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(54) Title: COMPOSITIONS AND METHODS FOR THE TREATMENT OF NATURAL KILLER CELL RELATED DISEASES

(57) Abstract: The present invention relates to compositions containing novel proteins and methods of using those compositions for the diagnosis and treatment of immune related diseases.

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COMPOSITIONS AND METHODS FOR THE TREATMENT OF NATURAL KILLER CELL RELATED DISEASES

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Field of the Invention

The present invention relates to compositions and methods useful for the diagnosis and treatment of immune related diseases.

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Background of the Invention

Immune related and inflammatory diseases are the manifestation or consequence of fairly complex, often multiple interconnected biological pathways which in normal physiology are critical to respond to insult or injury, initiate repair from insult or injury, and mount innate and acquired defense against foreign organisms. Disease or pathology occurs when these normal physiological pathways cause additional insult or injury either as directly related to the intensity of the response, as a consequence of abnormal regulation or excessive stimulation, as a reaction to self, or as a combination of these.

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Though the genesis of these diseases often involves multistep pathways and often multiple different biological systems/pathways, intervention at critical points in one or more of these pathways can have an ameliorative or therapeutic effect. Therapeutic intervention can occur by either antagonism of a detrimental process/pathway or stimulation of a beneficial process/pathway.

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Many immune related diseases are known and have been extensively studied. Such diseases include immune-mediated inflammatory diseases, non-immune-mediated inflammatory diseases, infectious diseases, immunodeficiency diseases, neoplasia, *etc.*

Immune related diseases could be treated by suppressing the immune response. Using neutralizing antibodies that inhibit molecules having immune stimulatory activity would be beneficial in the treatment of immune-mediated and inflammatory diseases. Molecules which inhibit the immune response can be utilized (proteins directly or via the use of antibody agonists) to inhibit the immune response and thus ameliorate immune related disease.

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Natural killer (NK) cells are an important effector cell of the innate immune system. They are specialized to effect killing against host cells that have either been infected by viruses, parasites or that have become cancerous. Phenotypically, NK cells are large granular lymphocytes that constitute ~2 % of the circulating lymphocyte population. They are commonly identified by cell surface expression of CD56 and CD16. NK cells mature in the bone marrow from a CD34+ precursor cell that they share with T cells. The mature NK cell, shares expression of CD8, cytolytic machinery, and some KIRs, with T cells, but remains distinct from T cells by the lack of CD3 and the T cell receptors. Like cytotoxic T cells, they contain granules filled with pore forming protein, cytotoxins, serine esterases and proteoglycans that mediate lysis of target cells. Both cytotoxic T cells and NK cells kill on contact by binding to their targets and delivering their lethal burst of chemicals that produces holes in the target cell's membrane. Unlike cytotoxic T cells, NK cells do not need to recognize a specific antigen before initiating lysis. Rather, NK cell activation can be mediated by growth factors and cytokines such as, IL-2, IL-12 and IL-15 have been shown to mediate

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proliferative and cytotoxic activities or by a delicate balance between two classes of NK cell receptors, one that activates the cells, and another that inhibits. Killer Ig-like receptors (KIRs) are NK cell receptors that transmit an inhibitory signal if they encounter class I MHC molecules on a cell surface. This is important for killing of both cancerous cells and virally infected cells. Because viruses often suppress class I MHC expression in cells they infect, the virus-infected cell becomes susceptible to killing by NK cells. Likewise, cancer cells have reduced or no class I MHC expression also become susceptible to killing by NK cells. Natural cytotoxicity receptors (NCRs) constitute a family of activating receptors on NK cells. In some effector-target systems, the surface density of NCRs correlates with the cytolytic activity of the NK cells, while in other systems killing requires cooperation between NCR, another activating receptor NKG2D and its adaptor polypeptide DAP10. Additionally, the strength of the stimulatory signals can be influenced by engagement of co-receptors such as 2B4 and NTB-A. The ligands for NCRs and NKG2D, hemoglutinins and MICA, MICB respectively are not expressed by most normal cells, but are induced in most tumor cell lines. Expression of the ligands by tumor cells triggers a dramatic immune response resulting in tumor cell rejection.

Activation of NK cells with IL-15 or IL-12 have been shown to induce both cytotoxic and proliferative effects. Junctional adhesion molecule 2 (JAM2) has been shown to bind to NK cells and has been hypothesized to play a role in lymphocyte extravasation to sites of inflammation. Therefore, a DNA microarray experiment comparing differential expression of genes from these three modes of activation versus resting NK cells has the potential to reveal novel genes or novel gene associations with NK cell activity. Therapeutic antibodies, peptides or small molecules could be developed to target specific genes revealed by these microarrays for the treatment of immune mediated inflammatory diseases and malignancies.

Despite the above research in NK cells, there is a great need for additional diagnostic and therapeutic agents capable of detecting the presence of NK cell mediated disorders in a mammal and for effectively reducing these disorders. Accordingly, it is an objective of the present invention to identify polypeptides that are differentially expressed in activated NK cells as compared to resting NK cells, and to use those polypeptides, and their encoding nucleic acids, to produce compositions of matter useful in the therapeutic treatment and diagnostic detection of NK cell mediated disorders in mammals.

Summary of the Invention

A. Embodiments

The present invention concerns compositions and methods useful for the diagnosis and treatment of immune related disease in mammals, including humans. The present invention is based on the identification of proteins (including agonist and antagonist antibodies) which are a result of stimulation of the immune response in mammals. Immune related diseases can be treated by suppressing or enhancing the immune response. Molecules that enhance the immune response stimulate or potentiate the immune response to an antigen. Molecules which stimulate the immune response can be used therapeutically where enhancement of the immune response would be beneficial. Alternatively, molecules that suppress the immune response attenuate or reduce the immune response to an antigen (*e.g.*, neutralizing antibodies) can be used therapeutically where attenuation of the immune response would be beneficial (*e.g.*, inflammation).

Accordingly, the PRO polypeptides, agonists and antagonists thereof are also useful to prepare medicines and medicaments for the treatment of immune-related and inflammatory diseases. In a specific aspect, such medicines and medicaments comprise a therapeutically effective amount of a PRO polypeptide, agonist or antagonist thereof with a pharmaceutically acceptable carrier. Preferably, the admixture is sterile.

5 In a further embodiment, the invention concerns a method of identifying agonists or antagonists to a PRO polypeptide which comprises contacting the PRO polypeptide with a candidate molecule and monitoring a biological activity mediated by said PRO polypeptide. Preferably, the PRO polypeptide is a native sequence PRO polypeptide. In a specific aspect, the PRO agonist or antagonist is an anti-PRO antibody.

10 In another embodiment, the invention concerns a composition of matter comprising a PRO polypeptide or an agonist or antagonist antibody which binds the polypeptide in admixture with a carrier or excipient. In one aspect, the composition comprises a therapeutically effective amount of the polypeptide or antibody. In another aspect, when the composition comprises an immune stimulating molecule, the composition is useful for: (a) increasing infiltration of inflammatory cells into a tissue of a mammal in need thereof, (b) stimulating or enhancing an immune response in a mammal in need thereof, (c) increasing the proliferation of NK cells in a mammal in need thereof in response to an antigen, (d) stimulating the activity of NK cells or (e) increasing the vascular permeability. In a further aspect, when the composition comprises an immune inhibiting molecule, the composition is useful for: (a) decreasing infiltration of inflammatory cells into a tissue of a mammal in need thereof, (b) inhibiting or reducing an immune response in a mammal in need thereof, (c) decreasing the activity of NK cells or (d) decreasing the proliferation of NK cells in a mammal in need thereof in response to an antigen. In another aspect, the composition comprises a further active ingredient, which may, for example, be a further antibody or a cytotoxic or chemotherapeutic agent. Preferably, the composition is sterile.

25 In another embodiment, the invention concerns a method of treating an immune related disorder in a mammal in need thereof, comprising administering to the mammal an effective amount of a PRO polypeptide, an agonist thereof, or an antagonist thereto. In a preferred aspect, the immune related disorder is selected from the group consisting of: systemic lupus erythematosus, rheumatoid arthritis, osteoarthritis, juvenile chronic arthritis, spondyloarthropathies, systemic sclerosis, idiopathic inflammatory myopathies, Sjögren's syndrome, systemic vasculitis, sarcoidosis, autoimmune hemolytic anemia, autoimmune thrombocytopenia, thyroiditis, diabetes mellitus, immune-mediated renal disease, demyelinating diseases of the central and peripheral nervous systems such as multiple sclerosis, idiopathic demyelinating polyneuropathy or Guillain-Barré syndrome, and chronic inflammatory demyelinating polyneuropathy, hepatobiliary diseases such as infectious, autoimmune chronic active hepatitis, primary biliary cirrhosis, granulomatous hepatitis, and sclerosing cholangitis, inflammatory bowel disease, gluten-sensitive enteropathy, and Whipple's disease, autoimmune or immune-mediated skin diseases including bullous skin diseases, erythema multiforme and contact dermatitis, psoriasis, allergic diseases such as asthma, allergic rhinitis, atopic dermatitis, food hypersensitivity and urticaria, immunologic diseases of the lung such as eosinophilic pneumonias, idiopathic pulmonary fibrosis and hypersensitivity pneumonitis, transplantation associated diseases including graft rejection and graft -versus-host-disease.

In another embodiment, the invention provides an antibody which specifically binds to any of the above or below described polypeptides. Optionally, the antibody is a monoclonal antibody, humanized antibody, antibody fragment or single-chain antibody. In one aspect, the present invention concerns an isolated antibody which binds a PRO polypeptide. In another aspect, the antibody mimics the activity of a PRO polypeptide (an agonist antibody) or conversely the antibody inhibits or neutralizes the activity of a PRO polypeptide (an antagonist antibody). In another aspect, the antibody is a monoclonal antibody, which preferably has nonhuman complementarity determining region (CDR) residues and human framework region (FR) residues. The antibody may be labeled and may be immobilized on a solid support. In a further aspect, the antibody is an antibody fragment, a monoclonal antibody, a single-chain antibody, or an anti-idiotypic antibody.

In yet another embodiment, the present invention provides a composition comprising an anti-PRO antibody in admixture with a pharmaceutically acceptable carrier. In one aspect, the composition comprises a therapeutically effective amount of the antibody. Preferably, the composition is sterile. The composition may be administered in the form of a liquid pharmaceutical formulation, which may be preserved to achieve extended storage stability. Alternatively, the antibody is a monoclonal antibody, an antibody fragment, a humanized antibody, or a single-chain antibody.

In a further embodiment, the invention concerns an article of manufacture, comprising:

- (a) a composition of matter comprising a PRO polypeptide or agonist or antagonist thereof;
- (b) a container containing said composition; and
- (c) a label affixed to said container, or a package insert included in said container referring to the use of said PRO polypeptide or agonist or antagonist thereof in the treatment of an immune related disease. The composition may comprise a therapeutically effective amount of the PRO polypeptide or the agonist or antagonist thereof.

In yet another embodiment, the present invention concerns a method of diagnosing an immune related disease in a mammal, comprising detecting the level of expression of a gene encoding a PRO polypeptide (a) in a test sample of tissue cells obtained from the mammal, and (b) in a control sample of known normal tissue cells of the same cell type, wherein a higher or lower expression level in the test sample as compared to the control sample indicates the presence of immune related disease in the mammal from which the test tissue cells were obtained.

In another embodiment, the present invention concerns a method of diagnosing an immune disease in a mammal, comprising (a) contacting an anti-PRO antibody with a test sample of tissue cells obtained from the mammal, and (b) detecting the formation of a complex between the antibody and a PRO polypeptide, in the test sample; wherein the formation of said complex is indicative of the presence or absence of said disease. The detection may be qualitative or quantitative, and may be performed in comparison with monitoring the complex formation in a control sample of known normal tissue cells of the same cell type. A larger quantity of complexes formed in the test sample indicates the presence or absence of an immune disease in the mammal from which the test tissue cells were obtained. The antibody preferably carries a detectable label. Complex formation can be monitored, for example, by light microscopy, flow cytometry, fluorimetry, or other techniques known in the art. The test sample is usually obtained from an individual suspected of having a deficiency or abnormality of the immune system.

In another embodiment, the invention provides a method for determining the presence of a PRO polypeptide in a sample comprising exposing a test sample of cells suspected of containing the PRO polypeptide to an anti-PRO antibody and determining the binding of said antibody to said cell sample. In a specific aspect, the sample comprises a cell suspected of containing the PRO polypeptide and the antibody binds to the cell. The antibody is preferably detectably labeled and/or bound to a solid support.

In another embodiment, the present invention concerns an immune-related disease diagnostic kit, comprising an anti-PRO antibody and a carrier in suitable packaging. The kit preferably contains instructions for using the antibody to detect the presence of the PRO polypeptide. Preferably the carrier is pharmaceutically acceptable.

In another embodiment, the present invention concerns a diagnostic kit, containing an anti-PRO antibody in suitable packaging. The kit preferably contains instructions for using the antibody to detect the PRO polypeptide.

In another embodiment, the invention provides a method of diagnosing an immune-related disease in a mammal which comprises detecting the presence or absence of a PRO polypeptide in a test sample of tissue cells obtained from said mammal, wherein the presence or absence of the PRO polypeptide in said test sample is indicative of the presence of an immune-related disease in said mammal.

In another embodiment, the present invention concerns a method for identifying an agonist of a PRO polypeptide comprising:

(a) contacting cells and a test compound to be screened under conditions suitable for the induction of a cellular response normally induced by a PRO polypeptide; and

(b) determining the induction of said cellular response to determine if the test compound is an effective agonist, wherein the induction of said cellular response is indicative of said test compound being an effective agonist.

In another embodiment, the invention concerns a method for identifying a compound capable of inhibiting the activity of a PRO polypeptide comprising contacting a candidate compound with a PRO polypeptide under conditions and for a time sufficient to allow these two components to interact and determining whether the activity of the PRO polypeptide is inhibited. In a specific aspect, either the candidate compound or the PRO polypeptide is immobilized on a solid support. In another aspect, the non-immobilized component carries a detectable label. In a preferred aspect, this method comprises the steps of:

(a) contacting cells and a test compound to be screened in the presence of a PRO polypeptide under conditions suitable for the induction of a cellular response normally induced by a PRO polypeptide; and

(b) determining the induction of said cellular response to determine if the test compound is an effective antagonist.

In another embodiment, the invention provides a method for identifying a compound that inhibits the expression of a PRO polypeptide in cells that normally express the polypeptide, wherein the method comprises contacting the cells with a test compound and determining whether the expression of the PRO polypeptide is inhibited. In a preferred aspect, this method comprises the steps of:

(a) contacting cells and a test compound to be screened under conditions suitable for allowing expression of the PRO polypeptide; and

(b) determining the inhibition of expression of said polypeptide.

In yet another embodiment, the present invention concerns a method for treating an immune-related disorder in a mammal that suffers therefrom comprising administering to the mammal a nucleic acid molecule that codes for either (a) a PRO polypeptide, (b) an agonist of a PRO polypeptide or (c) an antagonist of a PRO polypeptide, wherein said agonist or antagonist may be an anti-PRO antibody. In a preferred embodiment, the mammal is human. In another preferred embodiment, the nucleic acid is administered via *ex vivo* gene therapy. In a further preferred embodiment, the nucleic acid is comprised within a vector, more preferably an adenoviral, adeno-associated viral, lentiviral or retroviral vector.

In yet another aspect, the invention provides a recombinant viral particle comprising a viral vector consisting essentially of a promoter, nucleic acid encoding (a) a PRO polypeptide, (b) an agonist polypeptide of a PRO polypeptide, or (c) an antagonist polypeptide of a PRO polypeptide, and a signal sequence for cellular secretion of the polypeptide, wherein the viral vector is in association with viral structural proteins. Preferably, the signal sequence is from a mammal, such as from a native PRO polypeptide.

In a still further embodiment, the invention concerns an *ex vivo* producer cell comprising a nucleic acid construct that expresses retroviral structural proteins and also comprises a retroviral vector consisting essentially of a promoter, nucleic acid encoding (a) a PRO polypeptide, (b) an agonist polypeptide of a PRO polypeptide or (c) an antagonist polypeptide of a PRO polypeptide, and a signal sequence for cellular secretion of the polypeptide, wherein said producer cell packages the retroviral vector in association with the structural proteins to produce recombinant retroviral particles.

In a still further embodiment, the invention provides a method of increasing the activity of NK cells in a mammal comprising administering to said mammal (a) a PRO polypeptide, (b) an agonist of a PRO polypeptide, or (c) an antagonist of a PRO polypeptide, wherein the activity of NK cells in the mammal is increased.

In a still further embodiment, the invention provides a method of decreasing the activity of NK cells in a mammal comprising administering to said mammal (a) a PRO polypeptide, (b) an agonist of a PRO polypeptide, or (c) an antagonist of a PRO polypeptide, wherein the activity of NK cells in the mammal is decreased.

In a still further embodiment, the invention provides a method of increasing the proliferation of NK cells in a mammal comprising administering to said mammal (a) a PRO polypeptide, (b) an agonist of a PRO polypeptide, or (c) an antagonist of a PRO polypeptide, wherein the proliferation of NK cells in the mammal is increased.

In a still further embodiment, the invention provides a method of decreasing the proliferation of NK cells in a mammal comprising administering to said mammal (a) a PRO polypeptide, (b) an agonist of a PRO polypeptide, or (c) an antagonist of a PRO polypeptide, wherein the proliferation of NK cells in the mammal is decreased.

B. Additional Embodiments

In other embodiments of the present invention, the invention provides vectors comprising DNA encoding any of the herein described polypeptides. Host cell comprising any such vector are also provided. By way of example, the host cells may be CHO cells, *E. coli*, or yeast. A process for producing any of the herein described polypeptides is further provided and comprises culturing host cells under conditions

suitable for expression of the desired polypeptide and recovering the desired polypeptide from the cell culture.

In other embodiments, the invention provides chimeric molecules comprising any of the herein described polypeptides fused to a heterologous polypeptide or amino acid sequence. Example of such chimeric molecules comprise any of the herein described polypeptides fused to an epitope tag sequence or a Fc region of an immunoglobulin.

In another embodiment, the invention provides an antibody which specifically binds to any of the above or below described polypeptides. Optionally, the antibody is a monoclonal antibody, humanized antibody, antibody fragment or single-chain antibody.

In yet other embodiments, the invention provides oligonucleotide probes useful for isolating genomic and cDNA nucleotide sequences or as antisense probes, wherein those probes may be derived from any of the above or below described nucleotide sequences.

In other embodiments, the invention provides an isolated nucleic acid molecule comprising a nucleotide sequence that encodes a PRO polypeptide.

In one aspect, the isolated nucleic acid molecule comprises a nucleotide sequence having at least about 80% nucleic acid sequence identity, alternatively at least about 81% nucleic acid sequence identity, alternatively at least about 82% nucleic acid sequence identity, alternatively at least about 83% nucleic acid sequence identity, alternatively at least about 84% nucleic acid sequence identity, alternatively at least about 85% nucleic acid sequence identity, alternatively at least about 86% nucleic acid sequence identity, alternatively at least about 87% nucleic acid sequence identity, alternatively at least about 88% nucleic acid sequence identity, alternatively at least about 89% nucleic acid sequence identity, alternatively at least about 90% nucleic acid sequence identity, alternatively at least about 91% nucleic acid sequence identity, alternatively at least about 92% nucleic acid sequence identity, alternatively at least about 93% nucleic acid sequence identity, alternatively at least about 94% nucleic acid sequence identity, alternatively at least about 95% nucleic acid sequence identity, alternatively at least about 96% nucleic acid sequence identity, alternatively at least about 97% nucleic acid sequence identity, alternatively at least about 98% nucleic acid sequence identity and alternatively at least about 99% nucleic acid sequence identity to (a) a DNA molecule encoding a PRO polypeptide having a full-length amino acid sequence as disclosed herein, an amino acid sequence lacking the signal peptide as disclosed herein, an extracellular domain of a transmembrane protein, with or without the signal peptide, as disclosed herein or any other specifically defined fragment of the full-length amino acid sequence as disclosed herein, or (b) the complement of the DNA molecule of (a).

In other aspects, the isolated nucleic acid molecule comprises a nucleotide sequence having at least about 80% nucleic acid sequence identity, alternatively at least about 81% nucleic acid sequence identity, alternatively at least about 82% nucleic acid sequence identity, alternatively at least about 83% nucleic acid sequence identity, alternatively at least about 84% nucleic acid sequence identity, alternatively at least about 85% nucleic acid sequence identity, alternatively at least about 86% nucleic acid sequence identity, alternatively at least about 87% nucleic acid sequence identity, alternatively at least about 88% nucleic acid sequence identity, alternatively at least about 89% nucleic acid sequence identity, alternatively at least about 90% nucleic acid sequence identity, alternatively at least about 91% nucleic acid sequence identity, alternatively at least about 92% nucleic acid sequence identity, alternatively at least about 93% nucleic acid

sequence identity, alternatively at least about 94% nucleic acid sequence identity, alternatively at least about 95% nucleic acid sequence identity, alternatively at least about 96% nucleic acid sequence identity, alternatively at least about 97% nucleic acid sequence identity, alternatively at least about 98% nucleic acid sequence identity and alternatively at least about 99% nucleic acid sequence identity to (a) a DNA molecule comprising the coding sequence of a full-length PRO polypeptide cDNA as disclosed herein, the coding sequence of a PRO polypeptide lacking the signal peptide as disclosed herein, the coding sequence of an extracellular domain of a transmembrane PRO polypeptide, with or without the signal peptide, as disclosed herein or the coding sequence of any other specifically defined fragment of the full-length amino acid sequence as disclosed herein, or (b) the complement of the DNA molecule of (a).

In a further aspect, the invention concerns an isolated nucleic acid molecule comprising a nucleotide sequence having at least about 80% nucleic acid sequence identity, alternatively at least about 81% nucleic acid sequence identity, alternatively at least about 82% nucleic acid sequence identity, alternatively at least about 83% nucleic acid sequence identity, alternatively at least about 84% nucleic acid sequence identity, alternatively at least about 85% nucleic acid sequence identity, alternatively at least about 86% nucleic acid sequence identity, alternatively at least about 87% nucleic acid sequence identity, alternatively at least about 88% nucleic acid sequence identity, alternatively at least about 89% nucleic acid sequence identity, alternatively at least about 90% nucleic acid sequence identity, alternatively at least about 91% nucleic acid sequence identity, alternatively at least about 92% nucleic acid sequence identity, alternatively at least about 93% nucleic acid sequence identity, alternatively at least about 94% nucleic acid sequence identity, alternatively at least about 95% nucleic acid sequence identity, alternatively at least about 96% nucleic acid sequence identity, alternatively at least about 97% nucleic acid sequence identity, alternatively at least about 98% nucleic acid sequence identity and alternatively at least about 99% nucleic acid sequence identity to (a) a DNA molecule that encodes the same mature polypeptide encoded by any of the human protein cDNAs as disclosed herein, or (b) the complement of the DNA molecule of (a).

Another aspect the invention provides an isolated nucleic acid molecule comprising a nucleotide sequence encoding a PRO polypeptide which is either transmembrane domain-deleted or transmembrane domain-inactivated, or is complementary to such encoding nucleotide sequence, wherein the transmembrane domain(s) of such polypeptide are disclosed herein. Therefore, soluble extracellular domains of the herein described PRO polypeptides are contemplated.

Another embodiment is directed to fragments of a PRO polypeptide coding sequence, or the complement thereof, that may find use as, for example, hybridization probes, for encoding fragments of a PRO polypeptide that may optionally encode a polypeptide comprising a binding site for an anti-PRO antibody or as antisense oligonucleotide probes. Such nucleic acid fragments are usually at least about 20 nucleotides in length, alternatively at least about 30 nucleotides in length, alternatively at least about 40 nucleotides in length, alternatively at least about 50 nucleotides in length, alternatively at least about 60 nucleotides in length, alternatively at least about 70 nucleotides in length, alternatively at least about 80 nucleotides in length, alternatively at least about 90 nucleotides in length, alternatively at least about 100 nucleotides in length, alternatively at least about 110 nucleotides in length, alternatively at least about 120 nucleotides in length, alternatively at least about 130 nucleotides in length, alternatively at least about 140 nucleotides in length, alternatively at least about 150 nucleotides in length, alternatively at least about 160

nucleotides in length, alternatively at least about 170 nucleotides in length, alternatively at least about 180 nucleotides in length, alternatively at least about 190 nucleotides in length, alternatively at least about 200 nucleotides in length, alternatively at least about 250 nucleotides in length, alternatively at least about 300 nucleotides in length, alternatively at least about 350 nucleotides in length, alternatively at least about 400 nucleotides in length, alternatively at least about 450 nucleotides in length, alternatively at least about 500 nucleotides in length, alternatively at least about 600 nucleotides in length, alternatively at least about 700 nucleotides in length, alternatively at least about 800 nucleotides in length, alternatively at least about 900 nucleotides in length and alternatively at least about 1000 nucleotides in length, wherein in this context the term "about" means the referenced nucleotide sequence length plus or minus 10% of that referenced length.

It is noted that novel fragments of a PRO polypeptide-encoding nucleotide sequence may be determined in a routine manner by aligning the PRO polypeptide-encoding nucleotide sequence with other known nucleotide sequences using any of a number of well known sequence alignment programs and determining which PRO polypeptide-encoding nucleotide sequence fragment(s) are novel. All of such PRO polypeptide-encoding nucleotide sequences are contemplated herein. Also contemplated are the PRO polypeptide fragments encoded by these nucleotide molecule fragments, preferably those PRO polypeptide fragments that comprise a binding site for an anti-PRO antibody.

In another embodiment, the invention provides isolated PRO polypeptide encoded by any of the isolated nucleic acid sequences herein above identified.

In a certain aspect, the invention concerns an isolated PRO polypeptide, comprising an amino acid sequence having at least about 80% amino acid sequence identity, alternatively at least about 81% amino acid sequence identity, alternatively at least about 82% amino acid sequence identity, alternatively at least about 83% amino acid sequence identity, alternatively at least about 84% amino acid sequence identity, alternatively at least about 85% amino acid sequence identity, alternatively at least about 86% amino acid sequence identity, alternatively at least about 87% amino acid sequence identity, alternatively at least about 88% amino acid sequence identity, alternatively at least about 89% amino acid sequence identity, alternatively at least about 90% amino acid sequence identity, alternatively at least about 91% amino acid sequence identity, alternatively at least about 92% amino acid sequence identity, alternatively at least about 93% amino acid sequence identity, alternatively at least about 94% amino acid sequence identity, alternatively at least about 95% amino acid sequence identity, alternatively at least about 96% amino acid sequence identity, alternatively at least about 97% amino acid sequence identity, alternatively at least about 98% amino acid sequence identity and alternatively at least about 99% amino acid sequence identity to a PRO polypeptide having a full-length amino acid sequence as disclosed herein, an amino acid sequence lacking the signal peptide as disclosed herein, an extracellular domain of a transmembrane protein, with or without the signal peptide, as disclosed herein or any other specifically defined fragment of the full-length amino acid sequence as disclosed herein.

In a further aspect, the invention concerns an isolated PRO polypeptide comprising an amino acid sequence having at least about 80% amino acid sequence identity, alternatively at least about 81% amino acid sequence identity, alternatively at least about 82% amino acid sequence identity, alternatively at least about 83% amino acid sequence identity, alternatively at least about 84% amino acid sequence identity, alternatively at least about 85% amino acid sequence identity, alternatively at least about 86% amino acid

sequence identity, alternatively at least about 87% amino acid sequence identity, alternatively at least about 88% amino acid sequence identity, alternatively at least about 89% amino acid sequence identity, alternatively at least about 90% amino acid sequence identity, alternatively at least about 91% amino acid sequence identity, alternatively at least about 92% amino acid sequence identity, alternatively at least about 93% amino acid sequence identity, alternatively at least about 94% amino acid sequence identity, alternatively at least about 95% amino acid sequence identity, alternatively at least about 96% amino acid sequence identity, alternatively at least about 97% amino acid sequence identity, alternatively at least about 98% amino acid sequence identity and alternatively at least about 99% amino acid sequence identity to an amino acid sequence encoded by any of the human protein cDNAs as disclosed herein.

In a specific aspect, the invention provides an isolated PRO polypeptide without the N-terminal signal sequence and/or the initiating methionine and is encoded by a nucleotide sequence that encodes such an amino acid sequence as herein before described. Processes for producing the same are also herein described, wherein those processes comprise culturing a host cell comprising a vector which comprises the appropriate encoding nucleic acid molecule under conditions suitable for expression of the PRO polypeptide and recovering the PRO polypeptide from the cell culture.

Another aspect the invention provides an isolated PRO polypeptide which is either transmembrane domain-deleted or transmembrane domain-inactivated. Processes for producing the same are also herein described, wherein those processes comprise culturing a host cell comprising a vector which comprises the appropriate encoding nucleic acid molecule under conditions suitable for expression of the PRO polypeptide and recovering the PRO polypeptide from the cell culture.

In yet another embodiment, the invention concerns agonists and antagonists of a native PRO polypeptide as defined herein. In a particular embodiment, the agonist or antagonist is an anti-PRO antibody or a small molecule.

In a further embodiment, the invention concerns a method of identifying agonists or antagonists to a PRO polypeptide which comprise contacting the PRO polypeptide with a candidate molecule and monitoring a biological activity mediated by said PRO polypeptide. Preferably, the PRO polypeptide is a native PRO polypeptide.

In a still further embodiment, the invention concerns a composition of matter comprising a PRO polypeptide, or an agonist or antagonist of a PRO polypeptide as herein described, or an anti-PRO antibody, in combination with a carrier. Optionally, the carrier is a pharmaceutically acceptable carrier.

Another embodiment of the present invention is directed to the use of a PRO polypeptide, or an agonist or antagonist thereof as herein before described, or an anti-PRO antibody, for the preparation of a medicament useful in the treatment of a condition which is responsive to the PRO polypeptide, an agonist or antagonist thereof or an anti-PRO antibody.

BRIEF DESCRIPTION OF THE DRAWINGS

In the list of figures for the present application, specific cDNA sequences which are differentially expressed in activated Natural Killer (NK) cells as compared to normal resting NK cells are individually identified with a specific alphanumeric designation. These cDNA sequences are differentially expressed in NK cells that are specifically treated as described in Example 1 below. If start and/or stop

codons have been identified in a cDNA sequence shown in the attached figures, they are shown in bold and underlined font, and the encoded polypeptide is shown in the next consecutive figure.

The Figures 1-1477 show the nucleic acids of the invention and their encoded PRO polypeptides. Also included, for convenience is a List of Figures attached hereto as Appendix A, which gives the figure number and the corresponding DNA or PRO number.

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List of Figures

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Figure 10: PRO83282
Figure 11: DNA254127, NP_008925.1, 38241.at
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Figure 13A-B: DNA103216, BAA31595.1, 38671.at
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Figure 15A-B: DNA329093, NP_006631.1, 41220.at
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Figure 17: DNA326185, NP_073607.2, 45633.at
Figure 18: PRO82602
Figure 19: DNA329913, SSB-3, 46256.at
Figure 20: PRO85228
Figure 21: DNA331288, ARHGAP8, 47069.at
Figure 22: PRO86389
Figure 23: DNA328364, NP_068577.1, 52940.at
Figure 24: PRO84223
Figure 25: DNA324633, BC000478, 200691.s_at
Figure 26: PRO81277
Figure 27: DNA324633, NP_004125.2, 200692.s_at
Figure 28: PRO81277
Figure 29: DNA88350, NP_000168.1, 200696.s_at
Figure 30: PRO2758
Figure 31: DNA287207, NP_006316.1, 200750.s_at
Figure 32: PRO39268
Figure 33: DNA324135, BC001854, 200768.s_at
Figure 34: PRO80837
Figure 35: DNA324135, NP_005902.1, 200769.s_at
Figure 36: PRO80837
Figure 37: DNA324060, NP_002530.1, 200790.at
Figure 38: PRO80773
Figure 39: DNA287211, NP_002147.1, 200806.s_at
Figure 40: PRO69492
Figure 41: DNA287211, HSPD1, 200807.s_at
Figure 42: PRO69492
Figure 43A-B: DNA255281, NP_006380.1, 200825.s_at
Figure 44: PRO50357
Figure 45: DNA328380, HSHLAEHCM, 200904.at
Figure 46: DNA272695, NP_001722.1, 200920.s_at
Figure 47: PRO60817
Figure 48: DNA327255, NP_002385.2, 200924.s_at
Figure 49: PRO57298
Figure 50: DNA225878, NP_004334.1, 200935.at
Figure 51: PRO36341
Figure 52A-B: DNA287217, NP_001750.1, 200951.s_at

Figure 53: PRO36766
Figure 54A-B: DNA287217, CCND2, 200952.s_at
Figure 55: PRO36766
Figure 56A-B: DNA226303, HUMRSC289, 200953.s_at
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Figure 58A-B: DNA331289, ABLIM1, 200965.s_at
Figure 59: PRO86390
Figure 60: DNA328388, BC010273, 201013.s_at
Figure 61: PRO84240
Figure 62: DNA328388, NP_006443.1, 201014.s_at
Figure 63: PRO84240
Figure 64: DNA328391, NP_004408.1, 201041.s_at
Figure 65: PRO84242
Figure 66: DNA287198, NP_006073.1, 201090.x_at
Figure 67: PRO69484
Figure 68: DNA304719, NP_002296.1, 201105.at
Figure 69: PRO71145
Figure 70: DNA329931, AF053642, 201111.at
Figure 71: DNA273865, NP_006221.1, 201115.at
Figure 72: PRO61824
Figure 73: DNA326273, NP_001961.1, 201123.s_at
Figure 74: PRO82678
Figure 75: DNA329103, NP_002112.2, 201137.s_at
Figure 76: PRO84752
Figure 77: DNA329104, NP_004085.1, 201144.s_at
Figure 78: PRO69550
Figure 79: DNA151802, NP_003661.1, 201169.s_at
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Figure 82: PRO12890
Figure 83A-B: DNA103453, HUME16GEN, 201195.s_at
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Figure 88: PRO69463
Figure 89: DNA287331, NP_002645.1, 201251.at
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Figure 91: DNA270950, NP_003182.1, 201263.at
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Figure 93: DNA328405, NP_112556.1, 201277.s_at
Figure 94: PRO84252
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Figure 97: DNA328406, DAB2, 201280.s_at
Figure 98: PRO84253
Figure 99: DNA331290, NP_038474.1, 201285.at
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Figure 101: DNA327546, HSTOP2A10, 201292.at
Figure 102: DNA329106, NP_003013.1, 201311.s_at
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 Figure 106A-B: DNA274141, AF205218, 201362.at
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 Figure 110: DNA329107, NP_008818.3, 201367.s.at
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 Figure 117: PRO85248
 Figure 118: DNA226600, NP_003371.1, 201426.s.at
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 Figure 122: DNA325704, NP_004981.2, 201475.x.at
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 Figure 124: DNA327551, NP_001024.1, 201477.s.at
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 Figure 126: DNA304459, BC005020, 201489.at
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 Figure 136: DNA227071, NP_000260.1, 201577.at
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 Figure 145: PRO59218
 Figure 146: DNA327559, NP_058432.1, 201752.s.at
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 Figure 162: DNA253582, DNA253582, 201890.at
 Figure 163: PRO49181
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 Figure 171: PRO62927
 Figure 172: DNA274167, NP_006422.1, 201946.s.at
 Figure 173: PRO62097
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 Figure 299: DNA302020, NP_005564.1, 203276.at
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Figure 330: DNA287246, NP_004044.2, 203612_at
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Figure 548: DNA328763, NP_001219.2, 207686_s_at
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Figure 554: DNA227224, NP_060877.1, 208029_s_at
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Figure 556: DNA328610, NP_112601.2, 208146_s_at
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Figure 573: DNA329188, BC012142, 208638_at
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Figure 575: DNA330139, AK022493, 208657_s_at
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Figure 585: DNA238565, NP_005907.2, 208795_s_at
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Figure 599: DNA327701, NP_001203.1, 208910_s_at
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Figure 601: DNA226500, NP_005619.1, 208916_at
Figure 602: PRO36963
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Figure 605: DNA328629, NP_006079.1, 208977_x_at
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Figure 608: DNA330155, 7692317.2, 208982_at
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Figure 613: DNA328635, BC020946, 209026_x_at
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Figure 615: DNA274202, NP_006804.1, 209034_at
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Figure 630: DNA326267, NP_004861.1, 209208_at
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Figure 634: DNA227483, NP_003120.1, 209218_at
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Figure 636: DNA331332, BC007405, 209238_at

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Figure 1052: PRO69661
Figure 1053: DNA331377, NP_060753.1, 219347.at
Figure 1054: PRO86448
Figure 1055: DNA254518, NP_057354.1, 219371.s_at
Figure 1056: PRO49625
Figure 1057: DNA328902, NP_071750.1, 219452.at
Figure 1058: PRO84623
Figure 1059: DNA327890, NP_079021.1, 219493.at
Figure 1060: PRO83826
Figure 1061A-B: DNA227179, NP_059120.1, 219505.at
Figure 1062: PRO37642
Figure 1063: DNA329299, NP_004660.1, 219529.at
Figure 1064: PRO84888
Figure 1065: DNA330410, NP_060925.1, 219555.s_at
Figure 1066: PRO85618

- Figure 1067: DNA327891, NP_078909.1, 219563.at
 Figure 1068: PRO83827
 Figure 1069: DNA331378, ALS2CR8, 219834.at
 Figure 1070: PRO86449
 Figure 1071: DNA255255, LOC64116, 219869.s.at
 Figure 1072: PRO50332
 Figure 1073: DNA256325, NP_005470.1, 219889.at
 Figure 1074: PRO51367
 Figure 1075: DNA328923, NP_075379.1, 219892.at
 Figure 1076: PRO84640
 Figure 1077: DNA330421, NP_057438.2, 219911.s.at
 Figure 1078: PRO85626
 Figure 1079: DNA330423, NP_037466.2, 219920.s.at
 Figure 1080: PRO85628
 Figure 1081: DNA328924, NP_057150.2, 219933.at
 Figure 1082: PRO84641
 Figure 1083: DNA330537, NP_060533.2, 220085.at
 Figure 1084: PRO81892
 Figure 1085: DNA227302, NP_037401.1, 220132.s.at
 Figure 1086: PRO37765
 Figure 1087A-B: DNA328930, NP_038465.1, 220253.s.at
 Figure 1088: PRO23525
 Figure 1089: DNA330436, NP_037394.1, 220319.s.at
 Figure 1090: PRO85639
 Figure 1091: DNA327904, NP_071419.2, 220330.s.at
 Figure 1092: PRO83839
 Figure 1093: DNA331379, PHEMX, 220558.x.at
 Figure 1094: PRO86450
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 Figure 1096: PRO85642
 Figure 1097: DNA255734, NP_057607.1, 220646.s.at
 Figure 1098: PRO50791
 Figure 1099A-B: DNA327908, MCM10, 220651.s.at
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 Figure 1101: DNA323756, NP_057267.2, 220688.s.at
 Figure 1102: PRO80512
 Figure 1103: DNA331380, DKFZp566O084Homo, 220690.s.at
 Figure 1104: DNA288247, NP_478059.1, 220892.s.at
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 Figure 1106: DNA331381, BA108L7.2, 220974.x.at
 Figure 1107: PRO86451
 Figure 1108: DNA287397, NP_112214.1, 220987.s.at
 Figure 1109: PRO69654
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 Figure 1111: PRO84657
 Figure 1112: DNA331382, CISH, 221223.x.at
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 Figure 1114: DNA330451, NP_110429.1, 221249.s.at
 Figure 1115: PRO85652
 Figure 1116: DNA328948, NP_110437.1, 221253.s.at
 Figure 1117: PRO84659
 Figure 1118: DNA326507, NP_112490.2, 221267.s.at
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 Figure 1124: DNA227303, NP_004322.1, 221479.s.at
 Figure 1125: PRO37766
 Figure 1126: DNA326221, NP_057179.1, 221521.s.at
 Figure 1127: PRO82634
 Figure 1128: DNA330457, NP_076944.1, 221559.s.at
 Figure 1129: PRO85658
 Figure 1130: DNA329318, IRO033793, 221564.at
 Figure 1131: DNA329319, BC006401, 221601.s.at
 Figure 1132: PRO1607
 Figure 1133: DNA329319, NP_005440.1, 221602.s.at
 Figure 1134: PRO1607
 Figure 1135: DNA330459, NP_060083.1, 221677.s.at
 Figure 1136: PRO50083
 Figure 1137: DNA328961, NP_443112.1, 221756.at
 Figure 1138: PRO84667
 Figure 1139: DNA328961, MGC17330, 221757.at
 Figure 1140: PRO84667
 Figure 1141: DNA331383, BC007588, 221769.at
 Figure 1142: DNA331384, AK026326, 221985.at
 Figure 1143: PRO86454
 Figure 1144: DNA330467, NP_060114.1, 221986.s.at
 Figure 1145: PRO85665
 Figure 1146: DNA254739, NP_068766.1, 221987.s.at
 Figure 1147: PRO49837
 Figure 1148: DNA257797, DNA257797, 222036.s.at
 Figure 1149: DNA257798, DNA257798, 222037.at
 Figure 1150: DNA325648, NP_037409.2, 222077.s.at
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 Figure 1154A-B: DNA331387, NP_008919.2, 222162.s.at
 Figure 1155: PRO86456
 Figure 1156: DNA328977, NP_071344.1, 222216.s.at
 Figure 1157: PRO84678
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 Figure 1159: PRO82287
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 Figure 1163: PRO4984
 Figure 1164: DNA327942, NP_060596.1, 222642.s.at
 Figure 1165: PRO83870
 Figure 1166: DNA327943, NP_055399.1, 222646.s.at
 Figure 1167: PRO865
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 Figure 1169: PRO61430
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 Figure 1171: DNA331388, NP_068747.1, 222753.s.at
 Figure 1172: PRO3567
 Figure 1173: DNA329335, AK023411, 222843.at

- Figure 1174: PRO84919
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 Figure 1180: PRO85693
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 Figure 1183: DNA329571, NP_057547.3, 222996.s.at
 Figure 1184: PRO51662
 Figure 1185: DNA189412, NP_057390.1, 223054.at
 Figure 1186: PRO25349
 Figure 1187: DNA288247, PSA, 223062.s.at
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 Figure 1189: DNA331390, AAF28975.1, 223070.at
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 Figure 1198: PRO49387
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 Figure 1203A-B: DNA257461, MAIL, 223218.s.at
 Figure 1204: PRO52040
 Figure 1205: DNA326056, NP_072088.1, 223264.at
 Figure 1206: PRO82491
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 Figure 1212: PRO37588
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 Figure 1214: PRO49998
 Figure 1215: DNA329456, NP_057126.1, 223490.s.at
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 Figure 1217: DNA330536, NP_115666.1, 223542.at
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 Figure 1225: DNA331392, NP_004186.1, 223851.s.at
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 Figure 1227: DNA331393, D83532, 223961.s.at
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 Figure 1229: DNA330552, BC001104, 223984.s.at
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 Figure 1231: DNA330558, NP_057588.1, 224330.s.at
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 Figure 1233: DNA328323, NP_114148.2, 224428.s.at
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 Figure 1235: DNA331394, MGC11316, 224482.s.at
 Figure 1236: PRO86459
 Figure 1237: DNA327976, NP_116120.1, 224511.s.at
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 Figure 1239: DNA329374, NP_115735.1, 224523.s.at
 Figure 1240: PRO84953
 Figure 1241: DNA331395, TNFRSF18, 224553.s.at
 Figure 1242: PRO86460
 Figure 1243: DNA331396, 1357555.1, 224603.at
 Figure 1244: PRO86461
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 Figure 1247A-B: DNA330574, AB033054, 224698.at
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 Figure 1250: DNA257352, DNA257352, 224739.at
 Figure 1251: PRO51940
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 Figure 1253: PRO69594
 Figure 1254A-B: DNA287330, AB032991, 224801.at
 Figure 1255: DNA331397, AK001723, 224802.at
 Figure 1256: PRO23259
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 Figure 1258: PRO84957
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 Figure 1266: PRO83915
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 Figure 1288: PRO86463
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 Figure 1295A-B: DNA331401, 336865.4, 225700.at
 Figure 1296: PRO86465
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 Figure 1298: DNA254820, DNA254820, 225707.at
 Figure 1299: PRO49916
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 Figure 1302: PRO84989
 Figure 1303A-B: DNA331402, 197159.1, 225845.at
 Figure 1304: PRO86466
 Figure 1305: DNA287370, BAB14983.1, 225866.at
 Figure 1306: PRO69630
 Figure 1307A-B: DNA331403, TP53INP1, 225912.at
 Figure 1308: PRO86467
 Figure 1309A-B: DNA331405, 979005.2, 225956.at
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 Figure 1314: DNA193896, DNA193896, 226276.at
 Figure 1315: PRO23314
 Figure 1316: DNA328028, NP_005773.1, 226319.s.at
 Figure 1317: PRO83945
 Figure 1318: DNA328028, ALY, 226320.at
 Figure 1319: PRO83945
 Figure 1320A-B: DNA331406, 399773.27, 226334.s.at
 Figure 1321: PRO86470
 Figure 1322A-B: DNA331407, 198233.1, 226352.at
 Figure 1323: PRO86471
 Figure 1324A-B: DNA331409, AB051464, 226370.at
 Figure 1325A-B: DNA330675, 177663.2, 226372.at
 Figure 1326: PRO85847
 Figure 1327: DNA330677, 1384190.6, 226390.at
 Figure 1328: PRO85849
 Figure 1329: DNA331410, HSM802051, 226416.at
 Figure 1330: PRO86474
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 Figure 1335: PRO85855
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 Figure 1337: PRO52447
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 Figure 1339: PRO83953
 Figure 1340: DNA328044, 039170.3, 226936.at
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 Figure 1342A-B: DNA330705, 198782.1, 227020.at
 Figure 1343: PRO85876
 Figure 1344A-B: DNA330706, AF445027, 227027.at
 Figure 1345: PRO85877
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 Figure 1347: PRO86475
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 Figure 1349: PRO85886
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 Figure 1351: PRO86476
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 Figure 1353: DNA329444, BC017821, 227278.at
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 Figure 1364: PRO1107
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 Figure 1366: PRO85023
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 Figure 1368: PRO85913
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 Figure 1374: PRO85028
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 Figure 1376: PRO86477
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 Figure 1378: PRO86478
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 Figure 1380: PRO86479
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 Figure 1382: PRO85944
 Figure 1383: DNA330784, 233595.21, 228990.at
 Figure 1384: PRO85948
 Figure 1385: DNA330787, 349981.7, 229041.s.at
 Figure 1386: PRO85951
 Figure 1387: DNA327307, AF442769, 229215.at
 Figure 1388: PRO83560
 Figure 1389: DNA287421, 234832.1, 229437.at

Figure 1390: PRO69678
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Figure 1392: PRO85963
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Figure 1394: PRO85973
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Figure 1396: PRO23814
Figure 1397A-B: DNA331416, FREQ, 230146.s.at
Figure 1398: PRO11501
Figure 1399: DNA329468, BC011589, 230170.at
Figure 1400: PRO88
Figure 1401: DNA330818, 212282.1, 230304.at
Figure 1402: PRO85982
Figure 1403: DNA257756, DNA257756, 230405.at
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Figure 1405: PRO85036
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Figure 1407: PRO86480
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Figure 1409: PRO86481
Figure 1410A-B: DNA287217, DNA287217, 231259.s.at
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Figure 1413: PRO86006
Figure 1414: DNA331419, 085942.3, 232001.at
Figure 1415: PRO86482
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Figure 1417: PRO86483
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Figure 1419: PRO86484
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Figure 1421: PRO84097
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Figure 1423: PRO69661
Figure 1424: DNA331422, 077853.1, 233289.at
Figure 1425: PRO86485
Figure 1426: DNA331423, AF176071, 233467.s.at
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Figure 1432: PRO69581
Figure 1433: DNA330891, AK027315, 235113.at
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Figure 1435A-C: DNA331425, 228001.3, 235116.at
Figure 1436: PRO20128
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Figure 1450: PRO791
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Figure 1453: PRO84109
Figure 1454: DNA331428, 7692702.1, 241803.s.at
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Figure 1457: PRO85067
Figure 1458: DNA331429, NP_110403.1, 242020.s.at
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Figure 1470: DNA331430, 030957.1, 243808.at
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Figure 1472: DNA331431, 201839.1, 243840.at
Figure 1473: PRO86491
Figure 1474: DNA331432, 151634.1, 244035.at
Figure 1475: PRO86492
Figure 1476: DNA331433, 020071.1, 244434.at
Figure 1477: PRO86493

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

I. Definitions

The terms "PRO polypeptide" and "PRO" as used herein and when immediately followed by a numerical designation refer to various polypeptides, wherein the complete designation (i.e., PRO/number) refers to specific polypeptide sequences as described herein. The terms "PRO/number polypeptide" and "PRO/number" wherein the term "number" is provided as an actual numerical designation as used herein encompass native sequence polypeptides and polypeptide variants (which are further defined herein). The PRO polypeptides described herein may be isolated from a variety of sources, such as from human tissue types or from another source, or prepared by recombinant or synthetic methods. The term "PRO polypeptide" refers to each individual PRO/number polypeptide disclosed herein. All disclosures in this specification which refer to the "PRO polypeptide" refer to each of the polypeptides individually as well as jointly. For example, descriptions of the preparation of, purification of, derivation of, formation of antibodies to or against, administration of, compositions containing, treatment of a disease with, etc., pertain to each polypeptide of the invention individually. The term "PRO polypeptide" also includes variants of the PRO/number polypeptides disclosed herein.

A "native sequence PRO polypeptide" comprises a polypeptide having the same amino acid sequence as the corresponding PRO polypeptide derived from nature. Such native sequence PRO polypeptides can be isolated from nature or can be produced by recombinant or synthetic means. The term "native sequence PRO polypeptide" specifically encompasses naturally-occurring truncated or secreted forms of the specific PRO polypeptide (e.g., an extracellular domain sequence), naturally-occurring variant forms (e.g., alternatively spliced forms) and naturally-occurring allelic variants of the polypeptide. In various embodiments of the invention, the native sequence PRO polypeptides disclosed herein are mature or full-length native sequence polypeptides comprising the full-length amino acids sequences shown in the accompanying figures. Start and stop codons are shown in bold font and underlined in the figures. However, while the PRO polypeptide disclosed in the accompanying figures are shown to begin with methionine residues designated herein as amino acid position 1 in the figures, it is conceivable and possible that other methionine residues located either upstream or downstream from the amino acid position 1 in the figures may be employed as the starting amino acid residue for the PRO polypeptides.

The PRO polypeptide "extracellular domain" or "ECD" refers to a form of the PRO polypeptide which is essentially free of the transmembrane and cytoplasmic domains. Ordinarily, a PRO polypeptide ECD will have less than 1% of such transmembrane and/or cytoplasmic domains and preferably, will have less than 0.5% of such domains. It will be understood that any transmembrane domains identified for the PRO polypeptides of the present invention are identified pursuant to criteria routinely employed in the art for identifying that type of hydrophobic domain. The exact boundaries of a transmembrane domain may vary but most likely by no more than about 5 amino acids at either end of the domain as initially identified herein. Optionally, therefore, an extracellular domain of a PRO polypeptide may contain from about 5 or fewer amino acids on either side of the transmembrane domain/extracellular domain boundary as identified in the Examples or specification and such polypeptides, with or without the associated signal peptide, and nucleic acid encoding them, are contemplated by the present invention.

The approximate location of the "signal peptides" of the various PRO polypeptides disclosed herein are shown in the present specification and/or the accompanying figures. It is noted, however, that the C-terminal boundary of a signal peptide may vary, but most likely by no more than about 5 amino acids on either side of the signal peptide C-terminal boundary as initially identified herein, wherein the C-terminal boundary of the signal peptide may be identified pursuant to criteria routinely employed in the art for identifying that type of amino acid sequence element (e.g., Nielsen et al., Prot. Eng. 10:1-6 (1997) and von Heinje et al., Nucl. Acids. Res. 14:4683-4690 (1986)). Moreover, it is also recognized that, in some cases, cleavage of a signal sequence from a secreted polypeptide is not entirely uniform, resulting in more than one secreted species. These mature polypeptides, where the signal peptide is cleaved within no more than about 5 amino acids on either side of the C-terminal boundary of the signal peptide as identified herein, and the polynucleotides encoding them, are contemplated by the present invention.

"PRO polypeptide variant" means an active PRO polypeptide as defined above or below having at least about 80% amino acid sequence identity with a full-length native sequence PRO polypeptide sequence as disclosed herein, a PRO polypeptide sequence lacking the signal peptide as disclosed herein, an extracellular domain of a PRO polypeptide, with or without the signal peptide, as disclosed herein or any other fragment of a full-length PRO polypeptide sequence as disclosed herein. Such PRO polypeptide variants include, for instance, PRO polypeptides wherein one or more amino acid residues are added, or deleted, at the N- or C-terminus of the full-length native amino acid sequence. Ordinarily, a PRO polypeptide variant will have at least about 80% amino acid sequence identity, alternatively at least about 81% amino acid sequence identity, alternatively at least about 82% amino acid sequence identity, alternatively at least about 83% amino acid sequence identity, alternatively at least about 84% amino acid sequence identity, alternatively at least about 85% amino acid sequence identity, alternatively at least about 86% amino acid sequence identity, alternatively at least about 87% amino acid sequence identity, alternatively at least about 88% amino acid sequence identity, alternatively at least about 89% amino acid sequence identity, alternatively at least about 90% amino acid sequence identity, alternatively at least about 91% amino acid sequence identity, alternatively at least about 92% amino acid sequence identity, alternatively at least about 93% amino acid sequence identity, alternatively at least about 94% amino acid sequence identity, alternatively at least about 95% amino acid sequence identity, alternatively at least about 96% amino acid sequence identity, alternatively at least about 97% amino acid sequence identity, alternatively at least about 98% amino acid sequence identity and alternatively at least about 99% amino acid sequence identity to a full-length native sequence PRO polypeptide sequence as disclosed herein, a PRO polypeptide sequence lacking the signal peptide as disclosed herein, an extracellular domain of a PRO polypeptide, with or without the signal peptide, as disclosed herein or any other specifically defined fragment of a full-length PRO polypeptide sequence as disclosed herein. Ordinarily, PRO variant polypeptides are at least about 10 amino acids in length, alternatively at least about 20 amino acids in length, alternatively at least about 30 amino acids in length, alternatively at least about 40 amino acids in length, alternatively at least about 50 amino acids in length, alternatively at least about 60 amino acids in length, alternatively at least about 70 amino acids in length, alternatively at least about 80 amino acids in length, alternatively at least about 90 amino acids in length, alternatively at least about 100 amino acids in length,

alternatively at least about 150 amino acids in length, alternatively at least about 200 amino acids in length, alternatively at least about 300 amino acids in length, or more.

"Percent (%) amino acid sequence identity" with respect to the PRO polypeptide sequences identified herein is defined as the percentage of amino acid residues in a candidate sequence that are identical with the amino acid residues in the specific PRO polypeptide sequence, after aligning the sequences and introducing gaps, if necessary, to achieve the maximum percent sequence identity, and not considering any conservative substitutions as part of the sequence identity. Alignment for purposes of determining percent amino acid sequence identity can be achieved in various ways that are within the skill in the art, for instance, using publicly available computer software such as BLAST, BLAST-2, ALIGN or Megalign (DNASTAR) software. Those skilled in the art can determine appropriate parameters for measuring alignment, including any algorithms needed to achieve maximal alignment over the full length of the sequences being compared. For purposes herein, however, % amino acid sequence identity values are generated using the sequence comparison computer program ALIGN-2, wherein the complete source code for the ALIGN-2 program is provided in Table 1 below. The ALIGN-2 sequence comparison computer program was authored by Genentech, Inc. and the source code shown in Table 1 below has been filed with user documentation in the U.S. Copyright Office, Washington D.C., 20559, where it is registered under U.S. Copyright Registration No. TXU510087. The ALIGN-2 program is publicly available through Genentech, Inc., South San Francisco, California or may be compiled from the source code provided in Table 1 below. The ALIGN-2 program should be compiled for use on a UNIX operating system, preferably digital UNIX V4.0D. All sequence comparison parameters are set by the ALIGN-2 program and do not vary.

In situations where ALIGN-2 is employed for amino acid sequence comparisons, the % amino acid sequence identity of a given amino acid sequence A to, with, or against a given amino acid sequence B (which can alternatively be phrased as a given amino acid sequence A that has or comprises a certain % amino acid sequence identity to, with, or against a given amino acid sequence B) is calculated as follows:

$$100 \text{ times the fraction } X/Y$$

where X is the number of amino acid residues scored as identical matches by the sequence alignment program ALIGN-2 in that program's alignment of A and B, and where Y is the total number of amino acid residues in B. It will be appreciated that where the length of amino acid sequence A is not equal to the length of amino acid sequence B, the % amino acid sequence identity of A to B will not equal the % amino acid sequence identity of B to A. As examples of % amino acid sequence identity calculations using this method, Tables 2 and 3 demonstrate how to calculate the % amino acid sequence identity of the amino acid sequence designated "Comparison Protein" to the amino acid sequence designated "PRO", wherein "PRO" represents the amino acid sequence of a hypothetical PRO polypeptide of interest, "Comparison Protein" represents the amino acid sequence of a polypeptide against which the "PRO" polypeptide of interest is being compared, and "X", "Y" and "Z" each represent different hypothetical amino acid residues.

Unless specifically stated otherwise, all % amino acid sequence identity values used herein are obtained as described in the immediately preceding paragraph using the ALIGN-2 computer program.

However, % amino acid sequence identity values may also be obtained as described below by using the WU-

BLAST-2 computer program (Altschul et al., Methods in Enzymology 266:460-480 (1996)). Most of the WU-BLAST-2 search parameters are set to the default values. Those not set to default values, i.e., the adjustable parameters, are set with the following values: overlap span = 1, overlap fraction = 0.125, word threshold (T) = 11, and scoring matrix = BLOSUM62. When WU-BLAST-2 is employed, a % amino acid sequence identity value is determined by dividing (a) the number of matching identical amino acid residues between the amino acid sequence of the PRO polypeptide of interest having a sequence derived from the native PRO polypeptide and the comparison amino acid sequence of interest (i.e., the sequence against which the PRO polypeptide of interest is being compared which may be a PRO variant polypeptide) as determined by WU-BLAST-2 by (b) the total number of amino acid residues of the PRO polypeptide of interest. For example, in the statement "a polypeptide comprising an the amino acid sequence A which has or having at least 80% amino acid sequence identity to the amino acid sequence B", the amino acid sequence A is the comparison amino acid sequence of interest and the amino acid sequence B is the amino acid sequence of the PRO polypeptide of interest.

Percent amino acid sequence identity may also be determined using the sequence comparison program NCBI-BLAST2 (Altschul et al., Nucleic Acids Res. 25:3389-3402 (1997)). The NCBI-BLAST2 sequence comparison program may be downloaded from <http://www.ncbi.nlm.nih.gov> or otherwise obtained from the National Institute of Health, Bethesda, MD. NCBI-BLAST2 uses several search parameters, wherein all of those search parameters are set to default values including, for example, unmask = yes, strand = all, expected occurrences = 10, minimum low complexity length = 15/5, multi-pass e-value = 0.01, constant for multi-pass = 25, dropoff for final gapped alignment = 25 and scoring matrix = BLOSUM62.

In situations where NCBI-BLAST2 is employed for amino acid sequence comparisons, the % amino acid sequence identity of a given amino acid sequence A to, with, or against a given amino acid sequence B (which can alternatively be phrased as a given amino acid sequence A that has or comprises a certain % amino acid sequence identity to, with, or against a given amino acid sequence B) is calculated as follows:

$$100 \text{ times the fraction } X/Y$$

where X is the number of amino acid residues scored as identical matches by the sequence alignment program NCBI-BLAST2 in that program's alignment of A and B, and where Y is the total number of amino acid residues in B. It will be appreciated that where the length of amino acid sequence A is not equal to the length of amino acid sequence B, the % amino acid sequence identity of A to B will not equal the % amino acid sequence identity of B to A.

"PRO variant polynucleotide" or "PRO variant nucleic acid sequence" means a nucleic acid molecule which encodes an active PRO polypeptide as defined below and which has at least about 80% nucleic acid sequence identity with a nucleotide acid sequence encoding a full-length native sequence PRO polypeptide sequence as disclosed herein, a full-length native sequence PRO polypeptide sequence lacking the signal peptide as disclosed herein, an extracellular domain of a PRO polypeptide, with or without the signal peptide, as disclosed herein or any other fragment of a full-length PRO polypeptide sequence as disclosed herein. Ordinarily, a PRO variant polynucleotide will have at least about 80% nucleic acid

sequence identity, alternatively at least about 81% nucleic acid sequence identity, alternatively at least about 82% nucleic acid sequence identity, alternatively at least about 83% nucleic acid sequence identity, alternatively at least about 84% nucleic acid sequence identity, alternatively at least about 85% nucleic acid sequence identity, alternatively at least about 86% nucleic acid sequence identity, alternatively at least about 87% nucleic acid sequence identity, alternatively at least about 88% nucleic acid sequence identity, alternatively at least about 89% nucleic acid sequence identity, alternatively at least about 90% nucleic acid sequence identity, alternatively at least about 91% nucleic acid sequence identity, alternatively at least about 92% nucleic acid sequence identity, alternatively at least about 93% nucleic acid sequence identity, alternatively at least about 94% nucleic acid sequence identity, alternatively at least about 95% nucleic acid sequence identity, alternatively at least about 96% nucleic acid sequence identity, alternatively at least about 97% nucleic acid sequence identity, alternatively at least about 98% nucleic acid sequence identity and alternatively at least about 99% nucleic acid sequence identity with a nucleic acid sequence encoding a full-length native sequence PRO polypeptide sequence as disclosed herein, a full-length native sequence PRO polypeptide sequence lacking the signal peptide as disclosed herein, an extracellular domain of a PRO polypeptide, with or without the signal sequence, as disclosed herein or any other fragment of a full-length PRO polypeptide sequence as disclosed herein. Variants do not encompass the native nucleotide sequence.

Ordinarily, PRO variant polynucleotides are at least about 30 nucleotides in length, alternatively at least about 60 nucleotides in length, alternatively at least about 90 nucleotides in length, alternatively at least about 120 nucleotides in length, alternatively at least about 150 nucleotides in length, alternatively at least about 180 nucleotides in length, alternatively at least about 210 nucleotides in length, alternatively at least about 240 nucleotides in length, alternatively at least about 270 nucleotides in length, alternatively at least about 300 nucleotides in length, alternatively at least about 450 nucleotides in length, alternatively at least about 600 nucleotides in length, alternatively at least about 900 nucleotides in length, or more.

"Percent (%) nucleic acid sequence identity" with respect to PRO-encoding nucleic acid sequences identified herein is defined as the percentage of nucleotides in a candidate sequence that are identical with the nucleotides in the PRO nucleic acid sequence of interest, after aligning the sequences and introducing gaps, if necessary, to achieve the maximum percent sequence identity. Alignment for purposes of determining percent nucleic acid sequence identity can be achieved in various ways that are within the skill in the art, for instance, using publicly available computer software such as BLAST, BLAST-2, ALIGN or Megalign (DNASTAR) software. For purposes herein, however, % nucleic acid sequence identity values are generated using the sequence comparison computer program ALIGN-2, wherein the complete source code for the ALIGN-2 program is provided in Table 1 below. The ALIGN-2 sequence comparison computer program was authored by Genentech, Inc. and the source code shown in Table 1 below has been filed with user documentation in the U.S. Copyright Office, Washington D.C., 20559, where it is registered under U.S. Copyright Registration No. TXU510087. The ALIGN-2 program is publicly available through Genentech, Inc., South San Francisco, California or may be compiled from the source code provided in Table 1 below. The ALIGN-2 program should be compiled for use on a UNIX operating system, preferably digital UNIX V4.0D. All sequence comparison parameters are set by the ALIGN-2 program and do not vary.

In situations where ALIGN-2 is employed for nucleic acid sequence comparisons, the % nucleic acid sequence identity of a given nucleic acid sequence C to, with, or against a given nucleic acid sequence

D (which can alternatively be phrased as a given nucleic acid sequence C that has or comprises a certain % nucleic acid sequence identity to, with, or against a given nucleic acid sequence D) is calculated as follows:

$$100 \text{ times the fraction } W/Z$$

where W is the number of nucleotides scored as identical matches by the sequence alignment program ALIGN-2 in that program's alignment of C and D, and where Z is the total number of nucleotides in D. It will be appreciated that where the length of nucleic acid sequence C is not equal to the length of nucleic acid sequence D, the % nucleic acid sequence identity of C to D will not equal the % nucleic acid sequence identity of D to C. As examples of % nucleic acid sequence identity calculations, Tables 4 and 5, demonstrate how to calculate the % nucleic acid sequence identity of the nucleic acid sequence designated "Comparison DNA" to the nucleic acid sequence designated "PRO-DNA", wherein "PRO-DNA" represents a hypothetical PRO-encoding nucleic acid sequence of interest, "Comparison DNA" represents the nucleotide sequence of a nucleic acid molecule against which the "PRO-DNA" nucleic acid molecule of interest is being compared, and "N", "L" and "V" each represent different hypothetical nucleotides.

Unless specifically stated otherwise, all % nucleic acid sequence identity values used herein are obtained as described in the immediately preceding paragraph using the ALIGN-2 computer program. However, % nucleic acid sequence identity values may also be obtained as described below by using the WU-BLAST-2 computer program (Altschul et al., Methods in Enzymology 266:460-480 (1996)). Most of the WU-BLAST-2 search parameters are set to the default values. Those not set to default values, i.e., the adjustable parameters, are set with the following values: overlap span = 1, overlap fraction = 0.125, word threshold (T) = 11, and scoring matrix = BLOSUM62. When WU-BLAST-2 is employed, a % nucleic acid sequence identity value is determined by dividing (a) the number of matching identical nucleotides between the nucleic acid sequence of the PRO polypeptide-encoding nucleic acid molecule of interest having a sequence derived from the native sequence PRO polypeptide-encoding nucleic acid and the comparison nucleic acid molecule of interest (i.e., the sequence against which the PRO polypeptide-encoding nucleic acid molecule of interest is being compared which may be a variant PRO polynucleotide) as determined by WU-BLAST-2 by (b) the total number of nucleotides of the PRO polypeptide-encoding nucleic acid molecule of interest. For example, in the statement "an isolated nucleic acid molecule comprising a nucleic acid sequence A which has or having at least 80% nucleic acid sequence identity to the nucleic acid sequence B", the nucleic acid sequence A is the comparison nucleic acid molecule of interest and the nucleic acid sequence B is the nucleic acid sequence of the PRO polypeptide-encoding nucleic acid molecule of interest.

Percent nucleic acid sequence identity may also be determined using the sequence comparison program NCBI-BLAST2 (Altschul et al., Nucleic Acids Res. 25:3389-3402 (1997)). The NCBI-BLAST2 sequence comparison program may be downloaded from <http://www.ncbi.nlm.nih.gov> or otherwise obtained from the National Institute of Health, Bethesda, MD. NCBI-BLAST2 uses several search parameters, wherein all of those search parameters are set to default values including, for example, unmask = yes, strand = all, expected occurrences = 10, minimum low complexity length = 15/5, multi-pass e-value = 0.01, constant for multi-pass = 25, dropoff for final gapped alignment = 25 and scoring matrix = BLOSUM62.

In situations where NCBI-BLAST2 is employed for sequence comparisons, the % nucleic acid sequence identity of a given nucleic acid sequence C to, with, or against a given nucleic acid sequence D (which can alternatively be phrased as a given nucleic acid sequence C that has or comprises a certain % nucleic acid sequence identity to, with, or against a given nucleic acid sequence D) is calculated as follows:

$$100 \text{ times the fraction } W/Z$$

where W is the number of nucleotides scored as identical matches by the sequence alignment program NCBI-BLAST2 in that program's alignment of C and D, and where Z is the total number of nucleotides in D. It will be appreciated that where the length of nucleic acid sequence C is not equal to the length of nucleic acid sequence D, the % nucleic acid sequence identity of C to D will not equal the % nucleic acid sequence identity of D to C.

In other embodiments, PRO variant polynucleotides are nucleic acid molecules that encode an active PRO polypeptide and which are capable of hybridizing, preferably under stringent hybridization and wash conditions, to nucleotide sequences encoding a full-length PRO polypeptide as disclosed herein. PRO variant polypeptides may be those that are encoded by a PRO variant polynucleotide.

"Isolated," when used to describe the various polypeptides disclosed herein, means polypeptide that has been identified and separated and/or recovered from a component of its natural environment. Contaminant components of its natural environment are materials that would typically interfere with diagnostic or therapeutic uses for the polypeptide, and may include enzymes, hormones, and other proteinaceous or non-proteinaceous solutes. In preferred embodiments, the polypeptide will be purified (1) to a degree sufficient to obtain at least 15 residues of N-terminal or internal amino acid sequence by use of a spinning cup sequenator, or (2) to homogeneity by SDS-PAGE under non-reducing or reducing conditions using Coomassie blue or, preferably, silver stain. Isolated polypeptide includes polypeptide *in situ* within recombinant cells, since at least one component of the PRO polypeptide natural environment will not be present. Ordinarily, however, isolated polypeptide will be prepared by at least one purification step.

An "isolated" PRO polypeptide-encoding nucleic acid or other polypeptide-encoding nucleic acid is a nucleic acid molecule that is identified and separated from at least one contaminant nucleic acid molecule with which it is ordinarily associated in the natural source of the polypeptide-encoding nucleic acid. An isolated polypeptide-encoding nucleic acid molecule is other than in the form or setting in which it is found in nature. Isolated polypeptide-encoding nucleic acid molecules therefore are distinguished from the specific polypeptide-encoding nucleic acid molecule as it exists in natural cells. However, an isolated polypeptide-encoding nucleic acid molecule includes polypeptide-encoding nucleic acid molecules contained in cells that ordinarily express the polypeptide where, for example, the nucleic acid molecule is in a chromosomal location different from that of natural cells.

The term "control sequences" refers to DNA sequences necessary for the expression of an operably linked coding sequence in a particular host organism. The control sequences that are suitable for prokaryotes, for example, include a promoter, optionally an operator sequence, and a ribosome binding site. Eukaryotic cells are known to utilize promoters, polyadenylation signals, and enhancers.

Nucleic acid is "operably linked" when it is placed into a functional relationship with another nucleic acid sequence. For example, DNA for a presequence or secretory leader is operably linked to DNA for a polypeptide if it is expressed as a preprotein that participates in the secretion of the polypeptide; a promoter or enhancer is operably linked to a coding sequence if it affects the transcription of the sequence; or a ribosome binding site is operably linked to a coding sequence if it is positioned so as to facilitate translation. Generally, "operably linked" means that the DNA sequences being linked are contiguous, and, in the case of a secretory leader, contiguous and in reading phase. However, enhancers do not have to be contiguous. Linking is accomplished by ligation at convenient restriction sites. If such sites do not exist, the synthetic oligonucleotide adaptors or linkers are used in accordance with conventional practice.

The term "antibody" is used in the broadest sense and specifically covers, for example, single anti-PRO monoclonal antibodies (including agonist, antagonist, and neutralizing antibodies), anti-PRO antibody compositions with polypeptidic specificity, single chain anti-PRO antibodies, and fragments of anti-PRO antibodies (see below). The term "monoclonal antibody" as used herein refers to an antibody obtained from a population of substantially homogeneous antibodies, i.e., the individual antibodies comprising the population are identical except for possible naturally-occurring mutations that may be present in minor amounts.

"Stringency" of hybridization reactions is readily determinable by one of ordinary skill in the art, and generally is an empirical calculation dependent upon probe length, washing temperature, and salt concentration. In general, longer probes require higher temperatures for proper annealing, while shorter probes need lower temperatures. Hybridization generally depends on the ability of denatured DNA to reanneal when complementary strands are present in an environment below their melting temperature. The higher the degree of desired homology between the probe and hybridizable sequence, the higher the relative temperature which can be used. As a result, it follows that higher relative temperatures would tend to make the reaction conditions more stringent, while lower temperatures less so. For additional details and explanation of stringency of hybridization reactions, see Ausubel et al., Current Protocols in Molecular Biology, Wiley Interscience Publishers, (1995).

"Stringent conditions" or "high stringency conditions", as defined herein, may be identified by those that: (1) employ low ionic strength and high temperature for washing, for example 0.015 M sodium chloride/0.0015 M sodium citrate/0.1% sodium dodecyl sulfate at 50°C; (2) employ during hybridization a denaturing agent, such as formamide, for example, 50% (v/v) formamide with 0.1% bovine serum albumin/0.1% Ficoll/0.1% polyvinylpyrrolidone/50mM sodium phosphate buffer at pH 6.5 with 750 mM sodium chloride, 75 mM sodium citrate at 42°C; or (3) employ 50% formamide, 5 x SSC (0.75 M NaCl, 0.075 M sodium citrate), 50 mM sodium phosphate (pH 6.8), 0.1% sodium pyrophosphate, 5 x Denhardt's solution, sonicated salmon sperm DNA (50 µg/ml), 0.1% SDS, and 10% dextran sulfate at 42°C, with washes at 42°C in 0.2 x SSC (sodium chloride/sodium citrate) and 50% formamide at 55°C, followed by a high-stringency wash consisting of 0.1 x SSC containing EDTA at 55°C.

"Moderately stringent conditions" may be identified as described by Sambrook et al., Molecular Cloning: A Laboratory Manual, New York: Cold Spring Harbor Press, 1989, and include the use of washing solution and hybridization conditions (e.g., temperature, ionic strength and %SDS) less stringent than those described above. An example of moderately stringent conditions is overnight incubation at 37°C in a

solution comprising: 20% formamide, 5 x SSC (150 mM NaCl, 15 mM trisodium citrate), 50 mM sodium phosphate (pH 7.6), 5 x Denhardt's solution, 10% dextran sulfate, and 20 mg/ml denatured sheared salmon sperm DNA, followed by washing the filters in 1 x SSC at about 37-50°C. The skilled artisan will recognize how to adjust the temperature, ionic strength, etc. as necessary to accommodate factors such as probe length and the like.

The term "epitope tagged" when used herein refers to a chimeric polypeptide comprising a PRO polypeptide fused to a "tag polypeptide". The tag polypeptide has enough residues to provide an epitope against which an antibody can be made, yet is short enough such that it does not interfere with activity of the polypeptide to which it is fused. The tag polypeptide preferably also is fairly unique so that the antibody does not substantially cross-react with other epitopes. Suitable tag polypeptides generally have at least six amino acid residues and usually between about 8 and 50 amino acid residues (preferably, between about 10 and 20 amino acid residues).

As used herein, the term "immunoadhesin" designates antibody-like molecules which combine the binding specificity of a heterologous protein (an "adhesin") with the effector functions of immunoglobulin constant domains. Structurally, the immunoadhesins comprise a fusion of an amino acid sequence with the desired binding specificity which is other than the antigen recognition and binding site of an antibody (i.e., is "heterologous"), and an immunoglobulin constant domain sequence. The adhesin part of an immunoadhesin molecule typically is a contiguous amino acid sequence comprising at least the binding site of a receptor or a ligand. The immunoglobulin constant domain sequence in the immunoadhesin may be obtained from any immunoglobulin, such as IgG-1, IgG-2, IgG-3, or IgG-4 subtypes, IgA (including IgA-1 and IgA-2), IgE, IgD or IgM.

"Active" or "activity" for the purposes herein refers to form(s) of a PRO polypeptide which retain a biological and/or an immunological activity of native or naturally-occurring PRO, wherein "biological" activity refers to a biological function (either inhibitory or stimulatory) caused by a native or naturally-occurring PRO other than the ability to induce the production of an antibody against an antigenic epitope possessed by a native or naturally-occurring PRO and an "immunological" activity refers to the ability to induce the production of an antibody against an antigenic epitope possessed by a native or naturally-occurring PRO.

The term "antagonist" is used in the broadest sense, and includes any molecule that partially or fully blocks, inhibits, or neutralizes a biological activity of a native PRO polypeptide disclosed herein. In a similar manner, the term "agonist" is used in the broadest sense and includes any molecule that mimics a biological activity of a native PRO polypeptide disclosed herein. Suitable agonist or antagonist molecules specifically include agonist or antagonist antibodies or antibody fragments, fragments or amino acid sequence variants of native PRO polypeptides, peptides, antisense oligonucleotides, small organic molecules, etc. Methods for identifying agonists or antagonists of a PRO polypeptide may comprise contacting a PRO polypeptide with a candidate agonist or antagonist molecule and measuring a detectable change in one or more biological activities normally associated with the PRO polypeptide.

"Treatment" refers to both therapeutic treatment and prophylactic or preventative measures, wherein the object is to prevent or slow down (lessen) the targeted pathologic condition or disorder. Those

in need of treatment include those already with the disorder as well as those prone to have the disorder or those in whom the disorder is to be prevented.

"Chronic" administration refers to administration of the agent(s) in a continuous mode as opposed to an acute mode, so as to maintain the initial therapeutic effect (activity) for an extended period of time.

5 "Intermittent" administration is treatment that is not consecutively done without interruption, but rather is cyclic in nature.

"Mammal" for purposes of treatment refers to any animal classified as a mammal, including humans, domestic and farm animals, and zoo, sports, or pet animals, such as dogs, cats, cattle, horses, sheep, pigs, goats, rabbits, etc. Preferably, the mammal is human.

10 Administration "in combination with" one or more further therapeutic agents includes simultaneous (concurrent) and consecutive administration in any order.

"Carriers" as used herein include pharmaceutically acceptable carriers, excipients, or stabilizers which are nontoxic to the cell or mammal being exposed thereto at the dosages and concentrations employed. Often the physiologically acceptable carrier is an aqueous pH buffered solution. Examples of
15 physiologically acceptable carriers include buffers such as phosphate, citrate, and other organic acids; antioxidants including ascorbic acid; low molecular weight (less than about 10 residues) polypeptide; proteins, such as serum albumin, gelatin, or immunoglobulins; hydrophilic polymers such as polyvinylpyrrolidone; amino acids such as glycine, glutamine, asparagine, arginine or lysine; monosaccharides, disaccharides, and other carbohydrates including glucose, mannose, or dextrans; chelating
20 agents such as EDTA; sugar alcohols such as mannitol or sorbitol; salt-forming counterions such as sodium; and/or nonionic surfactants such as TWEEN™, polyethylene glycol (PEG), and PLURONICS™.

"Antibody fragments" comprise a portion of an intact antibody, preferably the antigen binding or variable region of the intact antibody. Examples of antibody fragments include Fab, Fab', F(ab')₂, and Fv fragments; diabodies; linear antibodies (Zapata et al., Protein Eng. 8(10): 1057-1062 [1995]); single-chain
25 antibody molecules; and multispecific antibodies formed from antibody fragments.

Papain digestion of antibodies produces two identical antigen-binding fragments, called "Fab" fragments, each with a single antigen-binding site, and a residual "Fc" fragment, a designation reflecting the ability to crystallize readily. Pepsin treatment yields an F(ab')₂ fragment that has two antigen-combining sites and is still capable of cross-linking antigen.

30 "Fv" is the minimum antibody fragment which contains a complete antigen-recognition and -binding site. This region consists of a dimer of one heavy- and one light-chain variable domain in tight, non-covalent association. It is in this configuration that the three CDRs of each variable domain interact to define an antigen-binding site on the surface of the V_H-V_L dimer. Collectively, the six CDRs confer antigen-binding specificity to the antibody. However, even a single variable domain (or half of an Fv comprising
35 only three CDRs specific for an antigen) has the ability to recognize and bind antigen, although at a lower affinity than the entire binding site.

The Fab fragment also contains the constant domain of the light chain and the first constant domain (CH1) of the heavy chain. Fab fragments differ from Fab' fragments by the addition of a few residues at the carboxy terminus of the heavy chain CH1 domain including one or more cysteines from the antibody hinge
40 region. Fab'-SH is the designation herein for Fab' in which the cysteine residue(s) of the constant domains

bear a free thiol group. F(ab')₂ antibody fragments originally were produced as pairs of Fab' fragments which have hinge cysteines between them. Other chemical couplings of antibody fragments are also known.

The "light chains" of antibodies (immunoglobulins) from any vertebrate species can be assigned to one of two clearly distinct types, called kappa and lambda, based on the amino acid sequences of their
5 constant domains.

Depending on the amino acid sequence of the constant domain of their heavy chains, immunoglobulins can be assigned to different classes. There are five major classes of immunoglobulins: IgA, IgD, IgE, IgG, and IgM, and several of these may be further divided into subclasses (isotypes), e.g., IgG1, IgG2, IgG3, IgG4, IgA, and IgA2.

10 "Single-chain Fv" or "sFv" antibody fragments comprise the V_H and V_L domains of antibody, wherein these domains are present in a single polypeptide chain. Preferably, the Fv polypeptide further comprises a polypeptide linker between the V_H and V_L domains which enables the sFv to form the desired structure for antigen binding. For a review of sFv, see Pluckthun in The Pharmacology of Monoclonal Antibodies, vol. 113, Rosenberg and Moore eds., Springer-Verlag, New York, pp. 269-315 (1994).

15 The term "diabodies" refers to small antibody fragments with two antigen-binding sites, which fragments comprise a heavy-chain variable domain (V_H) connected to a light-chain variable domain (V_L) in the same polypeptide chain (V_H-V_L). By using a linker that is too short to allow pairing between the two domains on the same chain, the domains are forced to pair with the complementary domains of another chain and create two antigen-binding sites. Diabodies are described more fully in, for example, EP 404,097; WO
20 93/11161; and Hollinger et al., Proc. Natl. Acad. Sci. USA, 90:6444-6448 (1993).

An "isolated" antibody is one which has been identified and separated and/or recovered from a component of its natural environment. Contaminant components of its natural environment are materials which would interfere with diagnostic or therapeutic uses for the antibody, and may include enzymes, hormones, and other proteinaceous or nonproteinaceous solutes. In preferred embodiments, the antibody
25 will be purified (1) to greater than 95% by weight of antibody as determined by the Lowry method, and most preferably more than 99% by weight, (2) to a degree sufficient to obtain at least 15 residues of N-terminal or internal amino acid sequence by use of a spinning cup sequenator, or (3) to homogeneity by SDS-PAGE under reducing or nonreducing conditions using Coomassie blue or, preferably, silver stain. Isolated antibody includes the antibody in situ within recombinant cells since at least one component of the
30 antibody's natural environment will not be present. Ordinarily, however, isolated antibody will be prepared by at least one purification step.

An antibody that "specifically binds to" or is "specific for" a particular polypeptide or an epitope on a particular polypeptide is one that binds to that particular polypeptide or epitope on a particular polypeptide without substantially binding to any other polypeptide or polypeptide epitope.

35 The word "label" when used herein refers to a detectable compound or composition which is conjugated directly or indirectly to the antibody so as to generate a "labeled" antibody. The label may be detectable by itself (e.g. radioisotope labels or fluorescent labels) or, in the case of an enzymatic label, may catalyze chemical alteration of a substrate compound or composition which is detectable.

By "solid phase" is meant a non-aqueous matrix to which the antibody of the present invention can
40 adhere. Examples of solid phases encompassed herein include those formed partially or entirely of glass

(e.g., controlled pore glass), polysaccharides (e.g., agarose), polyacrylamides, polystyrene, polyvinyl alcohol and silicones. In certain embodiments, depending on the context, the solid phase can comprise the well of an assay plate; in others it is a purification column (e.g., an affinity chromatography column). This term also includes a discontinuous solid phase of discrete particles, such as those described in U.S. Patent No. 4,275,149.

A "liposome" is a small vesicle composed of various types of lipids, phospholipids and/or surfactant which is useful for delivery of a drug (such as a PRO polypeptide or antibody thereto) to a mammal. The components of the liposome are commonly arranged in a bilayer formation, similar to the lipid arrangement of biological membranes.

A "small molecule" is defined herein to have a molecular weight below about 500 Daltons.

The term "immune related disease" means a disease in which a component of the immune system of a mammal causes, mediates or otherwise contributes to a morbidity in the mammal. Also included are diseases in which stimulation or intervention of the immune response has an ameliorative effect on progression of the disease. Included within this term are immune-mediated inflammatory diseases, non-immune-mediated inflammatory diseases, infectious diseases, immunodeficiency diseases, neoplasia, *etc.*

The term "Natural Killer cell mediated disease" means a disease in which NK cells directly or indirectly mediate or otherwise contribute to a morbidity in a mammal. The NK cell-mediated disease may be associated with cell mediated effects, lymphokine mediated effects, *etc.*, and even effects associated with other immune cells if the cells are involved.

Examples of immune-related and inflammatory diseases, some of which are immune mediated, which can be treated according to the invention include systemic lupus erythematosus, rheumatoid arthritis, juvenile chronic arthritis, spondyloarthropathies, systemic sclerosis (scleroderma), idiopathic inflammatory myopathies (dermatomyositis, polymyositis), Sjögren's syndrome, systemic vasculitis, sarcoidosis, autoimmune hemolytic anemia (immune pancytopenia, paroxysmal nocturnal hemoglobinuria), autoimmune thrombocytopenia (idiopathic thrombocytopenic purpura, immune-mediated thrombocytopenia), thyroiditis (Grave's disease, Hashimoto's thyroiditis, juvenile lymphocytic thyroiditis, atrophic thyroiditis), diabetes mellitus, immune-mediated renal disease (glomerulonephritis, tubulointerstitial nephritis), demyelinating diseases of the central and peripheral nervous systems such as multiple sclerosis, idiopathic demyelinating polyneuropathy or Guillain-Barré syndrome, and chronic inflammatory demyelinating polyneuropathy, hepatobiliary diseases such as infectious hepatitis (hepatitis A, B, C, D, E and other non-hepatotropic viruses), autoimmune chronic active hepatitis, primary biliary cirrhosis, granulomatous hepatitis, and sclerosing cholangitis, inflammatory bowel disease (ulcerative colitis: Crohn's disease), gluten-sensitive enteropathy, and Whipple's disease, autoimmune or immune-mediated skin diseases including bullous skin diseases, erythema multiforme and contact dermatitis, psoriasis, allergic diseases such as asthma, allergic rhinitis, atopic dermatitis, food hypersensitivity and urticaria, immunologic diseases of the lung such as eosinophilic pneumonias, idiopathic pulmonary fibrosis and hypersensitivity pneumonitis, transplantation associated diseases including graft rejection and graft -versus-host-disease. Infectious diseases including viral diseases such as AIDS (HIV infection), hepatitis A, B, C, D, and E, herpes, *etc.*, bacterial infections, fungal infections, protozoal infections and parasitic infections.

The term "effective amount" is a concentration or amount of a PRO polypeptide and/or agonist/antagonist which results in achieving a particular stated purpose. An "effective amount" of a PRO polypeptide or agonist or antagonist thereof may be determined empirically. Furthermore, a "therapeutically effective amount" is a concentration or amount of a PRO polypeptide and/or agonist/antagonist which is effective for achieving a stated therapeutic effect. This amount may also be determined empirically.

The term "cytotoxic agent" as used herein refers to a substance that inhibits or prevents the function of cells and/or causes destruction of cells. The term is intended to include radioactive isotopes (*e.g.*, I^{131} , I^{125} , Y^{90} and Re^{186}), chemotherapeutic agents, and toxins such as enzymatically active toxins of bacterial, fungal, plant or animal origin, or fragments thereof.

A "chemotherapeutic agent" is a chemical compound useful in the treatment of cancer. Examples of chemotherapeutic agents include adriamycin, doxorubicin, epirubicin, 5-fluorouracil, cytosine arabinoside ("Ara-C"), cyclophosphamide, thiotepa, busulfan, cytoxin, taxoids, *e.g.*, paclitaxel (Taxol, Bristol-Myers Squibb Oncology, Princeton, NJ), and doxetaxel (Taxotere, Rhône-Poulenc Rorer, Antony, France), toxotere, methotrexate, cisplatin, melphalan, vinblastine, bleomycin, etoposide, ifosfamide, mitomycin C, mitoxantrone, vincristine, vinorelbine, carboplatin, teniposide, daunomycin, carminomycin, aminopterin, dactinomycin, mitomycins, esperamicins (see U.S. Pat. No. 4,675,187), melphalan and other related nitrogen mustards. Also included in this definition are hormonal agents that act to regulate or inhibit hormone action on tumors such as tamoxifen and onapristone.

A "growth inhibitory agent" when used herein refers to a compound or composition which inhibits growth of a cell, especially cancer cell overexpressing any of the genes identified herein, either *in vitro* or *in vivo*. Thus, the growth inhibitory agent is one which significantly reduces the percentage of cells overexpressing such genes in S phase. Examples of growth inhibitory agents include agents that block cell cycle progression (at a place other than S phase), such as agents that induce G1 arrest and M-phase arrest. Classical M-phase blockers include the vincas (vincristine and vinblastine), taxol, and topo II inhibitors such as doxorubicin, epirubicin, daunorubicin, etoposide, and bleomycin. Those agents that arrest G1 also spill over into S-phase arrest, for example, DNA alkylating agents such as tamoxifen, prednisone, dacarbazine, mechlorethamine, cisplatin, methotrexate, 5-fluorouracil, and ara-C. Further information can be found in *The Molecular Basis of Cancer*, Mendelsohn and Israel, eds., Chapter 1, entitled "Cell cycle regulation, oncogens, and antineoplastic drugs" by Murakami *et al.* (WB Saunders: Philadelphia, 1995), especially p. 13.

The term "cytokine" is a generic term for proteins released by one cell population which act on another cell as intercellular mediators. Examples of such cytokines are lymphokines, monokines, and traditional polypeptide hormones. Included among the cytokines are growth hormone such as human growth hormone, N-methionyl human growth hormone, and bovine growth hormone; parathyroid hormone; thyroxine; insulin; proinsulin; relaxin; prorelaxin; glycoprotein hormones such as follicle stimulating hormone (FSH), thyroid stimulating hormone (TSH), and luteinizing hormone (LH); hepatic growth factor; fibroblast growth factor; prolactin; placental lactogen; tumor necrosis factor- α and - β ; mullerian-inhibiting substance; mouse gonadotropin-associated peptide; inhibin; activin; vascular endothelial growth factor; integrin; thrombopoietin (TPO); nerve growth factors such as NGF- β ; platelet-growth factor; transforming growth factors (TGFs) such as TGF- α and TGF- β ; insulin-like growth factor-I and -II; erythropoietin (EPO);

osteoinductive factors; interferons such as interferon- α , - β , and - γ ; colony stimulating factors (CSFs) such as macrophage-CSF (M-CSF); granulocyte-macrophage-CSF (GM-CSF); and granulocyte-CSF (G-CSF); interleukins (ILs) such as IL-1, IL-1 α , IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-11, IL-12, IL-15 and tumor necrosis factor such as TNF- α or TNF- β ; and other polypeptide factors including LIF and kit ligand (KL). As used herein, the term cytokine includes proteins from natural sources or from recombinant cell culture and biologically active equivalents of the native sequence cytokines.

As used herein, the term "immunoadhesin" designates antibody-like molecules which combine the binding specificity of a heterologous protein (an "adhesin") with the effector functions of immunoglobulin constant domains. Structurally, the immunoadhesins comprise a fusion of an amino acid sequence with the desired binding specificity which is other than the antigen recognition and binding site of an antibody (*i.e.*, is "heterologous"), and an immunoglobulin constant domain sequence. The adhesin part of an immunoadhesin molecule typically is a contiguous amino acid sequence comprising at least the binding site of a receptor or a ligand. The immunoglobulin constant domain sequence in the immunoadhesin may be obtained from any immunoglobulin, such as IgG-1, IgG-2, IgG-3, or IgG-4 subtypes, IgA (including IgA-1 and IgA-2), IgE, IgD or IgM.

Table 1

```

/*
5  *
  * C-C increased from 12 to 15
  * Z is average of EQ
  * B is average of ND
10  * match with stop is _M; stop-stop = 0; J (joker) match = 0
  */
#define _M      -8      /* value of a match with a stop */

int  _day[26][26] = {
15  /* A B C D E F G H I J K L M N O P Q R S T U V W X Y Z */
  /* A */ { 2, 0, -2, 0, 0, -4, 1, -1, -1, 0, -1, -2, -1, 0, _M, 1, 0, -2, 1, 1, 0, 0, -6, 0, -3, 0},
  /* B */ { 0, 3, -4, 3, 2, -5, 0, 1, -2, 0, 0, -3, -2, 2, _M, -1, 1, 0, 0, 0, 0, -2, -5, 0, -3, 1},
  /* C */ {-2, -4, 15, -5, -5, -4, -3, -3, -2, 0, -5, -6, -5, -4, _M, -3, -5, -4, 0, -2, 0, -2, -8, 0, 0, -5},
  /* D */ { 0, 3, -5, 4, 3, -6, 1, 1, -2, 0, 0, -4, -3, 2, _M, -1, 2, -1, 0, 0, 0, -2, -7, 0, -4, 2},
  /* E */ { 0, 2, -5, 3, 4, -5, 0, 1, -2, 0, 0, -3, -2, 1, _M, -1, 2, -1, 0, 0, 0, -2, -7, 0, -4, 3},
20  /* F */ {-4, -5, -4, -6, -5, 9, -5, -2, 1, 0, -5, 2, 0, -4, _M, -5, -5, -4, -3, -3, 0, -1, 0, 0, 7, -5},
  /* G */ { 1, 0, -3, 1, 0, -5, 5, -2, -3, 0, -2, -4, -3, 0, _M, -1, -1, -3, 1, 0, 0, -1, -7, 0, -5, 0},
  /* H */ {-1, 1, -3, 1, 1, -2, -2, 6, -2, 0, 0, -2, -2, 2, _M, 0, 3, 2, -1, -1, 0, -2, -3, 0, 0, 2},
  /* I */ {-1, -2, -2, -2, -2, 1, -3, -2, 5, 0, -2, 2, 2, -2, _M, -2, -2, -2, -1, 0, 0, 4, -5, 0, -1, -2},
  /* J */ { 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, _M, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
25  /* K */ {-1, 0, -5, 0, 0, -5, -2, 0, -2, 0, 5, -3, 0, 1, _M, -1, 1, 3, 0, 0, 0, -2, -3, 0, -4, 0},
  /* L */ {-2, -3, -6, -4, -3, 2, -4, -2, 2, 0, -3, 6, 4, -3, _M, -3, -2, -3, -3, -1, 0, 2, -2, 0, -1, -2},
  /* M */ {-1, -2, -5, -3, -2, 0, -3, -2, 2, 0, 0, 4, 6, -2, _M, -2, -1, 0, -2, -1, 0, 2, -4, 0, -2, -1},
  /* N */ { 0, 2, -4, 2, 1, -4, 0, 2, -2, 0, 1, -3, -2, 2, _M, -1, 1, 0, 1, 0, 0, -2, -4, 0, -2, 1},
  /* O */ {_M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M, _M, 0, _M, _M, _M, _M, _M, _M, _M, _M, _M},
30  /* P */ { 1, -1, -3, -1, -1, -5, -1, 0, -2, 0, -1, -3, -2, -1, _M, 6, 0, 0, 1, 0, 0, -1, -6, 0, -5, 0},
  /* Q */ { 0, 1, -5, 2, 2, -5, -1, 3, -2, 0, 1, -2, -1, 1, _M, 0, 4, 1, -1, -1, 0, -2, -5, 0, -4, 3},
  /* R */ {-2, 0, -4, -1, -1, -4, -3, 2, -2, 0, 3, -3, 0, 0, _M, 0, 1, 6, 0, -1, 0, -2, 2, 0, -4, 0},
  /* S */ { 1, 0, 0, 0, 0, -3, 1, -1, -1, 0, 0, -3, -2, 1, _M, 1, -1, 0, 2, 1, 0, -1, -2, 0, -3, 0},
  /* T */ { 1, 0, -2, 0, 0, -3, 0, -1, 0, 0, 0, -1, -1, 0, _M, 0, -1, -1, 1, 3, 0, 0, -5, 0, -3, 0},
35  /* U */ { 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, _M, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
  /* V */ { 0, -2, -2, -2, -2, -1, -1, -2, 4, 0, -2, 2, 2, -2, _M, -1, -2, -2, -1, 0, 0, 4, -6, 0, -2, -2},
  /* W */ {-6, -5, -8, -7, -7, 0, -7, -3, -5, 0, -3, -2, -4, -4, _M, -6, -5, 2, -2, -5, 0, -6, 17, 0, 0, -6},
  /* X */ { 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, _M, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
  /* Y */ {-3, -3, 0, -4, -4, 7, -5, 0, -1, 0, -4, -1, -2, -2, _M, -5, -4, -4, -3, -3, 0, -2, 0, 0, 10, -4},
40  /* Z */ { 0, 1, -5, 2, 3, -5, 0, 2, -2, 0, 0, -2, -1, 1, _M, 0, 3, 0, 0, 0, 0, -2, -6, 0, -4, 4}
};

```


Table 1 (cont')

```

/*
*/
#include <stdio.h>
5  #include <ctype.h>

#define MAXJMP      16      /* max jumps in a diag */
#define MAXGAP      24      /* don't continue to penalize gaps larger than this */
#define JMPS        1024    /* max jmps in an path */
10  #define MX        4      /* save if there's at least MX-1 bases since last jmp */

#define DMAT        3      /* value of matching bases */
#define DMIS        0      /* penalty for mismatched bases */
#define DINS0       8      /* penalty for a gap */
15  #define DINS1     1      /* penalty per base */
#define PINS0       8      /* penalty for a gap */
#define PINS1       4      /* penalty per residue */

struct jmp {
20     short          n[MAXJMP]; /* size of jmp (neg for dely) */
     unsigned short x[MAXJMP]; /* base no. of jmp in seq x */
}; /* limits seq to 2^16 -1 */

struct diag {
25     int            score;      /* score at last jmp */
     long           offset;     /* offset of prev block */
     short          jmp;        /* current jmp index */
     struct jmp      jp;        /* list of jmps */
};

30  struct path {
     int            spc;        /* number of leading spaces */
     short          n[JMP]; /* size of jmp (gap) */
     int            x[JMP]; /* loc of jmp (last elem before gap) */
35  };

char      *ofile;      /* output file name */
char      *namex[2];   /* seq names: getseqs() */
char      *prog;       /* prog name for err msgs */
40  char      *seqx[2];  /* seqs: getseqs() */
int        dmax;        /* best diag: nw() */
int        dmax0;       /* final diag */
int        dna;         /* set if dna: main() */
int        endgaps;     /* set if penalizing end gaps */
45  int        gapx, gapy; /* total gaps in seqs */
int        len0, len1;  /* seq lens */
int        ngapx, ngapy; /* total size of gaps */
int        smax;        /* max score: nw() */
int        *xbm;        /* bitmap for matching */
50  long      offset;    /* current offset in jmp file */
struct     diag        *dx; /* holds diagonals */
struct     path        pp[2]; /* holds path for seqs */

char      *calloc(), *malloc(), *index(), *strcpy();
55  char      *getseq(), *g_calloc();

```

60

Table 1 (cont')

```

/* Needleman-Wunsch alignment program
*
* usage: progs file1 file2
5  * where file1 and file2 are two dna or two protein sequences.
* The sequences can be in upper- or lower-case and may contain ambiguity
* Any lines beginning with ';', '>' or '<' are ignored
* Max file length is 65535 (limited by unsigned short x in the jmp struct)
* A sequence with 1/3 or more of its elements ACGTU is assumed to be DNA
10 * Output is in the file "align.out"
*
* The program may create a tmp file in /tmp to hold info about traceback.
* Original version developed under BSD 4.3 on a vax 8650
*/
15 #include "nw.h"
#include "day.h"

static _dbval[26] = {
20     1,14,2,13,0,0,4,11,0,0,12,0,3,15,0,0,0,5,6,8,8,7,9,0,10,0
};

static _pbval[26] = {
25     1, 2[(1<<('D'-'A'))|(1<<('N'-'A'))], 4, 8, 16, 32, 64,
    128, 256, 0xFFFFFFFF, 1<<10, 1<<11, 1<<12, 1<<13, 1<<14,
    1<<15, 1<<16, 1<<17, 1<<18, 1<<19, 1<<20, 1<<21, 1<<22,
    1<<23, 1<<24, 1<<25[(1<<('E'-'A'))|(1<<('Q'-'A'))]
};

main(ac, av)
30     main
    int     ac;
    char    *av[ ];
{
35     prog = av[0];
    if (ac != 3) {
        fprintf(stderr, "usage: %s file1 file2\n", prog);
        fprintf(stderr, "where file1 and file2 are two dna or two protein sequences.\n");
        fprintf(stderr, "The sequences can be in upper- or lower-case\n");
        fprintf(stderr, "Any lines beginning with ';' or '<' are ignored\n");
40     fprintf(stderr, "Output is in the file \"align.out\"\n");
        exit(1);
    }
    namex[0] = av[1];
    namex[1] = av[2];
45     seqx[0] = getseq(namex[0], &len0);
    seqx[1] = getseq(namex[1], &len1);
    xbm = (dna)? _dbval : _pbval;

    endgaps = 0;                                /* 1 to penalize endgaps */
50     ofile = "align.out";                       /* output file */

    nw();                                         /* fill in the matrix, get the possible jmps */
    readjmps();                                  /* get the actual jmps */
    print();                                      /* print stats, alignment */
55     cleanup(0);                                /* unlink any tmp files */
}
60

```

Table 1 (cont')

```

/* do the alignment, return best score: main()
* dna: values in Fitch and Smith, PNAS, 80, 1382-1386, 1983
* pro: PAM 250 values
5  * When scores are equal, we prefer mismatches to any gap, prefer
   * a new gap to extending an ongoing gap, and prefer a gap in seqx
   * to a gap in seq y.
   */
nw()
10 {
    char      *px, *py;          /* seqs and ptrs */
    int        *ndely, *dely;     /* keep track of dely */
    int        ndelx, delx;       /* keep track of delx */
    15  int        *tmp;           /* for swapping row0, row1 */
    int        mis;              /* score for each type */
    int        ins0, ins1;        /* insertion penalties */
    register   id;               /* diagonal index */
    register   ij;               /* jmp index */
    20  register   *col0, *col1;   /* score for curr, last row */
    register   xx, yy;           /* index into seqs */

    dx = (struct diag *)g_calloc("to get diags", len0+len1+1, sizeof(struct diag));

    25  ndely = (int *)g_calloc("to get ndely", len1+1, sizeof(int));
    dely = (int *)g_calloc("to get dely", len1+1, sizeof(int));
    col0 = (int *)g_calloc("to get col0", len1+1, sizeof(int));
    col1 = (int *)g_calloc("to get col1", len1+1, sizeof(int));
    ins0 = (dna)? DINS0 : PINS0;
    30  ins1 = (dna)? DINS1 : PINS1;

    smax = -10000;
    if (endgaps) {
        35  for (col0[0] = dely[0] = -ins0, yy = 1; yy <= len1; yy++) {
            col0[yy] = dely[yy] = col0[yy-1] - ins1;
            ndely[yy] = yy;
        }
        col0[0] = 0;          /* Waterman Bull Math Biol 84 */
    }
    40  else
        for (yy = 1; yy <= len1; yy++)
            dely[yy] = -ins0;

    /* fill in match matrix
    */
    45  for (px = seqx[0], xx = 1; xx <= len0; px++, xx++) {
        /* initialize first entry in col
        */
        if (endgaps) {
            50  if (xx == 1)
                    col1[0] = delx = -(ins0+ins1);
                else
                    col1[0] = delx = col0[0] - ins1;
                ndelx = xx;
            55  }
        else {
            col1[0] = 0;
            delx = -ins0;
            ndelx = 0;
            60  }
    }

```

Table 1 (cont')**...nw**

```

5      for (py = seqx[1], yy = 1; yy <= len1; py++, yy++) {
        mis = col0[yy-1];
        if (dna)
            mis += (xbm[*px-'A']&xbm[*py-'A'])? DMAT : DMIS;
        else
            mis += _day[*px-'A'][*py-'A'];

10      /* update penalty for del in x seq;
        * favor new del over ongong del
        * ignore MAXGAP if weighting endgaps
        */
        if (endgaps || ndely[yy] < MAXGAP) {
15            if (col0[yy] - ins0 >= dely[yy]) {
                dely[yy] = col0[yy] - (ins0+ins1);
                ndely[yy] = 1;
            } else {
                dely[yy] -= ins1;
20                ndely[yy]++;
            }
        } else {
            if (col0[yy] - (ins0+ins1) >= dely[yy]) {
25                dely[yy] = col0[yy] - (ins0+ins1);
                ndely[yy] = 1;
            } else
                ndely[yy]++;
        }

30      /* update penalty for del in y seq;
        * favor new del over ongong del
        */
        if (endgaps || ndelx < MAXGAP) {
35            if (col1[yy-1] - ins0 >= delx) {
                delx = col1[yy-1] - (ins0+ins1);
                ndelx = 1;
            } else {
                delx -= ins1;
40                ndelx++;
            }
        } else {
            if (col1[yy-1] - (ins0+ins1) >= delx) {
                delx = col1[yy-1] - (ins0+ins1);
45                ndelx = 1;
            } else
                ndelx++;
        }

50      /* pick the maximum score; we're favoring
        * mis over any del and delx over dely
        */

```

55

60

Table 1 (cont')

...nw

```

id = xx - yy + len1 - 1;
if (mis >= delx && mis >= dely[yy])
    col1[yy] = mis;
else if (delx >= dely[yy]) {
    col1[yy] = delx;
    ij = dx[id].ijmp;
    if (dx[id].jp.n[0] && (!dna || (ndelx >= MAXJMP
10    && xx > dx[id].jp.x[ij]+MX) || mis > dx[id].score+DINS0)) {
        dx[id].ijmp++;
        if (++ij >= MAXJMP) {
            writejumps(id);
            ij = dx[id].ijmp = 0;
            dx[id].offset = offset;
            offset += sizeof(struct jmp) + sizeof(offset);
        }
    }
    dx[id].jp.n[ij] = ndelx;
    dx[id].jp.x[ij] = xx;
    dx[id].score = delx;
}
else {
    col1[yy] = dely[yy];
    ij = dx[id].ijmp;
    if (dx[id].jp.n[0] && (!dna || (ndely[yy] >= MAXJMP
25    && xx > dx[id].jp.x[ij]+MX) || mis > dx[id].score+DINS0)) {
        dx[id].ijmp++;
        if (++ij >= MAXJMP) {
            writejumps(id);
            ij = dx[id].ijmp = 0;
            dx[id].offset = offset;
            offset += sizeof(struct jmp) + sizeof(offset);
        }
    }
    dx[id].jp.n[ij] = -ndely[yy];
    dx[id].jp.x[ij] = xx;
    dx[id].score = dely[yy];
}
if (xx == len0 && yy < len1) {
    /* last col
    */
    if (endgaps)
        col1[yy] -= ins0+ins1*(len1-yy);
    if (col1[yy] > smax) {
        smax = col1[yy];
        dmax = id;
    }
}
if (endgaps && xx < len0)
    col1[yy-1] -= ins0+ins1*(len0-xx);
if (col1[yy-1] > smax) {
    smax = col1[yy-1];
    dmax = id;
}
tmp = col0; col0 = col1; col1 = tmp;
}
(void) free((char *)ndely);
(void) free((char *)dely);
(void) free((char *)col0);
(void) free((char *)col1);
}

```

Table 1 (cont')

```

/*
 *
 * print() -- only routine visible outside this module
 *
5  * static:
 * getmat() -- trace back best path, count matches: print()
 * pr_align() -- print alignment of described in array p[ ]: print()
 * dumpblock() -- dump a block of lines with numbers, stars: pr_align()
10 * nums() -- put out a number line: dumpblock()
 * putline() -- put out a line (name, [num], seq, [num]): dumpblock()
 * stars() -- put a line of stars: dumpblock()
 * stripname() -- strip any path and prefix from a seqname
 */
15
#include "nw.h"

#define SPC      3
#define P_LINE   256    /* maximum output line */
20 #define P_SPC   3      /* space between name or num and seq */

extern _day[26][26];
int olen;              /* set output line length */
FILE *fx;              /* output file */
25

print()
{
    print
{
30     int      lx, ly, firstgap, lastgap;      /* overlap */

    if ((fx = fopen(ofile, "w")) == 0) {
        fprintf(stderr, "%s: can't write %s\n", prog, ofile);
        cleanup(1);
    }
35     fprintf(fx, "<first sequence: %s (length = %d)\n", namex[0], len0);
    fprintf(fx, "<second sequence: %s (length = %d)\n", namex[1], len1);
    olen = 60;
    lx = len0;
    ly = len1;
40     firstgap = lastgap = 0;
    if (dmax < len1 - 1) {      /* leading gap in x */
        pp[0].spc = firstgap = len1 - dmax - 1;
        ly -= pp[0].spc;
    }
45     else if (dmax > len1 - 1) {      /* leading gap in y */
        pp[1].spc = firstgap = dmax - (len1 - 1);
        lx -= pp[1].spc;
    }
    if (dmax0 < len0 - 1) {      /* trailing gap in x */
50         lastgap = len0 - dmax0 - 1;
        lx -= lastgap;
    }
    else if (dmax0 > len0 - 1) {      /* trailing gap in y */
55         lastgap = dmax0 - (len0 - 1);
        ly -= lastgap;
    }
    getmat(lx, ly, firstgap, lastgap);
    pr_align();
60 }
}

```

Table 1 (cont')

```

/*
 * trace back the best path, count matches
 */
5  static
   getmat(lx, ly, firstgap, lastgap)                                     getmat
       int      lx, ly;                                     /* "core" (minus endgaps) */
       int      firstgap, lastgap;                             /* leading trailing overlap */
   {
10      int      nm, i0, i1, siz0, siz1;
       char      outx[32];
       double     pct;
       register   n0, n1;
15      register char  *p0, *p1;

       /* get total matches, score
        */
       i0 = i1 = siz0 = siz1 = 0;
       p0 = seqx[0] + pp[1].spc;
20      p1 = seqx[1] + pp[0].spc;
       n0 = pp[1].spc + 1;
       n1 = pp[0].spc + 1;

       nm = 0;
25      while ( *p0 && *p1 ) {
           if (siz0) {
               p1++;
               n1++;
               siz0--;
30           }
           else if (siz1) {
               p0++;
               n0++;
               siz1--;
35           }
           else {
               if (xbm[*p0-'A']&xbm[*p1-'A'])
                   nm++;
               if (n0++ == pp[0].x[i0])
                   siz0 = pp[0].n[i0++];
40               if (n1++ == pp[1].x[i1])
                   siz1 = pp[1].n[i1++];
               p0++;
               p1++;
45           }
       }

       /* pct homology:
        * if penalizing endgaps, base is the shorter seq
50      * else, knock off overhangs and take shorter core
        */
       if (endgaps)
           lx = (len0 < len1)? len0 : len1;
       else
55          lx = (lx < ly)? lx : ly;
       pct = 100.*(double)nm/(double)lx;
       fprintf(fx, "\n");
       fprintf(fx, "<%d match%s in an overlap of %d: %.2f percent similarity\n",
60          nm, (nm == 1)? "" : "es", lx, pct);

```

Table 1 (cont')

```

5      fprintf(fx, "<gaps in first sequence: %d", gapx);
      if (gapx) {
          (void) sprintf(outx, " (%d %s%s)",
              ngapx, (dna)? "base": "residue", (ngapx == 1)? "" : "s");
          fprintf(fx, "%s", outx);

10     fprintf(fx, ", gaps in second sequence: %d", gapy);
      if (gapy) {
          (void) sprintf(outx, " (%d %s%s)",
              ngapy, (dna)? "base": "residue", (ngapy == 1)? "" : "s");
          fprintf(fx, "%s", outx);
      }
15     if (dna)
        fprintf(fx,
            "\n<score: %d (match = %d, mismatch = %d, gap penalty = %d + %d per base)\n",
            smax, DMAT, DMIS, DINS0, DINS1);
    else
20     fprintf(fx,
        "\n<score: %d (Dayhoff PAM 250 matrix, gap penalty = %d + %d per residue)\n",
        smax, PINS0, PINS1);
    if (endgaps)
25     fprintf(fx,
        "<endgaps penalized. left endgap: %d %s%s, right endgap: %d %s%s\n",
        firstgap, (dna)? "base" : "residue", (firstgap == 1)? "" : "s",
        lastgap, (dna)? "base" : "residue", (lastgap == 1)? "" : "s");
    else
30     fprintf(fx, "<endgaps not penalized\n");
}
static      nm;          /* matches in core -- for checking */
static      lmax;        /* lengths of stripped file names */
static      ij[2];       /* jmp index for a path */
static      nc[2];       /* number at start of current line */
35 static      ni[2];      /* current elem number -- for gapping */
static      siz[2];
static char  *ps[2];      /* ptr to current element */
static char  *po[2];      /* ptr to next output char slot */
static char  out[2][P_LINE]; /* output line */
40 static char star[P_LINE]; /* set by stars() */

/*
 * print alignment of described in struct path pp[ ]
 */
45 static
pr_align()
{
    int      nn;          /* char count */
    int      more;
50     register i;

    for (i = 0, lmax = 0; i < 2; i++) {
        nn = stripname(name[i]);
        if (nn > lmax)
55             lmax = nn;

        nc[i] = 1;
        ni[i] = 1;
        siz[i] = ij[i] = 0;
60     ps[i] = seqx[i];
        po[i] = out[i];
    }

```

...getmat

pr_align

Table 1 (cont')**...pr_align**

```

for (nn = nm = 0, more = 1; more; ) {
    for (i = more = 0; i < 2; i++) {
        /*
5         * do we have more of this sequence?
        */
        if (!*ps[i])
            continue;

10         more++;

        if (pp[i].spc) { /* leading space */
            *po[i]++ = ' ';
            pp[i].spc--;
15        }
        else if (siz[i]) { /* in a gap */
            *po[i]++ = '-';
            siz[i]--;
20        }
        else { /* we're putting a seq element
            */
            *po[i] = *ps[i];
            if (islower(*ps[i]))
                *ps[i] = toupper(*ps[i]);
25            po[i]++;
            ps[i]++;

            /*
            * are we at next gap for this seq?
            */
30            if (ni[i] == pp[i].x[ij[i]]) {
                /*
                * we need to merge all gaps
                * at this location
                */
35                siz[i] = pp[i].n[ij[i]++];
                while (ni[i] == pp[i].x[ij[i]])
                    siz[i] += pp[i].n[ij[i]++];

                }
                ni[i]++;
40            }
        }
        if (++nn == olen || !more && nn) {
            dumpblock();
            for (i = 0; i < 2; i++)
                po[i] = out[i];
            nn = 0;
45        }
    }
}

/*
 * dump a block of lines, including numbers, stars: pr_align()
 */
55 static
dumpblock()
{
    register i;
    for (i = 0; i < 2; i++)
        *po[i]-- = '\0';
60

```

Table 1 (cont')**...dumpblock**

```

5      (void) putc('\n', fx);
      for (i = 0; i < 2; i++) {
          if (*out[i] && (*out[i] != ' ' || *(po[i]) != ' ')) {
              if (i == 0)
                  nums(i);
              if (i == 0 && *out[1])
                  stars();
              putline(i);
              if (i == 0 && *out[1])
                  fprintf(fx, star);
              if (i == 1)
                  nums(i);
          }
      }
}

20 /*
   * put out a number line: dumpblock()
   */
   static
   nums(ix)
25     int      ix;      /* index in out[ ] holding seq line */
   {
       char      nline[P_LINE];
       register  i, j;
       register char *pn, *px, *py;
30
       for (pn = nline, i = 0; i < lmax+P_SPC; i++, pn++)
           *pn = ' ';
       for (i = nc[ix], py = out[ix]; *py; py++, pn++) {
           if (*py == ' ' || *py == '-')
35               *pn = ' ';
           else {
               if (i%10 == 0 || (i == 1 && nc[ix] != 1)) {
                   j = (i < 0)? -i : i;
                   for (px = pn; j; j /= 10, px--)
40                       *px = j%10 + '0';
                   if (i < 0)
                       *px = '-';
               }
               else
45                   *pn = ' ';
               i++;
           }
       }
       *pn = '\0';
       nc[ix] = i;
       for (pn = nline; *pn; pn++)
           (void) putc(*pn, fx);
       (void) putc('\n', fx);
50   }

55 /*
   * put out a line (name, [num], seq, [num]): dumpblock()
   */
   static
   putline(ix)
60     int      ix;      {

```

nums**putline**

Table 1 (cont')**...putline**

```

5      int          i;
      register char *px;

      for (px = namex[ix], i = 0; *px && *px != ':'; px++, i++)
          (void) putc(*px, fx);
10     for (; i < lmax+P_SPC; i++)
          (void) putc(' ', fx);

      /* these count from 1:
      * ni[ ] is current element (from 1)
      * nc[ ] is number at start of current line
      */
15     for (px = out[ix]; *px; px++)
          (void) putc(*px&0x7F, fx);
      (void) putc('\n', fx);
20 }

/*
 * put a line of stars (seqs always in out[0], out[1]): dumpblock()
 */
25 static
stars()
{
    stars
    {
30        int          i;
        register char *p0, *p1, cx, *px;

        if (!*out[0] || (*out[0] == ' ' && *(po[0]) == ' ') ||
            !*out[1] || (*out[1] == ' ' && *(po[1]) == ' '))
            return;
35        px = star;
        for (i = lmax+P_SPC; i; i--)
            *px++ = ' ';

        for (p0 = out[0], p1 = out[1]; *p0 && *p1; p0++, p1++) {
40            if (isalpha(*p0) && isalpha(*p1)) {

                if (xbm[*p0-'A']&xbm[*p1-'A']) {
                    cx = '*';
                    nm++;
45                }
                else if (!dna && _day[*p0-'A'][*p1-'A'] > 0)
                    cx = '.';
                else
                    cx = ' ';
50            }
            else
                cx = ' ';
            *px++ = cx;
55        }
        *px++ = '\n';
        *px = '\0';
    }
60

```

Table 1 (cont')

```

/*
 * strip path or prefix from pn, return len: pr_align()
 */
5  static
  stripname(pn)
    stripname
      char *pn; /* file name (may be path) */
10  {
    register char *px, *py;

    py = 0;
    for (px = pn; *px; px++)
      if (*px == '/')
15      py = px + 1;

    if (py)
      (void) strcpy(pn, py);
    return(strlen(pn));
20  }

```

25

30

35

40

45

50

55

60

Table 1 (cont')

```

/*
 * cleanup() -- cleanup any tmp file
 * getseq() -- read in seq, set dna, len, maxlen
5  * g_calloc() -- calloc() with error checkin
 * readjumps() -- get the good jumps, from tmp file if necessary
 * writejumps() -- write a filled array of jumps to a tmp file: nw()
 */
10 #include "nw.h"
#include <sys/file.h>

char    *jname = "/tmp/homgXXXXXX";      /* tmp file for jumps */
FILE    *fj;

15 int    cleanup();                      /* cleanup tmp file */
long    lseek();

/*
 * remove any tmp file if we blow
20 */
cleanup(i)                                cleanup
{
    int    i;
    if (fj)
        (void) unlink(jname);
    exit(i);
}

/*
30 * read, return ptr to seq, set dna, len, maxlen
 * skip lines starting with ';', '<', or '>'
 * seq in upper or lower case
 */
char    *
35 getseq(file, len)                      getseq
{
    char    *file;      /* file name */
    int     *len;       /* seq len */
    {
        char    line[1024], *pseq;
        register char *px, *py;
        int     natgc, tlen;
        FILE    *fp;

        if ((fp = fopen(file, "r")) == 0) {
45             fprintf(stderr, "%s: can't read %s\n", prog, file);
             exit(1);
        }
        tlen = natgc = 0;
        while (fgets(line, 1024, fp)) {
50             if (*line == ';' || *line == '<' || *line == '>')
                 continue;
             for (px = line; *px != '\n'; px++)
                 if (isupper(*px) || islower(*px))
                     tlen++;
55         }
        if ((pseq = malloc((unsigned)(tlen+6))) == 0) {
             fprintf(stderr, "%s: malloc() failed to get %d bytes for %s\n", prog, tlen+6, file);
             exit(1);
        }
        pseq[0] = pseq[1] = pseq[2] = pseq[3] = '\0';
60

```

Table 1 (cont')

...getseq

```

5      py = pseq + 4;
      *len = tlen;
      rewind(fp);

      while (fgets(line, 1024, fp)) {
          if (*line == ';' || *line == '<' || *line == '>')
              continue;
10         for (px = line; *px != '\n'; px++) {
              if (isupper(*px))
                  *py++ = *px;
              else if (islower(*px))
                  *py++ = toupper(*px);
15             if (index("ATGCU", *(py-1)))
                  natgc++;
          }
      }
      *py++ = '\0';
      *py = '\0';
      (void) fclose(fp);
      dna = natgc > (tlen/3);
      return(pseq+4);
25 }

char *
g_alloc(msg, nx, sz)
char *msg;          /* program, calling routine */
int nx, sz;         /* number and size of elements */
30 {
    char *px, *calloc();

    if ((px = calloc((unsigned)nx, (unsigned)sz)) == 0) {
        if (*msg) {
35             fprintf(stderr, "%s: g_alloc() failed %s (n=%d, sz=%d)\n", prog, msg, nx, sz);
            exit(1);
        }
    }
    return(px);
40 }

/*
 * get final jmps from dx[ ] or tmp file, set pp[ ], reset dmax: main()
 */
45 readjmps()
    readjmps
{
    int fd = -1;
    int siz, i0, i1;
50     register i, j, xx;

    if (fj) {
        (void) fclose(fj);
        if ((fd = open(jname, O_RDONLY, 0)) < 0) {
55             fprintf(stderr, "%s: can't open() %s\n", prog, jname);
            cleanup(1);
        }
    }

    for (i = i0 = i1 = 0, dmax0 = dmax, xx = len0; ; i++) {
60         while (1) {
            for (j = dx[dmax].ijmp; j >= 0 && dx[dmax].jp.x[j] >= xx; j--)
                ;

```

g_alloc

Table 1 (cont')**...readjmps**

```

5         if (j < 0 && dx[dmax].offset && fj) {
            (void) lseek(fd, dx[dmax].offset, 0);
            (void) read(fd, (char *)&dx[dmax].jp, sizeof(struct jmp));
            (void) read(fd, (char *)&dx[dmax].offset, sizeof(dx[dmax].offset));
            dx[dmax].ijmp = MAXJMP-1;
        }
10        else
            break;
    }
    if (i >= JMPS) {
        fprintf(stderr, "%s: too many gaps in alignment\n", prog);
        cleanup(1);
15    }
    if (j >= 0) {
        siz = dx[dmax].jp.n[j];
        xx = dx[dmax].jp.x[j];
        dmax += siz;
20        if (siz < 0) { /* gap in second seq */
            pp[1].n[i1] = -siz;
            xx += siz;
            /* id = xx - yy + len1 - 1
            */
25            pp[1].x[i1] = xx - dmax + len1 - 1;
            gapy++;
            ngapy -= siz;
            /* ignore MAXGAP when doing endgaps */
            siz = (-siz < MAXGAP || endgaps)? -siz : MAXGAP;
30            i1++;
        }
        else if (siz > 0) { /* gap in first seq */
            pp[0].n[i0] = siz;
            pp[0].x[i0] = xx;
            gapx++;
            ngapx += siz;
            /* ignore MAXGAP when doing endgaps */
            siz = (siz < MAXGAP || endgaps)? siz : MAXGAP;
40            i0++;
        }
    }
    else
        break;
}
45
/* reverse the order of jmps
*/
for (j = 0, i0--; j < i0; j++, i0--) {
50    i = pp[0].n[j]; pp[0].n[j] = pp[0].n[i0]; pp[0].n[i0] = i;
    i = pp[0].x[j]; pp[0].x[j] = pp[0].x[i0]; pp[0].x[i0] = i;
}
for (j = 0, i1--; j < i1; j++, i1--) {
    i = pp[1].n[j]; pp[1].n[j] = pp[1].n[i1]; pp[1].n[i1] = i;
    i = pp[1].x[j]; pp[1].x[j] = pp[1].x[i1]; pp[1].x[i1] = i;
55 }
if (fd >= 0)
    (void) close(fd);
if (fj) {
    (void) unlink(jname);
60    fj = 0;
    offset = 0;
}
}

```

Table 1 (cont')

```

/*
5  * write a filled jmp struct offset of the prev one (if any): nw()
*/
writejumps(ix)
    writejumps
    int      ix;
10  {
    char      *mktemp();
    if (!fj) {
        if (mktemp(jname) < 0) {
15             fprintf(stderr, "%s: can't mktemp() %s\n", prog, jname);
            cleanup(1);
        }
        if ((fj = fopen(jname, "w")) == 0) {
            fprintf(stderr, "%s: can't write %s\n", prog, jname);
20             exit(1);
        }
    }
    (void) fwrite((char *)&dx[ix].jp, sizeof(struct jmp), 1, fj);
    (void) fwrite((char *)&dx[ix].offset, sizeof(dx[ix].offset), 1, fj);
25  }

```


Table 2

5 PRO XXXXXXXXXXXXXXXXXXXX (Length = 15 amino acids)
 Comparison Protein XXXXXYYYYYYYY (Length = 12 amino acids)
 % amino acid sequence identity =

(the number of identically matching amino acid residues between the two polypeptide sequences as
 10 determined by ALIGN-2) divided by (the total number of amino acid residues of the PRO polypeptide) =
 5 divided by 15 = 33.3%

Table 3

15 PRO XXXXXXXXXXXX (Length = 10 amino acids)
 Comparison Protein XXXXXYYYYYYYZZYZ (Length = 15 amino acids)
 % amino acid sequence identity =

(the number of identically matching amino acid residues between the two polypeptide sequences as
 20 determined by ALIGN-2) divided by (the total number of amino acid residues of the PRO polypeptide) =
 5 divided by 10 = 50%

Table 4

25 PRO-DNA NNNNNNNNNNNNNN (Length = 14 nucleotides)
 Comparison DNA NNNNNLLLLLLLLLL (Length = 16 nucleotides)
 % nucleic acid sequence identity =

30 (the number of identically matching nucleotides between the two nucleic acid sequences as determined by
 ALIGN-2) divided by (the total number of nucleotides of the PRO-DNA nucleic acid sequence) =
 6 divided by 14 = 42.9%

Table 5

35 PRO-DNA NNNNNNNNNNNN (Length = 12 nucleotides)
 Comparison DNA NNNNLLLVV (Length = 9 nucleotides)
 % nucleic acid sequence identity =

40

(the number of identically matching nucleotides between the two nucleic acid sequences as determined by ALIGN-2) divided by (the total number of nucleotides of the PRO-DNA nucleic acid sequence) =
4 divided by 12 = 33.3%

5 II. Compositions and Methods of the Invention

A. Full-Length PRO Polypeptides

The present invention provides newly identified and isolated nucleotide sequences encoding polypeptides referred to in the present application as PRO polypeptides. In particular, cDNAs encoding various PRO polypeptides have been identified and isolated, as disclosed in further detail in the Examples
10 below. However, for sake of simplicity, in the present specification the protein encoded by the full length native nucleic acid molecules disclosed herein as well as all further native homologues and variants included in the foregoing definition of PRO, will be referred to as "PRO/number", regardless of their origin or mode of preparation.

As disclosed in the Examples below, various cDNA clones have been disclosed. The predicted
15 amino acid sequence can be determined from the nucleotide sequence using routine skill. For the PRO polypeptides and encoding nucleic acids described herein, Applicants have identified what is believed to be the reading frame best identifiable with the sequence information available at the time.

B. PRO Polypeptide Variants

In addition to the full-length native sequence PRO polypeptides described herein, it is contemplated
20 that PRO variants can be prepared. PRO variants can be prepared by introducing appropriate nucleotide changes into the PRO DNA, and/or by synthesis of the desired PRO polypeptide. Those skilled in the art will appreciate that amino acid changes may alter post-translational processes of the PRO, such as changing the number or position of glycosylation sites or altering the membrane anchoring characteristics.

Variations in the native full-length sequence PRO or in various domains of the PRO described
25 herein, can be made, for example, using any of the techniques and guidelines for conservative and non-conservative mutations set forth, for instance, in U.S. Patent No. 5,364,934. Variations may be a substitution, deletion or insertion of one or more codons encoding the PRO that results in a change in the amino acid sequence of the PRO as compared with the native sequence PRO. Optionally, the variation is by substitution of at least one amino acid with any other amino acid in one or more of the domains of the PRO.
30 Guidance in determining which amino acid residue may be inserted, substituted or deleted without adversely affecting the desired activity may be found by comparing the sequence of the PRO with that of homologous known protein molecules and minimizing the number of amino acid sequence changes made in regions of high homology. Amino acid substitutions can be the result of replacing one amino acid with another amino acid having similar structural and/or chemical properties, such as the replacement of a leucine with a serine,
35 i.e., conservative amino acid replacements. Insertions or deletions may optionally be in the range of about 1 to 5 amino acids. The variation allowed may be determined by systematically making insertions, deletions or substitutions of amino acids in the sequence and testing the resulting variants for activity exhibited by the full-length or mature native sequence.

PRO polypeptide fragments are provided herein. Such fragments may be truncated at the N-
40 terminus or C-terminus, or may lack internal residues, for example, when compared with a full length native

protein. Certain fragments lack amino acid residues that are not essential for a desired biological activity of the PRO polypeptide.

PRO fragments may be prepared by any of a number of conventional techniques. Desired peptide fragments may be chemically synthesized. An alternative approach involves generating PRO fragments by enzymatic digestion, e.g., by treating the protein with an enzyme known to cleave proteins at sites defined by particular amino acid residues, or by digesting the DNA with suitable restriction enzymes and isolating the desired fragment. Yet another suitable technique involves isolating and amplifying a DNA fragment encoding a desired polypeptide fragment, by polymerase chain reaction (PCR). Oligonucleotides that define the desired termini of the DNA fragment are employed at the 5' and 3' primers in the PCR. Preferably, PRO polypeptide fragments share at least one biological and/or immunological activity with the native PRO polypeptide disclosed herein.

In particular embodiments, conservative substitutions of interest are shown in Table 6 under the heading of preferred substitutions. If such substitutions result in a change in biological activity, then more substantial changes, denominated exemplary substitutions in Table 6, or as further described below in reference to amino acid classes, are introduced and the products screened.

Table 6

5	Original	Exemplary	Preferred
	Residue	Substitutions	Substitutions
	Ala (A)	val; leu; ile	val
	Arg (R)	lys; gln; asn	lys
	Asn (N)	gln; his; lys; arg	gln
	Asp (D)	glu	glu
10	Cys (C)	ser	ser
	Gln (Q)	asn	asn
	Glu (E)	asp	asp
	Gly (G)	pro; ala	ala
	His (H)	asn; gln; lys; arg	arg
15	Ile (I)	leu; val; met; ala; phe; norleucine	leu
	Leu (L)	norleucine; ile; val; met; ala; phe	ile
	Lys (K)	arg; gln; asn	arg
20	Met (M)	leu; phe; ile	leu
	Phe (F)	leu; val; ile; ala; tyr	leu
	Pro (P)	ala	ala
	Ser (S)	thr	thr
	Thr (T)	ser	ser
25	Trp (W)	tyr; phe	tyr
	Tyr (Y)	trp; phe; thr; ser	phe
	Val (V)	ile; leu; met; phe; ala; norleucine	leu

30 Substantial modifications in function or immunological identity of the PRO polypeptide are accomplished by selecting substitutions that differ significantly in their effect on maintaining (a) the structure of the polypeptide backbone in the area of the substitution, for example, as a sheet or helical conformation, (b) the charge or hydrophobicity of the molecule at the target site, or (c) the bulk of the side chain. Naturally occurring residues are divided into groups based on common side-chain properties:

- 35 (1) hydrophobic: norleucine, met, ala, val, leu, ile;
 (2) neutral hydrophilic: cys, ser, thr;
 (3) acidic: asp, glu;
 (4) basic: asn, gln, his, lys, arg;
 (5) residues that influence chain orientation: gly, pro; and
 40 (5) aromatic: trp, tyr, phe.

Non-conservative substitutions will entail exchanging a member of one of these classes for another class. Such substituted residues also may be introduced into the conservative substitution sites or, more preferably, into the remaining (non-conserved) sites.

The variations can be made using methods known in the art such as oligonucleotide-mediated (site-directed) mutagenesis, alanine scanning, and PCR mutagenesis. Site-directed mutagenesis [Carter et al., Nucl. Acids Res., 13:4331 (1986); Zoller et al., Nucl. Acids Res., 10:6487 (1987)], cassette mutagenesis [Wells et al., Gene, 34:315 (1985)], restriction selection mutagenesis [Wells et al., Philos. Trans. R. Soc. London SerA, 317:415 (1986)] or other known techniques can be performed on the cloned DNA to produce the PRO variant DNA.

Scanning amino acid analysis can also be employed to identify one or more amino acids along a contiguous sequence. Among the preferred scanning amino acids are relatively small, neutral amino acids. Such amino acids include alanine, glycine, serine, and cysteine. Alanine is typically a preferred scanning amino acid among this group because it eliminates the side-chain beyond the beta-carbon and is less likely to alter the main-chain conformation of the variant [Cunningham and Wells, Science, 244: 1081-1085 (1989)]. Alanine is also typically preferred because it is the most common amino acid. Further, it is frequently found in both buried and exposed positions [Creighton, The Proteins, (W.H. Freeman & Co., N.Y.); Chothia, J. Mol. Biol., 150:1 (1976)]. If alanine substitution does not yield adequate amounts of variant, an isoteric amino acid can be used.

C. Modifications of PRO

Covalent modifications of PRO are included within the scope of this invention. One type of covalent modification includes reacting targeted amino acid residues of a PRO polypeptide with an organic derivatizing agent that is capable of reacting with selected side chains or the N- or C- terminal residues of the PRO. Derivatization with bifunctional agents is useful, for instance, for crosslinking PRO to a water-insoluble support matrix or surface for use in the method for purifying anti-PRO antibodies, and vice-versa. Commonly used crosslinking agents include, e.g., 1,1-bis(diazoacetyl)-2-phenylethane, glutaraldehyde, N-hydroxysuccinimide esters, for example, esters with 4-azidosalicylic acid, homobifunctional imidoesters, including disuccinimidyl esters such as 3,3'-dithiobis(succinimidylpropionate), bifunctional maleimides such as bis-N-maleimido-1,8-octane and agents such as methyl-3-[(p-azidophenyl)dithio]propioimide.

Other modifications include deamidation of glutamyl and asparaginy residues to the corresponding glutamyl and aspartyl residues, respectively, hydroxylation of proline and lysine, phosphorylation of hydroxyl groups of seryl or threonyl residues, methylation of the α -amino groups of lysine, arginine, and histidine side chains [T.E. Creighton, Proteins: Structure and Molecular Properties, W.H. Freeman & Co., San Francisco, pp. 79-86 (1983)], acetylation of the N-terminal amine, and amidation of any C-terminal carboxyl group.

Another type of covalent modification of the PRO polypeptide included within the scope of this invention comprises altering the native glycosylation pattern of the polypeptide. "Altering the native glycosylation pattern" is intended for purposes herein to mean deleting one or more carbohydrate moieties found in native sequence PRO (either by removing the underlying glycosylation site or by deleting the glycosylation by chemical and/or enzymatic means), and/or adding one or more glycosylation sites that are not present in the native sequence PRO. In addition, the phrase includes qualitative changes in the glycosylation of the native proteins, involving a change in the nature and proportions of the various carbohydrate moieties present.

Addition of glycosylation sites to the PRO polypeptide may be accomplished by altering the amino acid sequence. The alteration may be made, for example, by the addition of, or substitution by, one or more serine or threonine residues to the native sequence PRO (for O-linked glycosylation sites). The PRO amino acid sequence may optionally be altered through changes at the DNA level, particularly by mutating the DNA encoding the PRO polypeptide at preselected bases such that codons are generated that will translate into the desired amino acids.

Another means of increasing the number of carbohydrate moieties on the PRO polypeptide is by chemical or enzymatic coupling of glycosides to the polypeptide. Such methods are described in the art, e.g., in WO 87/05330 published 11 September 1987, and in Aplin and Wriston, CRC Crit. Rev. Biochem., pp. 259-306 (1981).

5 Removal of carbohydrate moieties present on the PRO polypeptide may be accomplished chemically or enzymatically or by mutational substitution of codons encoding for amino acid residues that serve as targets for glycosylation. Chemical deglycosylation techniques are known in the art and described, for instance, by Hakimuddin, et al., Arch. Biochem. Biophys., 259:52 (1987) and by Edge et al., Anal. Biochem., 118:131 (1981). Enzymatic cleavage of carbohydrate moieties on polypeptides can be achieved
10 by the use of a variety of endo- and exo-glycosidases as described by Thotakura et al., Meth. Enzymol., 138:350 (1987).

Another type of covalent modification of PRO comprises linking the PRO polypeptide to one of a variety of nonproteinaceous polymers, e.g., polyethylene glycol (PEG), polypropylene glycol, or polyoxyalkylenes, in the manner set forth in U.S. Patent Nos. 4,640,835; 4,496,689; 4,301,144; 4,670,417;
15 4,791,192 or 4,179,337.

The PRO of the present invention may also be modified in a way to form a chimeric molecule comprising PRO fused to another, heterologous polypeptide or amino acid sequence.

In one embodiment, such a chimeric molecule comprises a fusion of the PRO with a tag polypeptide which provides an epitope to which an anti-tag antibody can selectively bind. The epitope tag is
20 generally placed at the amino- or carboxyl- terminus of the PRO. The presence of such epitope-tagged forms of the PRO can be detected using an antibody against the tag polypeptide. Also, provision of the epitope tag enables the PRO to be readily purified by affinity purification using an anti-tag antibody or another type of affinity matrix that binds to the epitope tag. Various tag polypeptides and their respective antibodies are well known in the art. Examples include poly-histidine (poly-his) or poly-histidine-glycine
25 (poly-his-gly) tags; the flu HA tag polypeptide and its antibody 12CA5 [Field et al., Mol. Cell. Biol., 8:2159-2165 (1988)]; the c-myc tag and the 8F9, 3C7, 6E10, G4, B7 and 9E10 antibodies thereto [Evan et al., Molecular and Cellular Biology, 5:3610-3616 (1985)]; and the Herpes Simplex virus glycoprotein D (gD) tag and its antibody [Paborsky et al., Protein Engineering, 3(6):547-553 (1990)]. Other tag polypeptides include the Flag-peptide [Hopp et al., BioTechnology, 6:1204-1210 (1988)]; the KT3 epitope peptide
30 [Martin et al., Science, 255:192-194 (1992)]; an alpha-tubulin epitope peptide [Skinner et al., J. Biol. Chem., 266:15163-15166 (1991)]; and the T7 gene 10 protein peptide tag [Lutz-Freyermuth et al., Proc. Natl. Acad. Sci. USA, 87:6393-6397 (1990)].

In an alternative embodiment, the chimeric molecule may comprise a fusion of the PRO with an immunoglobulin or a particular region of an immunoglobulin. For a bivalent form of the chimeric molecule
35 (also referred to as an "immunoadhesin"), such a fusion could be to the Fc region of an IgG molecule. The Ig fusions preferably include the substitution of a soluble (transmembrane domain deleted or inactivated) form of a PRO polypeptide in place of at least one variable region within an Ig molecule. In a particularly preferred embodiment, the immunoglobulin fusion includes the hinge, CH2 and CH3, or the hinge, CH1, CH2 and CH3 regions of an IgG1 molecule. For the production of immunoglobulin fusions see also US
40 Patent No. 5,428,130 issued June 27, 1995.

D. Preparation of PRO

The description below relates primarily to production of PRO by culturing cells transformed or transfected with a vector containing PRO nucleic acid. It is, of course, contemplated that alternative methods, which are well known in the art, may be employed to prepare PRO. For instance, the PRO sequence, or portions thereof, may be produced by direct peptide synthesis using solid-phase techniques [see, e.g., Stewart et al., Solid-Phase Peptide Synthesis, W.H. Freeman Co., San Francisco, CA (1969); Merrifield, J. Am. Chem. Soc., **85**:2149-2154 (1963)]. *In vitro* protein synthesis may be performed using manual techniques or by automation. Automated synthesis may be accomplished, for instance, using an Applied Biosystems Peptide Synthesizer (Foster City, CA) using manufacturer's instructions. Various portions of the PRO may be chemically synthesized separately and combined using chemical or enzymatic methods to produce the full-length PRO.

1. Isolation of DNA Encoding PRO

DNA encoding PRO may be obtained from a cDNA library prepared from tissue believed to possess the PRO mRNA and to express it at a detectable level. Accordingly, human PRO DNA can be conveniently obtained from a cDNA library prepared from human tissue, such as described in the Examples. The PRO-encoding gene may also be obtained from a genomic library or by known synthetic procedures (e.g., automated nucleic acid synthesis).

Libraries can be screened with probes (such as antibodies to the PRO or oligonucleotides of at least about 20-80 bases) designed to identify the gene of interest or the protein encoded by it. Screening the cDNA or genomic library with the selected probe may be conducted using standard procedures, such as described in Sambrook et al., Molecular Cloning: A Laboratory Manual (New York: Cold Spring Harbor Laboratory Press, 1989). An alternative means to isolate the gene encoding PRO is to use PCR methodology [Sambrook et al., supra; Dieffenbach et al., PCR Primer: A Laboratory Manual (Cold Spring Harbor Laboratory Press, 1995)].

The Examples below describe techniques for screening a cDNA library. The oligonucleotide sequences selected as probes should be of sufficient length and sufficiently unambiguous that false positives are minimized. The oligonucleotide is preferably labeled such that it can be detected upon hybridization to DNA in the library being screened. Methods of labeling are well known in the art, and include the use of radiolabels like ³²P-labeled ATP, biotinylation or enzyme labeling. Hybridization conditions, including moderate stringency and high stringency, are provided in Sambrook et al., supra.

Sequences identified in such library screening methods can be compared and aligned to other known sequences deposited and available in public databases such as GenBank or other private sequence databases. Sequence identity (at either the amino acid or nucleotide level) within defined regions of the molecule or across the full-length sequence can be determined using methods known in the art and as described herein.

Nucleic acid having protein coding sequence may be obtained by screening selected cDNA or genomic libraries using the deduced amino acid sequence disclosed herein for the first time, and, if necessary, using conventional primer extension procedures as described in Sambrook et al., supra, to detect precursors and processing intermediates of mRNA that may not have been reverse-transcribed into cDNA.

2. Selection and Transformation of Host Cells

Host cells are transfected or transformed with expression or cloning vectors described herein for PRO production and cultured in conventional nutrient media modified as appropriate for inducing promoters, selecting transformants, or amplifying the genes encoding the desired sequences. The culture conditions, such as media, temperature, pH and the like, can be selected by the skilled artisan without undue experimentation. In general, principles, protocols, and practical techniques for maximizing the productivity of cell cultures can be found in Mammalian Cell Biotechnology: a Practical Approach, M. Butler, ed. (IRL Press, 1991) and Sambrook et al., supra.

Methods of eukaryotic cell transfection and prokaryotic cell transformation are known to the ordinarily skilled artisan, for example, CaCl₂, CaPO₄, liposome-mediated and electroporation. Depending on the host cell used, transformation is performed using standard techniques appropriate to such cells. The calcium treatment employing calcium chloride, as described in Sambrook et al., supra, or electroporation is generally used for prokaryotes. Infection with *Agrobacterium tumefaciens* is used for transformation of certain plant cells, as described by Shaw et al., Gene, 23:315 (1983) and WO 89/05859 published 29 June 1989. For mammalian cells without such cell walls, the calcium phosphate precipitation method of Graham and van der Eb, Virology, 52:456-457 (1978) can be employed. General aspects of mammalian cell host system transfections have been described in U.S. Patent No. 4,399,216. Transformations into yeast are typically carried out according to the method of Van Solingen et al., J. Bact., 130:946 (1977) and Hsiao et al., Proc. Natl. Acad. Sci. (USA), 76:3829 (1979). However, other methods for introducing DNA into cells, such as by nuclear microinjection, electroporation, bacterial protoplast fusion with intact cells, or polycations, e.g., polybrene, polyornithine, may also be used. For various techniques for transforming mammalian cells, see Keown et al., Methods in Enzymology, 185:527-537 (1990) and Mansour et al., Nature, 336:348-352 (1988).

Suitable host cells for cloning or expressing the DNA in the vectors herein include prokaryote, yeast, or higher eukaryote cells. Suitable prokaryotes include but are not limited to eubacteria, such as Gram-negative or Gram-positive organisms, for example, Enterobacteriaceae such as *E. coli*. Various *E. coli* strains are publicly available, such as *E. coli* K12 strain MM294 (ATCC 31,446); *E. coli* X1776 (ATCC 31,537); *E. coli* strain W3110 (ATCC 27,325) and K5 772 (ATCC 53,635). Other suitable prokaryotic host cells include Enterobacteriaceae such as *Escherichia*, e.g., *E. coli*, *Enterobacter*, *Erwinia*, *Klebsiella*, *Proteus*, *Salmonella*, e.g., *Salmonella typhimurium*, *Serratia*, e.g., *Serratia marcescans*, and *Shigella*, as well as *Bacilli* such as *B. subtilis* and *B. licheniformis* (e.g., *B. licheniformis* 41P disclosed in DD 266,710 published 12 April 1989), *Pseudomonas* such as *P. aeruginosa*, and *Streptomyces*. These examples are illustrative rather than limiting. Strain W3110 is one particularly preferred host or parent host because it is a common host strain for recombinant DNA product fermentations. Preferably, the host cell secretes minimal amounts of proteolytic enzymes. For example, strain W3110 may be modified to effect a genetic mutation in the genes encoding proteins endogenous to the host, with examples of such hosts including *E. coli* W3110 strain 1A2, which has the complete genotype *tonA* ; *E. coli* W3110 strain 9E4, which has the complete genotype *tonA ptr3*; *E. coli* W3110 strain 27C7 (ATCC 55,244), which has the complete genotype *tonA ptr3 phoA E15 (argF-lac)169 degP ompT kan^r*; *E. coli* W3110 strain 37D6, which has the complete genotype *tonA ptr3 phoA E15 (argF-lac)169 degP ompT rbs7 ilvG kan^r*; *E. coli* W3110 strain 40B4, which is strain

37D6 with a non-kanamycin resistant *degP* deletion mutation; and an *E. coli* strain having mutant periplasmic protease disclosed in U.S. Patent No. 4,946,783 issued 7 August 1990. Alternatively, *in vitro* methods of cloning, e.g., PCR or other nucleic acid polymerase reactions, are suitable.

In addition to prokaryotes, eukaryotic microbes such as filamentous fungi or yeast are suitable cloning or expression hosts for PRO-encoding vectors. *Saccharomyces cerevisiae* is a commonly used lower eukaryotic host microorganism. Others include *Schizosaccharomyces pombe* (Beach and Nurse, Nature, 290: 140 [1981]; EP 139,383 published 2 May 1985); *Kluyveromyces* hosts (U.S. Patent No. 4,943,529; Fleer et al., Bio/Technology, 9:968-975 (1991)) such as, e.g., *K. lactis* (MW98-8C, CBS683, CBS4574; Louvencourt et al., J. Bacteriol., 154(2):737-742 [1983]), *K. fragilis* (ATCC 12,424), *K. bulgaricus* (ATCC 16,045), *K. wickerhamii* (ATCC 24,178), *K. waltii* (ATCC 56,500), *K. drosophilae* (ATCC 36,906; Van den Berg et al., Bio/Technology, 8:135 (1990)), *K. thermotolerans*, and *K. marxianus*; *Yarrowia* (EP 402,226); *Pichia pastoris* (EP 183,070; Sreekrishna et al., J. Basic Microbiol., 28:265-278 [1988]); *Candida*; *Trichoderma reesei* (EP 244,234); *Neurospora crassa* (Case et al., Proc. Natl. Acad. Sci. USA, 76:5259-5263 [1979]); *Schwanniomyces* such as *Schwanniomyces occidentalis* (EP 394,538 published 31 October 1990); and filamentous fungi such as, e.g., *Neurospora*, *Penicillium*, *Tolypocladium* (WO 91/00357 published 10 January 1991), and *Aspergillus* hosts such as *A. nidulans* (Ballance et al., Biochem. Biophys. Res. Commun., 112:284-289 [1983]; Tilburn et al., Gene, 26:205-221 [1983]; Yelton et al., Proc. Natl. Acad. Sci. USA, 81: 1470-1474 [1984]) and *A. niger* (Kelly and Hynes, EMBO J., 4:475-479 [1985]). Methylophilic yeasts are suitable herein and include, but are not limited to, yeast capable of growth on methanol selected from the genera consisting of *Hansenula*, *Candida*, *Kloeckera*, *Pichia*, *Saccharomyces*, *Torulopsis*, and *Rhodotorula*. A list of specific species that are exemplary of this class of yeasts may be found in C. Anthony, The Biochemistry of Methylophilic Yeasts, 269 (1982).

Suitable host cells for the expression of glycosylated PRO are derived from multicellular organisms. Examples of invertebrate cells include insect cells such as *Drosophila* S2 and *Spodoptera* Sf9, as well as plant cells. Examples of useful mammalian host cell lines include Chinese hamster ovary (CHO) and COS cells. More specific examples include monkey kidney CV1 line transformed by SV40 (COS-7, ATCC CRL 1651); human embryonic kidney line (293 or 293 cells subcloned for growth in suspension culture, Graham et al., J. Gen. Virol., 36:59 (1977)); Chinese hamster ovary cells/DHFR (CHO, Urlaub and Chasin, Proc. Natl. Acad. Sci. USA, 77:4216 (1980)); mouse sertoli cells (TM4, Mather, Biol. Reprod., 23:243-251 (1980)); human lung cells (W138, ATCC CCL 75); human liver cells (Hep G2, HB 8065); and mouse mammary tumor (MMT 060562, ATCC CCL51). The selection of the appropriate host cell is deemed to be within the skill in the art.

3. Selection and Use of a Replicable Vector

The nucleic acid (e.g., cDNA or genomic DNA) encoding PRO may be inserted into a replicable vector for cloning (amplification of the DNA) or for expression. Various vectors are publicly available. The vector may, for example, be in the form of a plasmid, cosmid, viral particle, or phage. The appropriate nucleic acid sequence may be inserted into the vector by a variety of procedures. In general, DNA is inserted into an appropriate restriction endonuclease site(s) using techniques known in the art. Vector components generally include, but are not limited to, one or more of a signal sequence, an origin of replication, one or more marker genes, an enhancer element, a promoter, and a transcription termination

sequence. Construction of suitable vectors containing one or more of these components employs standard ligation techniques which are known to the skilled artisan.

The PRO may be produced recombinantly not only directly, but also as a fusion polypeptide with a heterologous polypeptide, which may be a signal sequence or other polypeptide having a specific cleavage site at the N-terminus of the mature protein or polypeptide. In general, the signal sequence may be a component of the vector, or it may be a part of the PRO-encoding DNA that is inserted into the vector. The signal sequence may be a prokaryotic signal sequence selected, for example, from the group of the alkaline phosphatase, penicillinase, lpp, or heat-stable enterotoxin II leaders. For yeast secretion the signal sequence may be, e.g., the yeast invertase leader, alpha factor leader (including *Saccharomyces* and *Kluyveromyces* α -factor leaders, the latter described in U.S. Patent No. 5,010,182), or acid phosphatase leader, the *C. albicans* glucoamylase leader (EP 362,179 published 4 April 1990), or the signal described in WO 90/13646 published 15 November 1990. In mammalian cell expression, mammalian signal sequences may be used to direct secretion of the protein, such as signal sequences from secreted polypeptides of the same or related species, as well as viral secretory leaders.

Both expression and cloning vectors contain a nucleic acid sequence that enables the vector to replicate in one or more selected host cells. Such sequences are well known for a variety of bacteria, yeast, and viruses. The origin of replication from the plasmid pBR322 is suitable for most Gram-negative bacteria, the 2 μ plasmid origin is suitable for yeast, and various viral origins (SV40, polyoma, adenovirus, VSV or BPV) are useful for cloning vectors in mammalian cells.

Expression and cloning vectors will typically contain a selection gene, also termed a selectable marker. Typical selection genes encode proteins that (a) confer resistance to antibiotics or other toxins, e.g., ampicillin, neomycin, methotrexate, or tetracycline, (b) complement auxotrophic deficiencies, or (c) supply critical nutrients not available from complex media, e.g., the gene encoding D-alanine racemase for *Bacilli*.

An example of suitable selectable markers for mammalian cells are those that enable the identification of cells competent to take up the PRO-encoding nucleic acid, such as DHFR or thymidine kinase. An appropriate host cell when wild-type DHFR is employed is the CHO cell line deficient in DHFR activity, prepared and propagated as described by Urlaub et al., Proc. Natl. Acad. Sci. USA, 77:4216 (1980).

A suitable selection gene for use in yeast is the *trp1* gene present in the yeast plasmid YRp7 [Stinchcomb et al., Nature, 282:39 (1979); Kingsman et al., Gene, 7:141 (1979); Tschemper et al., Gene, 10:157 (1980)].

The *trp1* gene provides a selection marker for a mutant strain of yeast lacking the ability to grow in tryptophan, for example, ATCC No. 44076 or PEP4-1 [Jones, Genetics, 85:12 (1977)].

Expression and cloning vectors usually contain a promoter operably linked to the PRO-encoding nucleic acid sequence to direct mRNA synthesis. Promoters recognized by a variety of potential host cells are well known. Promoters suitable for use with prokaryotic hosts include the β -lactamase and lactose promoter systems [Chang et al., Nature, 275:615 (1978); Goeddel et al., Nature, 281:544 (1979)], alkaline phosphatase, a tryptophan (*trp*) promoter system [Goeddel, Nucleic Acids Res., 8:4057 (1980); EP 36,776], and hybrid promoters such as the *tac* promoter [deBoer et al., Proc. Natl. Acad. Sci. USA, 80:21-25 (1983)]. Promoters for use in bacterial systems also will contain a Shine-Dalgarno (S.D.) sequence operably linked to the DNA encoding PRO.

Examples of suitable promoting sequences for use with yeast hosts include the promoters for 3-phosphoglycerate kinase [Hitzeman et al., J. Biol. Chem., 255:2073 (1980)] or other glycolytic enzymes [Hess et al., J. Adv. Enzyme Reg., 7:149 (1968); Holland, Biochemistry, 17:4900 (1978)], such as enolase, glyceraldehyde-3-phosphate dehydrogenase, hexokinase, pyruvate decarboxylase, phosphofructokinase, glucose-6-phosphate isomerase, 3-phosphoglycerate mutase, pyruvate kinase, triosephosphate isomerase, phosphoglucose isomerase, and glucokinase.

Other yeast promoters, which are inducible promoters having the additional advantage of transcription controlled by growth conditions, are the promoter regions for alcohol dehydrogenase 2, isocytichrome C, acid phosphatase, degradative enzymes associated with nitrogen metabolism, metallothionein, glyceraldehyde-3-phosphate dehydrogenase, and enzymes responsible for maltose and galactose utilization. Suitable vectors and promoters for use in yeast expression are further described in EP 73,657.

PRO transcription from vectors in mammalian host cells is controlled, for example, by promoters obtained from the genomes of viruses such as polyoma virus, fowlpox virus (UK 2,211,504 published 5 July 1989), adenovirus (such as Adenovirus 2), bovine papilloma virus, avian sarcoma virus, cytomegalovirus, a retrovirus, hepatitis-B virus and Simian Virus 40 (SV40), from heterologous mammalian promoters, e.g., the actin promoter or an immunoglobulin promoter, and from heat-shock promoters, provided such promoters are compatible with the host cell systems.

Transcription of a DNA encoding the PRO by higher eukaryotes may be increased by inserting an enhancer sequence into the vector. Enhancers are cis-acting elements of DNA, usually about from 10 to 300 bp, that act on a promoter to increase its transcription. Many enhancer sequences are now known from mammalian genes (globin, elastase, albumin, α -fetoprotein, and insulin). Typically, however, one will use an enhancer from a eukaryotic cell virus. Examples include the SV40 enhancer on the late side of the replication origin (bp 100-270), the cytomegalovirus early promoter enhancer, the polyoma enhancer on the late side of the replication origin, and adenovirus enhancers. The enhancer may be spliced into the vector at a position 5' or 3' to the PRO coding sequence, but is preferably located at a site 5' from the promoter.

Expression vectors used in eukaryotic host cells (yeast, fungi, insect, plant, animal, human, or nucleated cells from other multicellular organisms) will also contain sequences necessary for the termination of transcription and for stabilizing the mRNA. Such sequences are commonly available from the 5' and, occasionally 3', untranslated regions of eukaryotic or viral DNAs or cDNAs. These regions contain nucleotide segments transcribed as polyadenylated fragments in the untranslated portion of the mRNA encoding PRO.

Still other methods, vectors, and host cells suitable for adaptation to the synthesis of PRO in recombinant vertebrate cell culture are described in Gething et al., Nature, 293:620-625 (1981); Mantei et al., Nature, 281:40-46 (1979); EP 117,060; and EP 117,058.

4. Detecting Gene Amplification/Expression

Gene amplification and/or expression may be measured in a sample directly, for example, by conventional Southern blotting, Northern blotting to quantitate the transcription of mRNA [Thomas, Proc. Natl. Acad. Sci. USA, 77:5201-5205 (1980)], dot blotting (DNA analysis), or *in situ* hybridization, using an appropriately labeled probe, based on the sequences provided herein. Alternatively, antibodies may be

employed that can recognize specific duplexes, including DNA duplexes, RNA duplexes, and DNA-RNA hybrid duplexes or DNA-protein duplexes. The antibodies in turn may be labeled and the assay may be carried out where the duplex is bound to a surface, so that upon the formation of duplex on the surface, the presence of antibody bound to the duplex can be detected.

Gene expression, alternatively, may be measured by immunological methods, such as immunohistochemical staining of cells or tissue sections and assay of cell culture or body fluids, to quantitate directly the expression of gene product. Antibodies useful for immunohistochemical staining and/or assay of sample fluids may be either monoclonal or polyclonal, and may be prepared in any mammal. Conveniently, the antibodies may be prepared against a native sequence PRO polypeptide or against a synthetic peptide based on the DNA sequences provided herein or against exogenous sequence fused to PRO DNA and encoding a specific antibody epitope.

5. Purification of Polypeptide

Forms of PRO may be recovered from culture medium or from host cell lysates. If membrane-bound, it can be released from the membrane using a suitable detergent solution (e.g. Triton-X 100) or by enzymatic cleavage. Cells employed in expression of PRO can be disrupted by various physical or chemical means, such as freeze-thaw cycling, sonication, mechanical disruption, or cell lysing agents.

It may be desired to purify PRO from recombinant cell proteins or polypeptides. The following procedures are exemplary of suitable purification procedures: by fractionation on an ion-exchange column; ethanol precipitation; reverse phase HPLC; chromatography on silica or on a cation-exchange resin such as DEAE; chromatofocusing; SDS-PAGE; ammonium sulfate precipitation; gel filtration using, for example, Sephadex G-75; protein A Sepharose columns to remove contaminants such as IgG; and metal chelating columns to bind epitope-tagged forms of the PRO. Various methods of protein purification may be employed and such methods are known in the art and described for example in Deutscher, Methods in Enzymology, 182 (1990); Scopes, Protein Purification: Principles and Practice, Springer-Verlag, New York (1982). The purification step(s) selected will depend, for example, on the nature of the production process used and the particular PRO produced.

E. Tissue Distribution

The location of tissues expressing the PRO can be identified by determining mRNA expression in various human tissues. The location of such genes provides information about which tissues are most likely to be affected by the stimulating and inhibiting activities of the PRO polypeptides. The location of a gene in a specific tissue also provides sample tissue for the activity blocking assays discussed below.

As noted before, gene expression in various tissues may be measured by conventional Southern blotting, Northern blotting to quantitate the transcription of mRNA (Thomas, *Proc. Natl. Acad. Sci. USA*, 77:5201-5205 [1980]), dot blotting (DNA analysis), or *in situ* hybridization, using an appropriately labeled probe, based on the sequences provided herein. Alternatively, antibodies may be employed that can recognize specific duplexes, including DNA duplexes, RNA duplexes, and DNA-RNA hybrid duplexes or DNA-protein duplexes.

Gene expression in various tissues, alternatively, may be measured by immunological methods, such as immunohistochemical staining of tissue sections and assay of cell culture or body fluids, to quantitate directly the expression of gene product. Antibodies useful for immunohistochemical staining

and/or assay of sample fluids may be either monoclonal or polyclonal, and may be prepared in any mammal. Conveniently, the antibodies may be prepared against a native sequence of a PRO polypeptide or against a synthetic peptide based on the DNA sequences encoding the PRO polypeptide or against an exogenous sequence fused to a DNA encoding a PRO polypeptide and encoding a specific antibody epitope. General techniques for generating antibodies, and special protocols for Northern blotting and *in situ* hybridization are provided below.

F. Antibody Binding Studies

The activity of the PRO polypeptides can be further verified by antibody binding studies, in which the ability of anti-PRO antibodies to inhibit the effect of the PRO polypeptides, respectively, on tissue cells is tested. Exemplary antibodies include polyclonal, monoclonal, humanized, bispecific, and heteroconjugate antibodies, the preparation of which will be described hereinbelow.

Antibody binding studies may be carried out in any known assay method, such as competitive binding assays, direct and indirect sandwich assays, and immunoprecipitation assays. Zola, *Monoclonal Antibodies: A Manual of Techniques*, pp.147-158 (CRC Press, Inc., 1987).

Competitive binding assays rely on the ability of a labeled standard to compete with the test sample analyte for binding with a limited amount of antibody. The amount of target protein in the test sample is inversely proportional to the amount of standard that becomes bound to the antibodies. To facilitate determining the amount of standard that becomes bound, the antibodies preferably are insolubilized before or after the competition, so that the standard and analyte that are bound to the antibodies may conveniently be separated from the standard and analyte which remain unbound.

Sandwich assays involve the use of two antibodies, each capable of binding to a different immunogenic portion, or epitope, of the protein to be detected. In a sandwich assay, the test sample analyte is bound by a first antibody which is immobilized on a solid support, and thereafter a second antibody binds to the analyte, thus forming an insoluble three-part complex. See, *e.g.*, US Pat No. 4,376,110. The second antibody may itself be labeled with a detectable moiety (direct sandwich assays) or may be measured using an anti-immunoglobulin antibody that is labeled with a detectable moiety (indirect sandwich assay). For example, one type of sandwich assay is an ELISA assay, in which case the detectable moiety is an enzyme.

For immunohistochemistry, the tissue sample may be fresh or frozen or may be embedded in paraffin and fixed with a preservative such as formalin, for example.

G. Cell-Based Assays

Cell-based assays and animal models for immune related diseases can be used to further understand the relationship between the genes and polypeptides identified herein and the development and pathogenesis of immune related disease.

In a different approach, cells of a cell type known to be involved in a particular immune related disease are transfected with the cDNAs described herein, and the ability of these cDNAs to stimulate or inhibit immune function is analyzed. Suitable cells can be transfected with the desired gene, and monitored for immune function activity. Such transfected cell lines can then be used to test the ability of poly- or monoclonal antibodies or antibody compositions to inhibit or stimulate immune function, for example to modulate NK cell proliferation or inflammatory cell infiltration. Cells transfected with the coding sequences

of the genes identified herein can further be used to identify drug candidates for the treatment of immune related diseases.

In addition, primary cultures derived from transgenic animals (as described below) can be used in the cell-based assays herein, although stable cell lines are preferred. Techniques to derive continuous cell lines from transgenic animals are well known in the art (see, *e.g.*, Small *et al.*, *Mol. Cell. Biol.* 5: 642-648 [1985]).

The use of an agonist stimulating compound has also been validated experimentally. Activation of 4-1BB by treatment with an agonist anti-4-1BB antibody enhances eradication of tumors. Hellstrom, I. and Hellstrom, K. E., *Crit. Rev. Immunol.* (1998) 18:1. Immunoadjuvant therapy for treatment of tumors, described in more detail below, is another example of the use of the stimulating compounds of the invention.

Alternatively, an immune stimulating or enhancing effect can also be achieved by administration of a PRO which has vascular permeability enhancing properties. Enhanced vascular permeability would be beneficial to disorders which can be attenuated by local infiltration of immune cells (*e.g.*, NK cells, monocytes/macrophages, eosinophils, PMNs) and inflammation.

On the other hand, PRO polypeptides, as well as other compounds of the invention, which are direct inhibitors of NK cell proliferation/activation, lymphokine secretion, and/or vascular permeability can be directly used to suppress the immune response. These compounds are useful to reduce the degree of the immune response and to treat immune related diseases characterized by a hyperactive, superoptimal, or autoimmune response. The use of compound which suppress vascular permeability would be expected to reduce inflammation. Such uses would be beneficial in treating conditions associated with excessive inflammation.

Alternatively, compounds, *e.g.*, antibodies, which bind to stimulating PRO polypeptides and block the stimulating effect of these molecules produce a net inhibitory effect and can be used to suppress the NK cell mediated immune response by inhibiting NK cell proliferation/activation and/or lymphokine secretion. Blocking the stimulating effect of the polypeptides suppresses the immune response of the mammal.

H. Animal Models

The results of the cell based *in vitro* assays can be further verified using *in vivo* animal models and assays for NK cell function. A variety of well known animal models can be used to further understand the role of the genes identified herein in the development and pathogenesis of immune related disease, and to test the efficacy of candidate therapeutic agents, including antibodies, and other antagonists of the native polypeptides, including small molecule antagonists. The *in vivo* nature of such models makes them predictive of responses in human patients. Animal models of immune related diseases include both non-recombinant and recombinant (transgenic) animals. Non-recombinant animal models include, for example, rodent, *e.g.*, murine models. Such models can be generated by introducing cells into syngeneic mice using standard techniques, *e.g.*, subcutaneous injection, tail vein injection, spleen implantation, intraperitoneal implantation, implantation under the renal capsule, *etc.*

Graft-versus-host disease occurs when immunocompetent cells are transplanted into immunosuppressed or tolerant patients. The donor cells recognize and respond to host antigens. The response can vary from life threatening severe inflammation to mild cases of diarrhea and weight loss.

Graft-versus-host disease models provide a means of assessing NK cell reactivity against MHC antigens and minor transplant antigens. A suitable procedure is described in detail in *Current Protocols in Immunology*, above, unit 4.3.

Contact hypersensitivity is a simple delayed type hypersensitivity *in vivo* assay of cell mediated immune function. In this procedure, cutaneous exposure to exogenous haptens which gives rise to a delayed type hypersensitivity reaction which is measured and quantitated. Contact sensitivity involves an initial sensitizing phase followed by an elicitation phase. The elicitation phase occurs when the T lymphocytes encounter an antigen to which they have had previous contact. Swelling and inflammation occur, making this an excellent model of human allergic contact dermatitis. A suitable procedure is described in detail in *Current Protocols in Immunology*, Eds. J. E. Coligan, A. M. Kruisbeek, D. H. Margulies, E. M. Shevach and W. Strober, John Wiley & Sons, Inc., 1994, unit 4.2. See also Grabbe, S. and Schwarz, T, *Immun. Today* 19 (1): 37-44 (1998)

Recombinant (transgenic) animal models can be engineered by introducing the coding portion of the genes identified herein into the genome of animals of interest, using standard techniques for producing transgenic animals. Animals that can serve as a target for transgenic manipulation include, without limitation, mice, rats, rabbits, guinea pigs, sheep, goats, pigs, and non-human primates, *e.g.*, baboons, chimpanzees and monkeys. Techniques known in the art to introduce a transgene into such animals include pronucleic microinjection (Hoppe and Wanger, U.S. Patent No. 4,873,191); retrovirus-mediated gene transfer into germ lines (*e.g.*, Van der Putten *et al.*, *Proc. Natl. Acad. Sci. USA* 82, 6148-615 [1985]); gene targeting in embryonic stem cells (Thompson *et al.*, *Cell* 56, 313-321 [1989]); electroporation of embryos (Lo, *Mol. Cel. Biol.* 3, 1803-1814 [1983]); sperm-mediated gene transfer (Lavitrano *et al.*, *Cell* 57, 717-73 [1989]). For review, see, for example, U.S. Patent No. 4,736,866.

For the purpose of the present invention, transgenic animals include those that carry the transgene only in part of their cells ("mosaic animals"). The transgene can be integrated either as a single transgene, or in concatamers, *e.g.*, head-to-head or head-to-tail tandems. Selective introduction of a transgene into a particular cell type is also possible by following, for example, the technique of Lasko *et al.*, *Proc. Natl. Acad. Sci. USA* 89, 6232-636 (1992).

The expression of the transgene in transgenic animals can be monitored by standard techniques. For example, Southern blot analysis or PCR amplification can be used to verify the integration of the transgene. The level of mRNA expression can then be analyzed using techniques such as *in situ* hybridization, Northern blot analysis, PCR, or immunocytochemistry.

The animals may be further examined for signs of immune disease pathology, for example by histological examination to determine infiltration of immune cells into specific tissues. Blocking experiments can also be performed in which the transgenic animals are treated with the compounds of the invention to determine the extent of the NK cell proliferation, stimulation or inhibition of the compounds. In these experiments, blocking antibodies which bind to the PRO polypeptide, prepared as described above, are administered to the animal and the effect on immune function is determined.

Alternatively, "knock out" animals can be constructed which have a defective or altered gene encoding a polypeptide identified herein, as a result of homologous recombination between the endogenous gene encoding the polypeptide and altered genomic DNA encoding the same polypeptide introduced into an

embryonic cell of the animal. For example, cDNA encoding a particular polypeptide can be used to clone genomic DNA encoding that polypeptide in accordance with established techniques. A portion of the genomic DNA encoding a particular polypeptide can be deleted or replaced with another gene, such as a gene encoding a selectable marker which can be used to monitor integration. Typically, several kilobases of unaltered flanking DNA (both at the 5' and 3' ends) are included in the vector [see *e.g.*, Thomas and Capecchi, *Cell*, 51:503 (1987) for a description of homologous recombination vectors]. The vector is introduced into an embryonic stem cell line (*e.g.*, by electroporation) and cells in which the introduced DNA has homologously recombined with the endogenous DNA are selected [see *e.g.*, Li *et al.*, *Cell*, 69:915 (1992)]. The selected cells are then injected into a blastocyst of an animal (*e.g.*, a mouse or rat) to form aggregation chimeras [see *e.g.*, Bradley, in *Teratocarcinomas and Embryonic Stem Cells: A Practical Approach*, E. J. Robertson, ed. (IRL, Oxford, 1987), pp. 113-152]. A chimeric embryo can then be implanted into a suitable pseudopregnant female foster animal and the embryo brought to term to create a "knock out" animal. Progeny harboring the homologously recombined DNA in their germ cells can be identified by standard techniques and used to breed animals in which all cells of the animal contain the homologously recombined DNA. Knockout animals can be characterized for instance, for their ability to defend against certain pathological conditions and for their development of pathological conditions due to absence of the polypeptide.

I. ImmunoAdjuvant Therapy

In one embodiment, the immunostimulating compounds of the invention can be used in immunoadjuvant therapy for the treatment of tumors (cancer). It is now well established that NK cells recognize human tumor specific antigens. One group of tumor antigens, encoded by the MAGE, BAGE and GAGE families of genes, are silent in all adult normal tissues, but are expressed in significant amounts in tumors, such as melanomas, lung tumors, head and neck tumors, and bladder carcinomas. DeSmet, C. *et al.*, (1996) *Proc. Natl. Acad. Sci. USA*, 93:7149. It has been shown that stimulation of immune cells induces tumor regression and an antitumor response both *in vitro* and *in vivo*. Melero, I. *et al.*, *Nature Medicine* (1997) 3:682; Kwon, E. D. *et al.*, *Proc. Natl. Acad. Sci. USA* (1997) 94: 8099; Lynch, D. H. *et al.*, *Nature Medicine* (1997) 3:625; Finn, O. J. and Lotze, M. T., *J. Immunol.* (1998) 21:114. The stimulatory compounds of the invention can be administered as adjuvants, alone or together with a growth regulating agent, cytotoxic agent or chemotherapeutic agent, to stimulate NK cell proliferation/activation and an antitumor response to tumor antigens. The growth regulating, cytotoxic, or chemotherapeutic agent may be administered in conventional amounts using known administration regimes. Immunostimulating activity by the compounds of the invention allows reduced amounts of the growth regulating, cytotoxic, or chemotherapeutic agents thereby potentially lowering the toxicity to the patient.

J. Screening Assays for Drug Candidates

Screening assays for drug candidates are designed to identify compounds that bind to or complex with the polypeptides encoded by the genes identified herein or a biologically active fragment thereof, or otherwise interfere with the interaction of the encoded polypeptides with other cellular proteins. Such screening assays will include assays amenable to high-throughput screening of chemical libraries, making them particularly suitable for identifying small molecule drug candidates. Small molecules contemplated include synthetic organic or inorganic compounds, including peptides, preferably soluble peptides,

(poly)peptide-immunoglobulin fusions, and, in particular, antibodies including, without limitation, poly- and monoclonal antibodies and antibody fragments, single-chain antibodies, anti-idiotypic antibodies, and chimeric or humanized versions of such antibodies or fragments, as well as human antibodies and antibody fragments. The assays can be performed in a variety of formats, including protein-protein binding assays, biochemical screening assays, immunoassays and cell based assays, which are well characterized in the art. All assays are common in that they call for contacting the drug candidate with a polypeptide encoded by a nucleic acid identified herein under conditions and for a time sufficient to allow these two components to interact.

In binding assays, the interaction is binding and the complex formed can be isolated or detected in the reaction mixture. In a particular embodiment, the polypeptide encoded by the gene identified herein or the drug candidate is immobilized on a solid phase, *e.g.*, on a microtiter plate, by covalent or non-covalent attachments. Non-covalent attachment generally is accomplished by coating the solid surface with a solution of the polypeptide and drying. Alternatively, an immobilized antibody, *e.g.*, a monoclonal antibody, specific for the polypeptide to be immobilized can be used to anchor it to a solid surface. The assay is performed by adding the non-immobilized component, which may be labeled by a detectable label, to the immobilized component, *e.g.*, the coated surface containing the anchored component. When the reaction is complete, the non-reacted components are removed, *e.g.*, by washing, and complexes anchored on the solid surface are detected. When the originally non-immobilized component carries a detectable label, the detection of label immobilized on the surface indicates that complexing occurred. Where the originally non-immobilized component does not carry a label, complexing can be detected, for example, by using a labelled antibody specifically binding the immobilized complex.

If the candidate compound interacts with but does not bind to a particular protein encoded by a gene identified herein, its interaction with that protein can be assayed by methods well known for detecting protein-protein interactions. Such assays include traditional approaches, such as, cross-linking, co-immunoprecipitation, and co-purification through gradients or chromatographic columns. In addition, protein-protein interactions can be monitored by using a yeast-based genetic system described by Fields and co-workers [Fields and Song, *Nature (London)* **340**, 245-246 (1989); Chien *et al.*, *Proc. Natl. Acad. Sci. USA* **88**, 9578-9582 (1991)] as disclosed by Chevray and Nathans, *Proc. Natl. Acad. Sci. USA* **89**, 5789-5793 (1991). Many transcriptional activators, such as yeast GAL4, consist of two physically discrete modular domains, one acting as the DNA-binding domain, while the other one functioning as the transcription activation domain. The yeast expression system described in the foregoing publications (generally referred to as the "two-hybrid system") takes advantage of this property, and employs two hybrid proteins, one in which the target protein is fused to the DNA-binding domain of GAL4, and another, in which candidate activating proteins are fused to the activation domain. The expression of a GAL1-*lacZ* reporter gene under control of a GAL4-activated promoter depends on reconstitution of GAL4 activity via protein-protein interaction. Colonies containing interacting polypeptides are detected with a chromogenic substrate for β -galactosidase. A complete kit (MATCHMAKERTM) for identifying protein-protein interactions between two specific proteins using the two-hybrid technique is commercially available from Clontech. This system can also be extended to map protein domains involved in specific protein interactions as well as to pinpoint amino acid residues that are crucial for these interactions.

In order to find compounds that interfere with the interaction of a gene identified herein and other intra- or extracellular components can be tested, a reaction mixture is usually prepared containing the product of the gene and the intra- or extracellular component under conditions and for a time allowing for the interaction and binding of the two products. To test the ability of a test compound to inhibit binding, the reaction is run in the absence and in the presence of the test compound. In addition, a placebo may be added to a third reaction mixture, to serve as positive control. The binding (complex formation) between the test compound and the intra- or extracellular component present in the mixture is monitored as described above. The formation of a complex in the control reaction(s) but not in the reaction mixture containing the test compound indicates that the test compound interferes with the interaction of the test compound and its reaction partner.

K. Compositions and Methods for the Treatment of Immune Related Diseases

The compositions useful in the treatment of immune related diseases include, without limitation, proteins, antibodies, small organic molecules, peptides, phosphopeptides, antisense and ribozyme molecules, triple helix molecules, *etc.* that inhibit or stimulate immune function, for example, NK cell proliferation/activation, lymphokine release, or immune cell infiltration.

For example, antisense RNA and RNA molecules act to directly block the translation of mRNA by hybridizing to targeted mRNA and preventing protein translation. When antisense DNA is used, oligodeoxyribonucleotides derived from the translation initiation site, *e.g.*, between about -10 and +10 positions of the target gene nucleotide sequence, are preferred.

Ribozymes are enzymatic RNA molecules capable of catalyzing the specific cleavage of RNA. Ribozymes act by sequence-specific hybridization to the complementary target RNA, followed by endonucleolytic cleavage. Specific ribozyme cleavage sites within a potential RNA target can be identified by known techniques. For further details see, *e.g.*, Rossi, *Current Biology* 4, 469-471 (1994), and PCT publication No. WO 97/33551 (published September 18, 1997).

Nucleic acid molecules in triple helix formation used to inhibit transcription should be single-stranded and composed of deoxynucleotides. The base composition of these oligonucleotides is designed such that it promotes triple helix formation via Hoogsteen base pairing rules, which generally require sizeable stretches of purines or pyrimidines on one strand of a duplex. For further details see, *e.g.*, PCT publication No. WO 97/33551, *supra*.

These molecules can be identified by any or any combination of the screening assays discussed above and/or by any other screening techniques well known for those skilled in the art.

L. Anti-PRO Antibodies

The present invention further provides anti-PRO antibodies. Exemplary antibodies include polyclonal, monoclonal, humanized, bispecific, and heteroconjugate antibodies.

1. Polyclonal Antibodies

The anti-PRO antibodies may comprise polyclonal antibodies. Methods of preparing polyclonal antibodies are known to the skilled artisan. Polyclonal antibodies can be raised in a mammal, for example, by one or more injections of an immunizing agent and, if desired, an adjuvant. Typically, the immunizing agent and/or adjuvant will be injected in the mammal by multiple subcutaneous or intraperitoneal injections.

The immunizing agent may include the PRO polypeptide or a fusion protein thereof. It may be useful to conjugate the immunizing agent to a protein known to be immunogenic in the mammal being immunized. Examples of such immunogenic proteins include but are not limited to keyhole limpet hemocyanin, serum albumin, bovine thyroglobulin, and soybean trypsin inhibitor. Examples of adjuvants which may be employed include Freund's complete adjuvant and MPL-TDM adjuvant (monophosphoryl Lipid A, synthetic trehalose dicorynomycolate). The immunization protocol may be selected by one skilled in the art without undue experimentation.

2. Monoclonal Antibodies

The anti-PRO antibodies may, alternatively, be monoclonal antibodies. Monoclonal antibodies may be prepared using hybridoma methods, such as those described by Kohler and Milstein, Nature, 256:495 (1975). In a hybridoma method, a mouse, hamster, or other appropriate host animal, is typically immunized with an immunizing agent to elicit lymphocytes that produce or are capable of producing antibodies that will specifically bind to the immunizing agent. Alternatively, the lymphocytes may be immunized *in vitro*.

The immunizing agent will typically include the PRO polypeptide or a fusion protein thereof. Generally, either peripheral blood lymphocytes ("PBLs") are used if cells of human origin are desired, or spleen cells or lymph node cells are used if non-human mammalian sources are desired. The lymphocytes are then fused with an immortalized cell line using a suitable fusing agent, such as polyethylene glycol, to form a hybridoma cell [Goding, Monoclonal Antibodies: Principles and Practice, Academic Press, (1986) pp. 59-103]. Immortalized cell lines are usually transformed mammalian cells, particularly myeloma cells of rodent, bovine and human origin. Usually, rat or mouse myeloma cell lines are employed. The hybridoma cells may be cultured in a suitable culture medium that preferably contains one or more substances that inhibit the growth or survival of the unfused, immortalized cells. For example, if the parental cells lack the enzyme hypoxanthine guanine phosphoribosyl transferase (HGPRT or HPRT), the culture medium for the hybridomas typically will include hypoxanthine, aminopterin, and thymidine ("HAT medium"), which substances prevent the growth of HGPRT-deficient cells.

Preferred immortalized cell lines are those that fuse efficiently, support stable high level expression of antibody by the selected antibody-producing cells, and are sensitive to a medium such as HAT medium. More preferred immortalized cell lines are murine myeloma lines, which can be obtained, for instance, from the Salk Institute Cell Distribution Center, San Diego, California and the American Type Culture Collection, Manassas, Virginia. Human myeloma and mouse-human heteromyeloma cell lines also have been described for the production of human monoclonal antibodies [Kozbor, J. Immunol., 133:3001 (1984); Brodeur et al., Monoclonal Antibody Production Techniques and Applications, Marcel Dekker, Inc., New York, (1987) pp. 51-63].

The culture medium in which the hybridoma cells are cultured can then be assayed for the presence of monoclonal antibodies directed against PRO. Preferably, the binding specificity of monoclonal antibodies produced by the hybridoma cells is determined by immunoprecipitation or by an *in vitro* binding assay, such as radioimmunoassay (RIA) or enzyme-linked immunoabsorbent assay (ELISA). Such techniques and assays are known in the art. The binding affinity of the monoclonal antibody can, for example, be determined by the Scatchard analysis of Munson and Pollard, Anal. Biochem., 107:220 (1980).

After the desired hybridoma cells are identified, the clones may be subcloned by limiting dilution procedures and grown by standard methods [Goding, *supra*]. Suitable culture media for this purpose include, for example, Dulbecco's Modified Eagle's Medium and RPMI-1640 medium. Alternatively, the hybridoma cells may be grown *in vivo* as ascites in a mammal.

5 The monoclonal antibodies secreted by the subclones may be isolated or purified from the culture medium or ascites fluid by conventional immunoglobulin purification procedures such as, for example, protein A-Sepharose, hydroxylapatite chromatography, gel electrophoresis, dialysis, or affinity chromatography.

10 The monoclonal antibodies may also be made by recombinant DNA methods, such as those described in U.S. Patent No. 4,816,567. DNA encoding the monoclonal antibodies of the invention can be readily isolated and sequenced using conventional procedures (e.g., by using oligonucleotide probes that are capable of binding specifically to genes encoding the heavy and light chains of murine antibodies). The hybridoma cells of the invention serve as a preferred source of such DNA. Once isolated, the DNA may be placed into expression vectors, which are then transfected into host cells such as simian COS cells, Chinese hamster ovary (CHO) cells, or myeloma cells that do not otherwise produce immunoglobulin protein, to obtain the synthesis of monoclonal antibodies in the recombinant host cells. The DNA also may be modified, for example, by substituting the coding sequence for human heavy and light chain constant domains in place of the homologous murine sequences [U.S. Patent No. 4,816,567; Morrison et al., *supra*] or by covalently joining to the immunoglobulin coding sequence all or part of the coding sequence for a non-immunoglobulin polypeptide. Such a non-immunoglobulin polypeptide can be substituted for the constant domains of an antibody of the invention, or can be substituted for the variable domains of one antigen-combining site of an antibody of the invention to create a chimeric bivalent antibody.

25 The antibodies may be monovalent antibodies. Methods for preparing monovalent antibodies are well known in the art. For example, one method involves recombinant expression of immunoglobulin light chain and modified heavy chain. The heavy chain is truncated generally at any point in the Fc region so as to prevent heavy chain crosslinking. Alternatively, the relevant cysteine residues are substituted with another amino acid residue or are deleted so as to prevent crosslinking.

30 *In vitro* methods are also suitable for preparing monovalent antibodies. Digestion of antibodies to produce fragments thereof, particularly, Fab fragments, can be accomplished using routine techniques known in the art.

3. Human and Humanized Antibodies

35 The anti-PRO antibodies of the invention may further comprise humanized antibodies or human antibodies. Humanized forms of non-human (e.g., murine) antibodies are chimeric immunoglobulins, immunoglobulin chains or fragments thereof (such as Fv, Fab, Fab', F(ab')₂ or other antigen-binding subsequences of antibodies) which contain minimal sequence derived from non-human immunoglobulin. Humanized antibodies include human immunoglobulins (recipient antibody) in which residues from a complementary determining region (CDR) of the recipient are replaced by residues from a CDR of a non-human species (donor antibody) such as mouse, rat or rabbit having the desired specificity, affinity and capacity. In some instances, Fv framework residues of the human immunoglobulin are replaced by corresponding non-human residues. Humanized antibodies may also comprise residues which are found

neither in the recipient antibody nor in the imported CDR or framework sequences. In general, the humanized antibody will comprise substantially all of at least one, and typically two, variable domains, in which all or substantially all of the CDR regions correspond to those of a non-human immunoglobulin and all or substantially all of the FR regions are those of a human immunoglobulin consensus sequence. The humanized antibody optimally also will comprise at least a portion of an immunoglobulin constant region (Fc), typically that of a human immunoglobulin [Jones et al., *Nature*, 321:522-525 (1986); Riechmann et al., *Nature*, 332:323-329 (1988); and Presta, *Curr. Op. Struct. Biol.*, 2:593-596 (1992)].

Methods for humanizing non-human antibodies are well known in the art. Generally, a humanized antibody has one or more amino acid residues introduced into it from a source which is non-human. These non-human amino acid residues are often referred to as "import" residues, which are typically taken from an "import" variable domain. Humanization can be essentially performed following the method of Winter and co-workers [Jones et al., *Nature*, 321:522-525 (1986); Riechmann et al., *Nature*, 332:323-327 (1988); Verhoeven et al., *Science*, 239:1534-1536 (1988)], by substituting rodent CDRs or CDR sequences for the corresponding sequences of a human antibody. Accordingly, such "humanized" antibodies are chimeric antibodies (U.S. Patent No. 4,816,567), wherein substantially less than an intact human variable domain has been substituted by the corresponding sequence from a non-human species. In practice, humanized antibodies are typically human antibodies in which some CDR residues and possibly some FR residues are substituted by residues from analogous sites in rodent antibodies.

Human antibodies can also be produced using various techniques known in the art, including phage display libraries [Hoogenboom and Winter, *J. Mol. Biol.*, 227:381 (1991); Marks et al., *J. Mol. Biol.*, 222:581 (1991)]. The techniques of Cole et al. and Boerner et al. are also available for the preparation of human monoclonal antibodies (Cole et al., *Monoclonal Antibodies and Cancer Therapy*, Alan R. Liss, p. 77 (1985) and Boerner et al., *J. Immunol.*, 147(1):86-95 (1991)]. Similarly, human antibodies can be made by introducing of human immunoglobulin loci into transgenic animals, e.g., mice in which the endogenous immunoglobulin genes have been partially or completely inactivated. Upon challenge, human antibody production is observed, which closely resembles that seen in humans in all respects, including gene rearrangement, assembly, and antibody repertoire. This approach is described, for example, in U.S. Patent Nos. 5,545,807; 5,545,806; 5,569,825; 5,625,126; 5,633,425; 5,661,016, and in the following scientific publications: Marks *et al.*, *Bio/Technology* 10, 779-783 (1992); Lonberg *et al.*, *Nature* 368 856-859 (1994); Morrison, *Nature* 368, 812-13 (1994); Fishwild *et al.*, *Nature Biotechnology* 14, 845-51 (1996); Neuberger, *Nature Biotechnology* 14, 826 (1996); Lonberg and Huszar, *Intern. Rev. Immunol.* 13 65-93 (1995).

The antibodies may also be affinity matured using known selection and/or mutagenesis methods as described above. Preferred affinity matured antibodies have an affinity which is five times, more preferably 10 times, even more preferably 20 or 30 times greater than the starting antibody (generally murine, humanized or human) from which the matured antibody is prepared.

4. Bispecific Antibodies

Bispecific antibodies are monoclonal, preferably human or humanized, antibodies that have binding specificities for at least two different antigens. In the present case, one of the binding specificities is for the

PRO, the other one is for any other antigen, and preferably for a cell-surface protein or receptor or receptor subunit.

Methods for making bispecific antibodies are known in the art. Traditionally, the recombinant production of bispecific antibodies is based on the co-expression of two immunoglobulin heavy-chain/light-chain pairs, where the two heavy chains have different specificities [Milstein and Cuello, Nature, 305:537-539 (1983)]. Because of the random assortment of immunoglobulin heavy and light chains, these hybridomas (quadromas) produce a potential mixture of ten different antibody molecules, of which only one has the correct bispecific structure. The purification of the correct molecule is usually accomplished by affinity chromatography steps. Similar procedures are disclosed in WO 93/08829, published 13 May 1993, and in Traunecker et al., EMBO J., 10:3655-3659 (1991).

Antibody variable domains with the desired binding specificities (antibody-antigen combining sites) can be fused to immunoglobulin constant domain sequences. The fusion preferably is with an immunoglobulin heavy-chain constant domain, comprising at least part of the hinge, CH2, and CH3 regions. It is preferred to have the first heavy-chain constant region (CH1) containing the site necessary for light-chain binding present in at least one of the fusions. DNAs encoding the immunoglobulin heavy-chain fusions and, if desired, the immunoglobulin light chain, are inserted into separate expression vectors, and are co-transfected into a suitable host organism. For further details of generating bispecific antibodies see, for example, Suresh et al., Methods in Enzymology, 121:210 (1986).

According to another approach described in WO 96/27011, the interface between a pair of antibody molecules can be engineered to maximize the percentage of heterodimers which are recovered from recombinant cell culture. The preferred interface comprises at least a part of the CH3 region of an antibody constant domain. In this method, one or more small amino acid side chains from the interface of the first antibody molecule are replaced with larger side chains (e.g. tyrosine or tryptophan). Compensatory "cavities" of identical or similar size to the large side chain(s) are created on the interface of the second antibody molecule by replacing large amino acid side chains with smaller ones (e.g. alanine or threonine). This provides a mechanism for increasing the yield of the heterodimer over other unwanted end-products such as homodimers.

Bispecific antibodies can be prepared as full length antibodies or antibody fragments (e.g. F(ab')₂ bispecific antibodies). Techniques for generating bispecific antibodies from antibody fragments have been described in the literature. For example, bispecific antibodies can be prepared using chemical linkage. Brennan *et al.*, Science 229:81 (1985) describe a procedure wherein intact antibodies are proteolytically cleaved to generate F(ab')₂ fragments. These fragments are reduced in the presence of the dithiol complexing agent sodium arsenite to stabilize vicinal dithiols and prevent intermolecular disulfide formation. The Fab' fragments generated are then converted to thionitrobenzoate (TNB) derivatives. One of the Fab'-TNB derivatives is then reconverted to the Fab'-thiol by reduction with mercaptoethylamine and is mixed with an equimolar amount of the other Fab'-TNB derivative to form the bispecific antibody. The bispecific antibodies produced can be used as agents for the selective immobilization of enzymes.

Fab' fragments may be directly recovered from *E. coli* and chemically coupled to form bispecific antibodies. Shalaby *et al.*, J. Exp. Med. 175:217-225 (1992) describe the production of a fully humanized bispecific antibody F(ab')₂ molecule. Each Fab' fragment was separately secreted from *E. coli* and

subjected to directed chemical coupling *in vitro* to form the bispecific antibody. The bispecific antibody thus formed was able to bind to cells overexpressing the ErbB2 receptor and normal human T cells, as well as trigger the lytic activity of human cytotoxic lymphocytes against human breast tumor targets.

Various technique for making and isolating bispecific antibody fragments directly from recombinant cell culture have also been described. For example, bispecific antibodies have been produced using leucine zippers. Kostelny *et al.*, J. Immunol. 148(5):1547-1553 (1992). The leucine zipper peptides from the Fos and Jun proteins were linked to the Fab' portions of two different antibodies by gene fusion. The antibody homodimers were reduced at the hinge region to form monomers and then re-oxidized to form the antibody heterodimers. This method can also be utilized for the production of antibody homodimers. The "diabody" technology described by Hollinger *et al.*, Proc. Natl. Acad. Sci. USA 90:6444-6448 (1993) has provided an alternative mechanism for making bispecific antibody fragments. The fragments comprise a heavy-chain variable domain (V_H) connected to a light-chain variable domain (V_L) by a linker which is too short to allow pairing between the two domains on the same chain. Accordingly, the V_H and V_L domains of one fragment are forced to pair with the complementary V_L and V_H domains of another fragment, thereby forming two antigen-binding sites. Another strategy for making bispecific antibody fragments by the use of single-chain Fv (sFv) dimers has also been reported. See, Gruber *et al.*, J. Immunol. 152:5368 (1994). Antibodies with more than two valencies are contemplated. For example, trispecific antibodies can be prepared. Tutt *et al.*, J. Immunol. 147:60 (1991).

Exemplary bispecific antibodies may bind to two different epitopes on a given PRO polypeptide herein. Alternatively, an anti-PRO polypeptide arm may be combined with an arm which binds to a triggering molecule on a leukocyte such as a T-cell receptor molecule (e.g. CD2, CD3, CD28, or B7), or Fc receptors for IgG (FcγR), such as FcγRI (CD64), FcγRII (CD32) and FcγRIII (CD16) so as to focus cellular defense mechanisms to the cell expressing the particular PRO polypeptide. Bispecific antibodies may also be used to localize cytotoxic agents to cells which express a particular PRO polypeptide. These antibodies possess a PRO-binding arm and an arm which binds a cytotoxic agent or a radionuclide chelator, such as EOTUBE, DPTA, DOTA, or TETA. Another bispecific antibody of interest binds the PRO polypeptide and further binds tissue factor (TF).

5. Heteroconjugate Antibodies

Heteroconjugate antibodies are also within the scope of the present invention. Heteroconjugate antibodies are composed of two covalently joined antibodies. Such antibodies have, for example, been proposed to target immune system cells to unwanted cells [U.S. Patent No. 4,676,980], and for treatment of HIV infection [WO 91/00360; WO 92/200373; EP 03089]. It is contemplated that the antibodies may be prepared *in vitro* using known methods in synthetic protein chemistry, including those involving crosslinking agents. For example, immunotoxins may be constructed using a disulfide exchange reaction or by forming a thioether bond. Examples of suitable reagents for this purpose include iminothiolate and methyl-4-mercaptobutyrimidate and those disclosed, for example, in U.S. Patent No. 4,676,980.

6. Effector Function Engineering

It may be desirable to modify the antibody of the invention with respect to effector function, so as to enhance, *e.g.*, the effectiveness of the antibody in treating cancer. For example, cysteine residue(s) may

be introduced into the Fc region, thereby allowing interchain disulfide bond formation in this region. The homodimeric antibody thus generated may have improved internalization capability and/or increased complement-mediated cell killing and antibody-dependent cellular cytotoxicity (ADCC). See Caron *et al.*, J. Exp Med., 176: 1191-1195 (1992) and Shopes, J. Immunol., 148: 2918-2922 (1992). Homodimeric antibodies with enhanced anti-tumor activity may also be prepared using heterobifunctional cross-linkers as described in Wolff *et al.* Cancer Research, 53: 2560-2565 (1993). Alternatively, an antibody can be engineered that has dual Fc regions and may thereby have enhanced complement lysis and ADCC capabilities. See Stevenson *et al.*, Anti-Cancer Drug Design, 3: 219-230 (1989).

7. Immunoconjugates

The invention also pertains to immunoconjugates comprising an antibody conjugated to a cytotoxic agent such as a chemotherapeutic agent, toxin (*e.g.*, an enzymatically active toxin of bacterial, fungal, plant, or animal origin, or fragments thereof), or a radioactive isotope (*i.e.*, a radioconjugate).

Chemotherapeutic agents useful in the generation of such immunoconjugates have been described above. Enzymatically active toxins and fragments thereof that can be used include diphtheria A chain, nonbinding active fragments of diphtheria toxin, exotoxin A chain (from *Pseudomonas aeruginosa*), ricin A chain, abrin A chain, modeccin A chain, alpha-sarcin, *Aleurites fordii* proteins, dianthin proteins, *Phytolaca americana* proteins (PAPI, PAPII, and PAP-S), momordica charantia inhibitor, curcin, crotin, sapaonaria officinalis inhibitor, gelonin, mitogellin, restrictocin, phenomycin, enomycin, and the tricothecenes. A variety of radionuclides are available for the production of radioconjugated antibodies. Examples include ^{212}Bi , ^{131}I , ^{131}In , ^{90}Y , and ^{186}Re .

Conjugates of the antibody and cytotoxic agent are made using a variety of bifunctional protein-coupling agents such as N-succinimidyl-3-(2-pyridyldithiol) propionate (SPDP), iminothiolane (IT), bifunctional derivatives of imidoesters (such as dimethyl adipimidate HCL), active esters (such as disuccinimidyl suberate), aldehydes (such as glutaraldehyde), bis-azido compounds (such as bis (p-azidobenzoyl) hexanediamine), bis-diazonium derivatives (such as bis-(p-diazoniumbenzoyl)-ethylenediamine), diisocyanates (such as tolyene 2,6-diisocyanate), and bis-active fluorine compounds (such as 1,5-difluoro-2,4-dinitrobenzene). For example, a ricin immunotoxin can be prepared as described in Vitetta *et al.*, Science, 238: 1098 (1987). Carbon-14-labeled 1-isothiocyanatobenzyl-3-methyldiethylene triaminepentaacetic acid (MX-DTPA) is an exemplary chelating agent for conjugation of radionucleotide to the antibody. See WO94/11026.

In another embodiment, the antibody may be conjugated to a "receptor" (such streptavidin) for utilization in tumor pretargeting wherein the antibody-receptor conjugate is administered to the patient, followed by removal of unbound conjugate from the circulation using a clearing agent and then administration of a "ligand" (*e.g.*, avidin) that is conjugated to a cytotoxic agent (*e.g.*, a radionucleotide).

8. Immunoliposomes

The antibodies disclosed herein may also be formulated as immunoliposomes. Liposomes containing the antibody are prepared by methods known in the art, such as described in Epstein *et al.*, Proc. Natl. Acad. Sci. USA, 82: 3688 (1985); Hwang *et al.*, Proc. Natl. Acad. Sci. USA, 77: 4030 (1980); and U.S. Pat. Nos. 4,485,045 and 4,544,545. Liposomes with enhanced circulation time are disclosed in U.S. Patent No. 5,013,556.

Particularly useful liposomes can be generated by the reverse-phase evaporation method with a lipid composition comprising phosphatidylcholine, cholesterol, and PEG-derivatized phosphatidylethanolamine (PEG-PE). Liposomes are extruded through filters of defined pore size to yield liposomes with the desired diameter. Fab' fragments of the antibody of the present invention can be conjugated to the liposomes as described in Martin *et al.*, J. Biol. Chem., 257: 286-288 (1982) via a disulfide-interchange reaction. A chemotherapeutic agent (such as Doxorubicin) is optionally contained within the liposome. See Gabizon *et al.*, J. National Cancer Inst., 81(19): 1484 (1989).

M. Pharmaceutical Compositions

The active PRO molecules of the invention (*e.g.*, PRO polypeptides, anti-PRO antibodies, and/or variants of each) as well as other molecules identified by the screening assays disclosed above, can be administered for the treatment of immune related diseases, in the form of pharmaceutical compositions.

Therapeutic formulations of the active PRO molecule, preferably a polypeptide or antibody of the invention, are prepared for storage by mixing the active molecule having the desired degree of purity with optional pharmaceutically acceptable carriers, excipients or stabilizers (*Remington's Pharmaceutical Sciences* 16th edition, Osol, A. Ed. [1980]), in the form of lyophilized formulations or aqueous solutions. Acceptable carriers, excipients, or stabilizers are nontoxic to recipients at the dosages and concentrations employed, and include buffers such as phosphate, citrate, and other organic acids; antioxidants including ascorbic acid and methionine; preservatives (such as octadecyldimethylbenzyl ammonium chloride; hexamethonium chloride; benzalkonium chloride, benzethonium chloride; phenol, butyl or benzyl alcohol; alkyl parabens such as methyl or propyl paraben; catechol; resorcinol; cyclohexanol; 3-pentanol; and m-cresol); low molecular weight (less than about 10 residues) polypeptides; proteins, such as serum albumin, gelatin, or immunoglobulins; hydrophilic polymers such as polyvinylpyrrolidone; amino acids such as glycine, glutamine, asparagine, histidine, arginine, or lysine; monosaccharides, disaccharides, and other carbohydrates including glucose, mannose, or dextrans; chelating agents such as EDTA; sugars such as sucrose, mannitol, trehalose or sorbitol; salt-forming counter-ions such as sodium; metal complexes (*e.g.*, Zn-protein complexes); and/or non-ionic surfactants such as TWEENTM, PLURONICSTM or polyethylene glycol (PEG).

Compounds identified by the screening assays disclosed herein can be formulated in an analogous manner, using standard techniques well known in the art.

Lipofections or liposomes can also be used to deliver the PRO molecule into cells. Where antibody fragments are used, the smallest inhibitory fragment which specifically binds to the binding domain of the target protein is preferred. For example, based upon the variable region sequences of an antibody, peptide molecules can be designed which retain the ability to bind the target protein sequence. Such peptides can be synthesized chemically and/or produced by recombinant DNA technology (see, *e.g.*, Marasco *et al.*, *Proc. Natl. Acad. Sci. USA* 90, 7889-7893 [1993]).

The formulation herein may also contain more than one active compound as necessary for the particular indication being treated, preferably those with complementary activities that do not adversely affect each other. Alternatively, or in addition, the composition may comprise a cytotoxic agent, cytokine or

growth inhibitory agent. Such molecules are suitably present in combination in amounts that are effective for the purpose intended.

The active PRO molecules may also be entrapped in microcapsules prepared, for example, by coacervation techniques or by interfacial polymerization, for example, hydroxymethylcellulose or gelatin-microcapsules and poly-(methylmethacrylate) microcapsules, respectively, in colloidal drug delivery systems (for example, liposomes, albumin microspheres, microemulsions, nano-particles and nanocapsules) or in macroemulsions. Such techniques are disclosed in *Remington's Pharmaceutical Sciences* 16th edition, Osol, A. Ed. (1980).

The formulations to be used for *in vivo* administration must be sterile. This is readily accomplished by filtration through sterile filtration membranes.

Sustained-release preparations or the PRO molecules may be prepared. Suitable examples of sustained-release preparations include semipermeable matrices of solid hydrophobic polymers containing the antibody, which matrices are in the form of shaped articles, *e.g.*, films, or microcapsules. Examples of sustained-release matrices include polyesters, hydrogels (for example, poly(2-hydroxyethyl-methacrylate), or poly(vinylalcohol)), polylactides (U.S. Pat. No. 3,773,919), copolymers of L-glutamic acid and γ -ethyl-L-glutamate, non-degradable ethylene-vinyl acetate, degradable lactic acid-glycolic acid copolymers such as the LUPRON DEPOTTM (injectable microspheres composed of lactic acid-glycolic acid copolymer and leuprolide acetate), and poly-D-(-)-3-hydroxybutyric acid. While polymers such as ethylene-vinyl acetate and lactic acid-glycolic acid enable release of molecules for over 100 days, certain hydrogels release proteins for shorter time periods. When encapsulated antibodies remain in the body for a long time, they may denature or aggregate as a result of exposure to moisture at 37°C, resulting in a loss of biological activity and possible changes in immunogenicity. Rational strategies can be devised for stabilization depending on the mechanism involved. For example, if the aggregation mechanism is discovered to be intermolecular S-S bond formation through thio-disulfide interchange, stabilization may be achieved by modifying sulfhydryl residues, lyophilizing from acidic solutions, controlling moisture content, using appropriate additives, and developing specific polymer matrix compositions.

N. Methods of Treatment

It is contemplated that the polypeptides, antibodies and other active compounds of the present invention may be used to treat various immune related diseases and conditions, such as NK cell diseases, including those characterized by infiltration of inflammatory cells into a tissue, stimulation of NK cells, inhibition of NK cells, increased or decreased vascular permeability or the inhibition thereof.

Exemplary conditions or disorders to be treated with the polypeptides, antibodies and other compounds of the invention, include, but are not limited to systemic lupus erythematosus, rheumatoid arthritis, juvenile chronic arthritis, osteoarthritis, spondyloarthropathies, systemic sclerosis (scleroderma), idiopathic inflammatory myopathies (dermatomyositis, polymyositis), Sjögren's syndrome, systemic vasculitis, sarcoidosis, autoimmune hemolytic anemia (immune pancytopenia, paroxysmal nocturnal hemoglobinuria), autoimmune thrombocytopenia (idiopathic thrombocytopenic purpura, immune-mediated thrombocytopenia), thyroiditis (Grave's disease, Hashimoto's thyroiditis, juvenile lymphocytic thyroiditis, atrophic thyroiditis), diabetes mellitus, immune-mediated renal disease (glomerulonephritis, tubulointerstitial nephritis), demyelinating diseases of the central and peripheral nervous systems such as multiple sclerosis,

idiopathic demyelinating polyneuropathy or Guillain-Barré syndrome, and chronic inflammatory demyelinating polyneuropathy, hepatobiliary diseases such as infectious hepatitis (hepatitis A, B, C, D, E and other non-hepatotropic viruses), autoimmune chronic active hepatitis, primary biliary cirrhosis, granulomatous hepatitis, and sclerosing cholangitis, inflammatory bowel disease (ulcerative colitis: Crohn's disease), gluten-sensitive enteropathy, and Whipple's disease, autoimmune or immune-mediated skin diseases including bullous skin diseases, erythema multiforme and contact dermatitis, psoriasis, allergic diseases such as asthma, allergic rhinitis, atopic dermatitis, food hypersensitivity and urticaria, immunologic diseases of the lung such as eosinophilic pneumonias, idiopathic pulmonary fibrosis and hypersensitivity pneumonitis, transplantation associated diseases including graft rejection and graft -versus-host-disease.

Rheumatoid arthritis (RA) is a chronic systemic autoimmune inflammatory disease that mainly involves the synovial membrane of multiple joints with resultant injury to the articular cartilage. The pathogenesis is T lymphocyte dependent and is associated with the production of rheumatoid factors, auto-antibodies directed against self IgG, with the resultant formation of immune complexes that attain high levels in joint fluid and blood. These complexes in the joint may induce the marked infiltrate of lymphocytes and NK cells into the synovium and subsequent marked synovial changes; the joint space/fluid is infiltrated by similar cells with the addition of numerous neutrophils. Tissues affected are primarily the joints, often in symmetrical pattern. However, extra-articular disease also occurs in two major forms. One form is the development of extra-articular lesions with ongoing progressive joint disease and typical lesions of pulmonary fibrosis, vasculitis, and cutaneous ulcers. The second form of extra-articular disease is the so called Felty's syndrome which occurs late in the RA disease course, sometimes after joint disease has become quiescent, and involves the presence of neutropenia, thrombocytopenia and splenomegaly. This can be accompanied by vasculitis in multiple organs with formations of infarcts, skin ulcers and gangrene. Patients often also develop rheumatoid nodules in the subcutis tissue overlying affected joints; the nodules in late stage have necrotic centers surrounded by a mixed inflammatory cell infiltrate. Other manifestations which can occur in RA include: pericarditis, pleuritis, coronary arteritis, interstitial pneumonitis with pulmonary fibrosis, keratoconjunctivitis sicca, and rheumatoid nodules. As described above, Natural Killer cells are not believed to be involved in the early events of RA, but a study by Dalbeth et al., have found CD56 + NK cells in the synovial fluid of inflamed joints and these cells are believed to respond to IL-12 and IL-15 secreted by macrophages also found in synovial fluid from the inflamed joints (Dalbeth et al., 2002 Arthritis Rheum 46(7): 1763-72).

Juvenile chronic arthritis is a chronic idiopathic inflammatory disease which begins often at less than 16 years of age. Its phenotype has some similarities to RA; some patients which are rheumatoid factor positive are classified as juvenile rheumatoid arthritis. The disease is sub-classified into three major categories: pauciarticular, polyarticular, and systemic. The arthritis can be severe and is typically destructive and leads to joint ankylosis and retarded growth. Other manifestations can include chronic anterior uveitis and systemic amyloidosis.

Systemic sclerosis (scleroderma) has an unknown etiology. A hallmark of the disease is induration of the skin; likely this is induced by an active inflammatory process. Scleroderma can be localized or systemic; vascular lesions are common and endothelial cell injury in the microvasculature is an early and important event in the development of systemic sclerosis; the vascular injury may be immune mediated. An

immunologic basis is implied by the presence of mononuclear cell infiltrates in the cutaneous lesions and the presence of anti-nuclear antibodies in many patients. ICAM-1 is often upregulated on the cell surface of fibroblasts in skin lesions suggesting that T cell interaction with these cells may have a role in the pathogenesis of the disease. As well as T cells, NK cells are proposed to play a role in the progression of scleroderma in patients where the disease has progressed late into the disease course, and in those patients who did not express anti-Scl 70 antibodies (Holcombe et al., 1995 Ann Rheum Dis 54(1): 69-72). Other organs involved include: the gastrointestinal tract: smooth muscle atrophy and fibrosis resulting in abnormal peristalsis/motility; kidney: concentric subendothelial intimal proliferation affecting small arcuate and interlobular arteries with resultant reduced renal cortical blood flow, results in proteinuria, azotemia and hypertension; skeletal muscle: atrophy, interstitial fibrosis; inflammation; lung: interstitial pneumonitis and interstitial fibrosis; and heart: contraction band necrosis, scarring/fibrosis.

Idiopathic inflammatory myopathies including dermatomyositis, polymyositis and others are disorders of chronic muscle inflammation of unknown etiology resulting in muscle weakness. Muscle injury/inflammation is often symmetric and progressive. Autoantibodies are associated with most forms. These myositis-specific autoantibodies are directed against and inhibit the function of components, proteins and RNA's, involved in protein synthesis.

Sarcoidosis is a condition of unknown etiology which is characterized by the presence of epithelioid granulomas in nearly any tissue in the body; involvement of the lung is most common. The pathogenesis involves the persistence of activated macrophages and lymphoid cells at sites of the disease with subsequent chronic sequelae resultant from the release of locally and systemically active products released by these cell types.

Autoimmune hemolytic anemia including autoimmune hemolytic anemia, immune pancytopenia, and paroxysmal nocturnal hemoglobinuria is a result of production of antibodies that react with antigens expressed on the surface of red blood cells (and in some cases other blood cells including platelets as well) and is a reflection of the removal of those antibody coated cells via complement mediated lysis and/or ADCC/Fc-receptor-mediated mechanisms.

Thyroiditis including Grave's disease, Hashimoto's thyroiditis, juvenile lymphocytic thyroiditis, and atrophic thyroiditis, are the result of an autoimmune response against thyroid antigens with production of antibodies that react with proteins present in and often specific for the thyroid gland. Experimental models exist including spontaneous models: rats (BUF and BB rats) and chickens (obese chicken strain); inducible models: immunization of animals with either thyroglobulin, thyroid microsomal antigen (thyroid peroxidase). NK cell activity was specifically studied in patients with Graves' disease and Hashimoto's thyroiditis, and a significant reduction in NK cell activity was found in both patient populations (Wenzel et al., 1998 Thyroid 8(11):1019-1022).

Inflammatory and Fibrotic Lung Disease, including Eosinophilic Pneumonias; Idiopathic Pulmonary Fibrosis, and Hypersensitivity Pneumonitis may involve a dysregulated immune-inflammatory response. Inhibition of that response would be of therapeutic benefit.

Psoriasis is a T lymphocyte-mediated inflammatory disease. Lesions contain infiltrates of T lymphocytes, macrophages and antigen processing cells, and some neutrophils.

Other diseases in which intervention of the immune and/or inflammatory response have benefit are infectious disease including but not limited to viral infection (including but not limited to AIDS, hepatitis A, B, C, D, E and herpes) bacterial infection, fungal infections, and protozoal and parasitic infections. Molecules (or derivatives/agonists) which stimulate the immune reaction can be utilized therapeutically to enhance the immune response to infectious agents), diseases of immunodeficiency (molecules/derivatives/agonists) which stimulate the immune reaction can be utilized therapeutically to enhance the immune response for conditions of inherited, acquired, infectious induced (as in HIV infection), or iatrogenic (*i.e.*, as from chemotherapy) immunodeficiency, and neoplasia.

It has been demonstrated that some human cancer patients develop an antibody and/or NK cell response to antigens on neoplastic cells. It has also been shown in animal models of neoplasia that enhancement of the immune response can result in rejection or regression of that particular neoplasm. Molecules that enhance the NK cell response have utility *in vivo* in enhancing the immune response against neoplasia. Molecules which enhance the NK cell proliferative response (or small molecule agonists or antibodies that affected the same receptor in an agonistic fashion) can be used therapeutically to treat cancer. Molecules that inhibit the NK cell response also function *in vivo* during neoplasia to suppress the immune response to a neoplasm; such molecules can either be expressed by the neoplastic cells themselves or their expression can be induced by the neoplasm in other cells. Antagonism of such inhibitory molecules (either with antibody, small molecule antagonists or other means) enhances immune-mediated tumor rejection.

Additionally, inhibition of molecules with proinflammatory properties may have therapeutic benefit in reperfusion injury; stroke; myocardial infarction; atherosclerosis; acute lung injury; hemorrhagic shock; burn; sepsis/septic shock; acute tubular necrosis; endometriosis; degenerative joint disease and pancreatitis.

The compounds of the present invention, *e.g.*, polypeptides or antibodies, are administered to a mammal, preferably a human, in accord with known methods, such as intravenous administration as a bolus or by continuous infusion over a period of time, by intramuscular, intraperitoneal, intracerebrospinal, subcutaneous, intra-articular, intrasynovial, intrathecal, oral, topical, or inhalation (intranasal, intrapulmonary) routes. Intravenous or inhaled administration of polypeptides and antibodies is preferred.

In immunoadjuvant therapy, other therapeutic regimens, such administration of an anti-cancer agent, may be combined with the administration of the proteins, antibodies or compounds of the instant invention. For example, the patient to be treated with the immunoadjuvant of the invention may also receive an anti-cancer agent (chemotherapeutic agent) or radiation therapy. Preparation and dosing schedules for such chemotherapeutic agents may be used according to manufacturers' instructions or as determined empirically by the skilled practitioner. Preparation and dosing schedules for such chemotherapy are also described in *Chemotherapy Service* Ed., M.C. Perry, Williams & Wilkins, Baltimore, MD (1992). The chemotherapeutic agent may precede, or follow administration of the immunoadjuvant or may be given simultaneously therewith. Additionally, an anti-estrogen compound such as tamoxifen or an anti-progesterone such as onapristone (see, EP 616812) may be given in dosages known for such molecules.

It may be desirable to also administer antibodies against other immune disease associated or tumor associated antigens, such as antibodies which bind to CD20, CD11a, CD18, ErbB2, EGFR, ErbB3, ErbB4, or vascular endothelial factor (VEGF). Alternatively, or in addition, two or more antibodies binding the same or two or more different antigens disclosed herein may be coadministered to the patient. Sometimes, it

may be beneficial to also administer one or more cytokines to the patient. In one embodiment, the PRO polypeptides are coadministered with a growth inhibitory agent. For example, the growth inhibitory agent may be administered first, followed by a PRO polypeptide. However, simultaneous administration or administration first is also contemplated. Suitable dosages for the growth inhibitory agent are those presently used and may be lowered due to the combined action (synergy) of the growth inhibitory agent and the PRO polypeptide.

For the treatment or reduction in the severity of immune related disease, the appropriate dosage of a compound of the invention will depend on the type of disease to be treated, as defined above, the severity and course of the disease, whether the agent is administered for preventive or therapeutic purposes, previous therapy, the patient's clinical history and response to the compound, and the discretion of the attending physician. The compound is suitably administered to the patient at one time or over a series of treatments.

For example, depending on the type and severity of the disease, about 1 $\mu\text{g/kg}$ to 15 mg/kg (*e.g.*, 0.1-20 mg/kg) of polypeptide or antibody is an initial candidate dosage for administration to the patient, whether, for example, by one or more separate administrations, or by continuous infusion. A typical daily dosage might range from about 1 $\mu\text{g/kg}$ to 100 mg/kg or more, depending on the factors mentioned above. For repeated administrations over several days or longer, depending on the condition, the treatment is sustained until a desired suppression of disease symptoms occurs. However, other dosage regimens may be useful. The progress of this therapy is easily monitored by conventional techniques and assays.

O. Articles of Manufacture

In another embodiment of the invention, an article of manufacture containing materials (*e.g.*, comprising a PRO molecule) useful for the diagnosis or treatment of the disorders described above is provided. The article of manufacture comprises a container and an instruction. Suitable containers include, for example, bottles, vials, syringes, and test tubes. The containers may be formed from a variety of materials such as glass or plastic. The container holds a composition which is effective for diagnosing or treating the condition and may have a sterile access port (for example the container may be an intravenous solution bag or a vial having a stopper pierceable by a hypodermic injection needle). The active agent in the composition is usually a polypeptide or an antibody of the invention. An instruction or label on, or associated with, the container indicates that the composition is used for diagnosing or treating the condition of choice. The article of manufacture may further comprise a second container comprising a pharmaceutically-acceptable buffer, such as phosphate-buffered saline, Ringer's solution and dextrose solution. It may further include other materials desirable from a commercial and user standpoint, including other buffers, diluents, filters, needles, syringes, and package inserts with instructions for use.

P. Diagnosis and Prognosis of Immune Related Disease

Cell surface proteins, such as proteins which are overexpressed in certain immune related diseases, are excellent targets for drug candidates or disease treatment. The same proteins along with secreted proteins encoded by the genes amplified in immune related disease states find additional use in the diagnosis and prognosis of these diseases. For example, antibodies directed against the protein products of genes amplified in multiple sclerosis, rheumatoid arthritis, or another immune related disease, can be used as diagnostics or prognostics.

For example, antibodies, including antibody fragments, can be used to qualitatively or quantitatively detect the expression of proteins encoded by amplified or overexpressed genes ("marker gene products"). The antibody preferably is equipped with a detectable, *e.g.*, fluorescent label, and binding can be monitored by light microscopy, flow cytometry, fluorimetry, or other techniques known in the art. These techniques are particularly suitable, if the overexpressed gene encodes a cell surface protein. Such binding assays are performed essentially as described above.

In situ detection of antibody binding to the marker gene products can be performed, for example, by immunofluorescence or immunoelectron microscopy. For this purpose, a histological specimen is removed from the patient, and a labeled antibody is applied to it, preferably by overlaying the antibody on a biological sample. This procedure also allows for determining the distribution of the marker gene product in the tissue examined. It will be apparent for those skilled in the art that a wide variety of histological methods are readily available for *in situ* detection.

The following examples are offered for illustrative purposes only, and are not intended to limit the scope of the present invention in any way.

All patent and literature references cited in the present specification are hereby incorporated by reference in their entirety.

EXAMPLES

Commercially available reagents referred to in the examples were used according to manufacturer's instructions unless otherwise indicated. The source of those cells identified in the following examples, and throughout the specification, by ATCC accession numbers is the American Type Culture Collection, Manassas, VA.

EXAMPLE 1: Microarray analysis of NK cells.

Nucleic acid microarrays, often containing thousands of gene sequences, are useful for identifying differentially expressed genes in diseased tissues as compared to their normal counterparts. Using nucleic acid microarrays, test and control mRNA samples from test and control tissue samples are reverse transcribed and labeled to generate cDNA probes. The cDNA probes are then hybridized to an array of nucleic acids immobilized on a solid support. The array is configured such that the sequence and position of each member of the array is known. For example, a selection of genes known to be expressed in certain disease states may be arrayed on a solid support. Hybridization of a labeled probe with a particular array member indicates that the sample from which the probe was derived expresses that gene. If the hybridization signal of a probe from a test (in this instance, activated NK cells) sample is greater than hybridization signal of a probe from a control (in this instance, resting NK cells) sample, the gene or genes expressed in the test tissue are identified. The implication of this result is that an overexpressed protein in a test tissue is useful not only as a diagnostic marker for the presence of the disease condition, but also as a therapeutic target for treatment of the disease condition.

The methodology of hybridization of nucleic acids and microarray technology is well known in the art. In one example, the specific preparation of nucleic acids for hybridization and probes, slides, and hybridization conditions are all detailed in PCT Patent Application Serial No. PCT/US01/10482, filed on March 30, 2001 and which is herein incorporated by reference.

For this experiment, peripheral blood NK cells were isolated from leukopacks by negative selection using the NK cell isolation kit with the Miltenyi MACS™ magnetic cell sorting system (Miltenyi Biotec). Cell purity was confirmed by staining with PE anti-CD56 for FACS analysis. Purity of cell preps ranged from 89% to 96%. Cell culture conditions were as follows: Set up in-vitro cultures in 6 well plates - 5 ml cultures/well using RPMI 1640, 10% heat inactivated FBS, 100 units/mL of Penicillin, 100 mg/mL of streptomycin, 2 mM L-glutamine, and 5.5×10^{-5} Beta-mercaptoethanol. The cells were cultured for 16 hours in the base media described above, but with the addition of IL-12 (10nM), IL-15(10nM) or JAM-IT(10nM). An untreated control sample was also cultured for 16 hours (16 Hour Timepoint). Activation of NK cells was monitored by FACS for cell surface expression of CD56 and CD69. Uncultured, untreated CD56(+) cells, for use as a control (Time 0). RNA was isolated using the Qiagen Midi™ preps as per the instructions in the manual with the addition of an on-column DNase I digestion after the first RW1 wash step. RNA was eluted in RNase free water and subsequently concentrated by ethanol precipitation. Precipitated RNA was taken up in nuclease free water to a final minimum concentration of 0.5 micrograms per microliter.

The isolated mRNA was labeled and hybridized to Affimax™ (Affymetrix Inc. Santa Clara, CA) microarray chips and proprietary Genentech microarrays. The cells harvested at Time 0 timepoint, and the 16 Hour timepoint were subjected to the same analysis. Genes were compared whose expression was upregulated at the 16 Hour Timepoint as compared to untreated 16 Hour Timepoint and uncultured, untreated Time 0 timepoints.

Below are the results of these experiments, demonstrating that various PRO polypeptides of the present invention are differentially expressed in activated NK cells after 16 hours in culture with IL-12, IL-15 or JAM2 as compared to normal resting NK cells cultured for 16 hours or resting NK cells harvested at Time 0. Specifically, Figure 438A-B, Figure 511, Figure 687, Figure 697, Figure 703, Figure 1057, Figure 1084, Figure 1126 and Figure 1228 identify sequences that are highly overexpressed in activated NK cells as compared to normal resting NK cells.

As described above, these data demonstrate that the PRO polypeptides of the present invention are useful not only as diagnostic markers for the presence of one or more immune disorders, but also serve as therapeutic targets for the treatment of those immune disorders.

The Figures 1-1477 show the nucleic acids of the invention and their encoded PRO polypeptides.

EXAMPLE 2: Use of PRO as a hybridization probe

The following method describes use of a nucleotide sequence encoding PRO as a hybridization probe.

DNA comprising the coding sequence of full-length or mature PRO as disclosed herein is employed as a probe to screen for homologous DNAs (such as those encoding naturally-occurring variants of PRO) in human tissue cDNA libraries or human tissue genomic libraries.

Hybridization and washing of filters containing either library DNAs is performed under the following high stringency conditions. Hybridization of radiolabeled PRO-derived probe to the filters is performed in a solution of 50% formamide, 5x SSC, 0.1% SDS, 0.1% sodium pyrophosphate, 50 mM

sodium phosphate, pH 6.8, 2x Denhardt's solution, and 10% dextran sulfate at 42°C for 20 hours. Washing of the filters is performed in an aqueous solution of 0.1x SSC and 0.1% SDS at 42°C.

DNAs having a desired sequence identity with the DNA encoding full-length native sequence PRO can then be identified using standard techniques known in the art.

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EXAMPLE 3: Expression of PRO in *E. coli*

This example illustrates preparation of an unglycosylated form of PRO by recombinant expression in *E. coli*.

The DNA sequence encoding PRO is initially amplified using selected PCR primers. The primers should contain restriction enzyme sites which correspond to the restriction enzyme sites on the selected expression vector. A variety of expression vectors may be employed. An example of a suitable vector is pBR322 (derived from *E. coli*; see Bolivar et al., Gene, 2:95 (1977)) which contains genes for ampicillin and tetracycline resistance. The vector is digested with restriction enzyme and dephosphorylated. The PCR amplified sequences are then ligated into the vector. The vector will preferably include sequences which encode for an antibiotic resistance gene, a trp promoter, a polyhis leader (including the first six STII codons, polyhis sequence, and enterokinase cleavage site), the PRO coding region, lambda transcriptional terminator, and an argU gene.

The ligation mixture is then used to transform a selected *E. coli* strain using the methods described in Sambrook et al., supra. Transformants are identified by their ability to grow on LB plates and antibiotic resistant colonies are then selected. Plasmid DNA can be isolated and confirmed by restriction analysis and DNA sequencing.

Selected clones can be grown overnight in liquid culture medium such as LB broth supplemented with antibiotics. The overnight culture may subsequently be used to inoculate a larger scale culture. The cells are then grown to a desired optical density, during which the expression promoter is turned on.

After culturing the cells for several more hours, the cells can be harvested by centrifugation. The cell pellet obtained by the centrifugation can be solubilized using various agents known in the art, and the solubilized PRO protein can then be purified using a metal chelating column under conditions that allow tight binding of the protein.

PRO may be expressed in *E. coli* in a poly-His tagged form, using the following procedure. The DNA encoding PRO is initially amplified using selected PCR primers. The primers will contain restriction enzyme sites which correspond to the restriction enzyme sites on the selected expression vector, and other useful sequences providing for efficient and reliable translation initiation, rapid purification on a metal chelation column, and proteolytic removal with enterokinase. The PCR-amplified, poly-His tagged sequences are then ligated into an expression vector, which is used to transform an *E. coli* host based on strain 52 (W3110 fuhA(tonA) lon galE rpoHts(htpRts) clpP(lacIq). Transformants are first grown in LB containing 50 mg/ml carbenicillin at 30°C with shaking until an O.D.600 of 3-5 is reached. Cultures are then diluted 50-100 fold into CRAP media (prepared by mixing 3.57 g (NH₄)₂SO₄, 0.71 g sodium citrate•2H₂O, 1.07 g KCl, 5.36 g Difco yeast extract, 5.36 g Sheffield hycase SF in 500 mL water, as well as 110 mM MPOS, pH 7.3, 0.55% (w/v) glucose and 7 mM MgSO₄) and grown for approximately 20-30 hours

at 30°C with shaking. Samples are removed to verify expression by SDS-PAGE analysis, and the bulk culture is centrifuged to pellet the cells. Cell pellets are frozen until purification and refolding.

E. coli paste from 0.5 to 1 L fermentations (6-10 g pellets) is resuspended in 10 volumes (w/v) in 7 M guanidine, 20 mM Tris, pH 8 buffer. Solid sodium sulfite and sodium tetrathionate is added to make final concentrations of 0.1M and 0.02 M, respectively, and the solution is stirred overnight at 4°C. This step results in a denatured protein with all cysteine residues blocked by sulfitolization. The solution is centrifuged at 40,000 rpm in a Beckman Ultracentrifuge for 30 min. The supernatant is diluted with 3-5 volumes of metal chelate column buffer (6 M guanidine, 20 mM Tris, pH 7.4) and filtered through 0.22 micron filters to clarify. The clarified extract is loaded onto a 5 ml Qiagen Ni-NTA metal chelate column equilibrated in the metal chelate column buffer. The column is washed with additional buffer containing 50 mM imidazole (Calbiochem, Utrol grade), pH 7.4. The protein is eluted with buffer containing 250 mM imidazole. Fractions containing the desired protein are pooled and stored at 4°C. Protein concentration is estimated by its absorbance at 280 nm using the calculated extinction coefficient based on its amino acid sequence.

The proteins are refolded by diluting the sample slowly into freshly prepared refolding buffer consisting of: 20 mM Tris, pH 8.6, 0.3 M NaCl, 2.5 M urea, 5 mM cysteine, 20 mM glycine and 1 mM EDTA. Refolding volumes are chosen so that the final protein concentration is between 50 to 100 micrograms/ml. The refolding solution is stirred gently at 4°C for 12-36 hours. The refolding reaction is quenched by the addition of TFA to a final concentration of 0.4% (pH of approximately 3). Before further purification of the protein, the solution is filtered through a 0.22 micron filter and acetonitrile is added to 2-10% final concentration. The refolded protein is chromatographed on a Poros R1/H reversed phase column using a mobile buffer of 0.1% TFA with elution with a gradient of acetonitrile from 10 to 80%. Aliquots of fractions with A280 absorbance are analyzed on SDS polyacrylamide gels and fractions containing homogeneous refolded protein are pooled. Generally, the properly refolded species of most proteins are eluted at the lowest concentrations of acetonitrile since those species are the most compact with their hydrophobic interiors shielded from interaction with the reversed phase resin. Aggregated species are usually eluted at higher acetonitrile concentrations. In addition to resolving misfolded forms of proteins from the desired form, the reversed phase step also removes endotoxin from the samples.

Fractions containing the desired folded PRO polypeptide are pooled and the acetonitrile removed using a gentle stream of nitrogen directed at the solution. Proteins are formulated into 20 mM Hepes, pH 6.8 with 0.14 M sodium chloride and 4% mannitol by dialysis or by gel filtration using G25 Superfine (Pharmacia) resins equilibrated in the formulation buffer and sterile filtered.

Many of the PRO polypeptides disclosed herein were successfully expressed as described above.

EXAMPLE 4: Expression of PRO in mammalian cells

This example illustrates preparation of a potentially glycosylated form of PRO by recombinant expression in mammalian cells.

The vector, pRK5 (see EP 307,247, published March 15, 1989), is employed as the expression vector. Optionally, the PRO DNA is ligated into pRK5 with selected restriction enzymes to allow insertion of the PRO DNA using ligation methods such as described in Sambrook et al., supra. The resulting vector is called pRK5-PRO.

In one embodiment, the selected host cells may be 293 cells. Human 293 cells (ATCC CCL 1573) are grown to confluence in tissue culture plates in medium such as DMEM supplemented with fetal calf serum and optionally, nutrient components and/or antibiotics. About 10 µg pRK5-PRO DNA is mixed with about 1 µg DNA encoding the VA RNA gene [Thimmappaya et al., *Cell*, 31:543 (1982)] and dissolved in 500 µl of 1 mM Tris-HCl, 0.1 mM EDTA, 0.227 M CaCl₂. To this mixture is added, dropwise, 500 µl of 50 mM HEPES (pH 7.35), 280 mM NaCl, 1.5 mM NaPO₄, and a precipitate is allowed to form for 10 minutes at 25°C. The precipitate is suspended and added to the 293 cells and allowed to settle for about four hours at 37°C. The culture medium is aspirated off and 2 ml of 20% glycerol in PBS is added for 30 seconds. The 293 cells are then washed with serum free medium, fresh medium is added and the cells are incubated for about 5 days.

Approximately 24 hours after the transfections, the culture medium is removed and replaced with culture medium (alone) or culture medium containing 200 µCi/ml ³⁵S-cysteine and 200 µCi/ml ³⁵S-methionine. After a 12 hour incubation, the conditioned medium is collected, concentrated on a spin filter, and loaded onto a 15% SDS gel. The processed gel may be dried and exposed to film for a selected period of time to reveal the presence of PRO polypeptide. The cultures containing transfected cells may undergo further incubation (in serum free medium) and the medium is tested in selected bioassays.

In an alternative technique, PRO may be introduced into 293 cells transiently using the dextran sulfate method described by Sompayrac et al., *Proc. Natl. Acad. Sci.*, 12:7575 (1981). 293 cells are grown to maximal density in a spinner flask and 700 µg pRK5-PRO DNA is added. The cells are first concentrated from the spinner flask by centrifugation and washed with PBS. The DNA-dextran precipitate is incubated on the cell pellet for four hours. The cells are treated with 20% glycerol for 90 seconds, washed with tissue culture medium, and re-introduced into the spinner flask containing tissue culture medium, 5 µg/ml bovine insulin and 0.1 µg/ml bovine transferrin. After about four days, the conditioned media is centrifuged and filtered to remove cells and debris. The sample containing expressed PRO can then be concentrated and purified by any selected method, such as dialysis and/or column chromatography.

In another embodiment, PRO can be expressed in CHO cells. The pRK5-PRO can be transfected into CHO cells using known reagents such as CaPO₄ or DEAE-dextran. As described above, the cell cultures can be incubated, and the medium replaced with culture medium (alone) or medium containing a radiolabel such as ³⁵S-methionine. After determining the presence of PRO polypeptide, the culture medium may be replaced with serum free medium. Preferably, the cultures are incubated for about 6 days, and then the conditioned medium is harvested. The medium containing the expressed PRO can then be concentrated and purified by any selected method.

Epitope-tagged PRO may also be expressed in host CHO cells. The PRO may be subcloned out of the pRK5 vector. The subclone insert can undergo PCR to fuse in frame with a selected epitope tag such as a poly-his tag into a Baculovirus expression vector. The poly-his tagged PRO insert can then be subcloned into a SV40 promoter/enhancer containing vector containing a selection marker such as DHFR for selection of stable clones. Finally, the CHO cells can be transfected (as described above) with the SV40 promoter/enhancer containing vector. Labeling may be performed, as described above, to verify expression. The culture medium containing the expressed poly-His tagged PRO can then be concentrated and purified by any selected method, such as by Ni²⁺-chelate affinity chromatography.

PRO may also be expressed in CHO and/or COS cells by a transient expression procedure or in CHO cells by another stable expression procedure.

Stable expression in CHO cells is performed using the following procedure. The proteins are expressed as an IgG construct (immunoadhesin), in which the coding sequences for the soluble forms (e.g. extracellular domains) of the respective proteins are fused to an IgG1 constant region sequence containing the hinge, CH2 and CH2 domains and/or is a poly-His tagged form.

Following PCR amplification, the respective DNAs are subcloned in a CHO expression vector using standard techniques as described in Ausubel et al., Current Protocols of Molecular Biology, Unit 3.16, John Wiley and Sons (1997). CHO expression vectors are constructed to have compatible restriction sites 5' and 3' of the DNA of interest to allow the convenient shuttling of cDNA's. The vector used expression in CHO cells is as described in Lucas et al., Nucl. Acids Res. 24:9 (1774-1779 (1996), and uses the SV40 early promoter/enhancer to drive expression of the cDNA of interest and dihydrofolate reductase (DHFR). DHFR expression permits selection for stable maintenance of the plasmid following transfection.

Twelve micrograms of the desired plasmid DNA is introduced into approximately 10 million CHO cells using commercially available transfection reagents Superfect® (Quiagen), Dospert® or Fugene® (Boehringer Mannheim). The cells are grown as described in Lucas et al., supra. Approximately 3×10^7 cells are frozen in an ampule for further growth and production as described below.

The ampules containing the plasmid DNA are thawed by placement into water bath and mixed by vortexing. The contents are pipetted into a centrifuge tube containing 10 mL of media and centrifuged at 1000 rpm for 5 minutes. The supernatant is aspirated and the cells are resuspended in 10 mL of selective media (0.2 μ m filtered PS20 with 5% 0.2 μ m diafiltered fetal bovine serum). The cells are then aliquoted into a 100 mL spinner containing 90 mL of selective media. After 1-2 days, the cells are transferred into a 250 mL spinner filled with 150 mL selective growth medium and incubated at 37°C. After another 2-3 days, 250 mL, 500 mL and 2000 mL spinners are seeded with 3×10^5 cells/mL. The cell media is exchanged with fresh media by centrifugation and resuspension in production medium. Although any suitable CHO media may be employed, a production medium described in U.S. Patent No. 5,122,469, issued June 16, 1992 may actually be used. A 3L production spinner is seeded at 1.2×10^6 cells/mL. On day 0, pH is determined. On day 1, the spinner is sampled and sparging with filtered air is commenced. On day 2, the spinner is sampled, the temperature shifted to 33°C, and 30 mL of 500 g/L glucose and 0.6 mL of 10% antifoam (e.g., 35% polydimethylsiloxane emulsion, Dow Corning 365 Medical Grade Emulsion) taken. Throughout the production, the pH is adjusted as necessary to keep it at around 7.2. After 10 days, or until the viability dropped below 70%, the cell culture is harvested by centrifugation and filtering through a 0.22 μ m filter. The filtrate was either stored at 4°C or immediately loaded onto columns for purification.

For the poly-His tagged constructs, the proteins are purified using a Ni-NTA column (Qiagen). Before purification, imidazole is added to the conditioned media to a concentration of 5 mM. The conditioned media is pumped onto a 6 ml Ni-NTA column equilibrated in 20 mM Hepes, pH 7.4, buffer containing 0.3 M NaCl and 5 mM imidazole at a flow rate of 4-5 ml/min. at 4°C. After loading, the column is washed with additional equilibration buffer and the protein eluted with equilibration buffer containing 0.25 M imidazole. The highly purified protein is subsequently desalted into a storage buffer containing 10

mM Hepes, 0.14 M NaCl and 4% mannitol, pH 6.8, with a 25 ml G25 Superfine (Pharmacia) column and stored at -80°C.

Immunoadhesin (Fc-containing) constructs are purified from the conditioned media as follows. The conditioned medium is pumped onto a 5 ml Protein A column (Pharmacia) which had been equilibrated in 20 mM Na phosphate buffer, pH 6.8. After loading, the column is washed extensively with equilibration buffer before elution with 100 mM citric acid, pH 3.5. The eluted protein is immediately neutralized by collecting 1 ml fractions into tubes containing 275 µl of 1 M Tris buffer, pH 9. The highly purified protein is subsequently desalted into storage buffer as described above for the poly-His tagged proteins. The homogeneity is assessed by SDS polyacrylamide gels and by N-terminal amino acid sequencing by Edman degradation.

Many of the PRO polypeptides disclosed herein were successfully expressed as described above.

EXAMPLE 5: Expression of PRO in Yeast

The following method describes recombinant expression of PRO in yeast.

First, yeast expression vectors are constructed for intracellular production or secretion of PRO from the ADH2/GAPDH promoter. DNA encoding PRO and the promoter is inserted into suitable restriction enzyme sites in the selected plasmid to direct intracellular expression of PRO. For secretion, DNA encoding PRO can be cloned into the selected plasmid, together with DNA encoding the ADH2/GAPDH promoter, a native PRO signal peptide or other mammalian signal peptide, or, for example, a yeast alpha-factor or invertase secretory signal/leader sequence, and linker sequences (if needed) for expression of PRO.

Yeast cells, such as yeast strain AB110, can then be transformed with the expression plasmids described above and cultured in selected fermentation media. The transformed yeast supernatants can be analyzed by precipitation with 10% trichloroacetic acid and separation by SDS-PAGE, followed by staining of the gels with Coomassie Blue stain.

Recombinant PRO can subsequently be isolated and purified by removing the yeast cells from the fermentation medium by centrifugation and then concentrating the medium using selected cartridge filters. The concentrate containing PRO may further be purified using selected column chromatography resins.

Many of the PRO polypeptides disclosed herein were successfully expressed as described above.

EXAMPLE 6: Expression of PRO in Baculovirus-Infected Insect Cells

The following method describes recombinant expression of PRO in Baculovirus-infected insect cells.

The sequence coding for PRO is fused upstream of an epitope tag contained within a baculovirus expression vector. Such epitope tags include poly-his tags and immunoglobulin tags (like Fc regions of IgG). A variety of plasmids may be employed, including plasmids derived from commercially available plasmids such as pVL1393 (Novagen). Briefly, the sequence encoding PRO or the desired portion of the coding sequence of PRO such as the sequence encoding the extracellular domain of a transmembrane protein or the sequence encoding the mature protein if the protein is extracellular is amplified by PCR with primers complementary to the 5' and 3' regions. The 5' primer may incorporate flanking (selected) restriction

enzyme sites. The product is then digested with those selected restriction enzymes and subcloned into the expression vector.

Recombinant baculovirus is generated by co-transfecting the above plasmid and BaculoGold™ virus DNA (Pharmlingen) into *Spodoptera frugiperda* ("Sf9") cells (ATCC CRL 1711) using lipofectin (commercially available from GIBCO-BRL). After 4 - 5 days of incubation at 28°C, the released viruses are harvested and used for further amplifications. Viral infection and protein expression are performed as described by O'Reilley et al., Baculovirus expression vectors: A Laboratory Manual, Oxford: Oxford University Press (1994).

Expressed poly-his tagged PRO can then be purified, for example, by Ni²⁺-chelate affinity chromatography as follows. Extracts are prepared from recombinant virus-infected Sf9 cells as described by Rupert et al., Nature, 362:175-179 (1993). Briefly, Sf9 cells are washed, resuspended in sonication buffer (25 mL Hepes, pH 7.9; 12.5 mM MgCl₂; 0.1 mM EDTA; 10% glycerol; 0.1% NP-40; 0.4 M KCl), and sonicated twice for 20 seconds on ice. The sonicates are cleared by centrifugation, and the supernatant is diluted 50-fold in loading buffer (50 mM phosphate, 300 mM NaCl, 10% glycerol, pH 7.8) and filtered through a 0.45 µm filter. A Ni²⁺-NTA agarose column (commercially available from Qiagen) is prepared with a bed volume of 5 mL, washed with 25 mL of water and equilibrated with 25 mL of loading buffer. The filtered cell extract is loaded onto the column at 0.5 mL per minute. The column is washed to baseline A₂₈₀ with loading buffer, at which point fraction collection is started. Next, the column is washed with a secondary wash buffer (50 mM phosphate; 300 mM NaCl, 10% glycerol, pH 6.0), which elutes nonspecifically bound protein. After reaching A₂₈₀ baseline again, the column is developed with a 0 to 500 mM Imidazole gradient in the secondary wash buffer. One mL fractions are collected and analyzed by SDS-PAGE and silver staining or Western blot with Ni²⁺-NTA-conjugated to alkaline phosphatase (Qiagen). Fractions containing the eluted His₁₀-tagged PRO are pooled and dialyzed against loading buffer.

Alternatively, purification of the IgG tagged (or Fc tagged) PRO can be performed using known chromatography techniques, including for instance, Protein A or protein G column chromatography.

Many of the PRO polypeptides disclosed herein were successfully expressed as described above.

EXAMPLE 7: Preparation of Antibodies that Bind PRO

This example illustrates preparation of monoclonal antibodies which can specifically bind PRO.

Techniques for producing the monoclonal antibodies are known in the art and are described, for instance, in Goding, supra. Immunogens that may be employed include purified PRO, fusion proteins containing PRO, and cells expressing recombinant PRO on the cell surface. Selection of the immunogen can be made by the skilled artisan without undue experimentation.

Mice, such as Balb/c, are immunized with the PRO immunogen emulsified in complete Freund's adjuvant and injected subcutaneously or intraperitoneally in an amount from 1-100 micrograms. Alternatively, the immunogen is emulsified in MPL-TDM adjuvant (Ribi Immunochemical Research, Hamilton, MT) and injected into the animal's hind foot pads. The immunized mice are then boosted 10 to 12 days later with additional immunogen emulsified in the selected adjuvant. Thereafter, for several weeks, the mice may also be boosted with additional immunization injections. Serum samples may be periodically obtained from the mice by retro-orbital bleeding for testing in ELISA assays to detect anti-PRO antibodies.

After a suitable antibody titer has been detected, the animals "positive" for antibodies can be injected with a final intravenous injection of PRO. Three to four days later, the mice are sacrificed and the spleen cells are harvested. The spleen cells are then fused (using 35% polyethylene glycol) to a selected murine myeloma cell line such as P3X63AgU.1, available from ATCC, No. CRL 1597. The fusions generate hybridoma cells which can then be plated in 96 well tissue culture plates containing HAT (hypoxanthine, aminopterin, and thymidine) medium to inhibit proliferation of non-fused cells, myeloma hybrids, and spleen cell hybrids.

The hybridoma cells will be screened in an ELISA for reactivity against PRO. Determination of "positive" hybridoma cells secreting the desired monoclonal antibodies against PRO is within the skill in the art.

The positive hybridoma cells can be injected intraperitoneally into syngeneic Balb/c mice to produce ascites containing the anti-PRO monoclonal antibodies. Alternatively, the hybridoma cells can be grown in tissue culture flasks or roller bottles. Purification of the monoclonal antibodies produced in the ascites can be accomplished using ammonium sulfate precipitation, followed by gel exclusion chromatography. Alternatively, affinity chromatography based upon binding of antibody to protein A or protein G can be employed.

EXAMPLE 8: Purification of PRO Polypeptides Using Specific Antibodies

Native or recombinant PRO polypeptides may be purified by a variety of standard techniques in the art of protein purification. For example, pro-PRO polypeptide, mature PRO polypeptide, or pre-PRO polypeptide is purified by immunoaffinity chromatography using antibodies specific for the PRO polypeptide of interest. In general, an immunoaffinity column is constructed by covalently coupling the anti-PRO polypeptide antibody to an activated chromatographic resin.

Polyclonal immunoglobulins are prepared from immune sera either by precipitation with ammonium sulfate or by purification on immobilized Protein A (Pharmacia LKB Biotechnology, Piscataway, N.J.). Likewise, monoclonal antibodies are prepared from mouse ascites fluid by ammonium sulfate precipitation or chromatography on immobilized Protein A. Partially purified immunoglobulin is covalently attached to a chromatographic resin such as CnBr-activated SEPHAROSE™ (Pharmacia LKB Biotechnology). The antibody is coupled to the resin, the resin is blocked, and the derivative resin is washed according to the manufacturer's instructions.

Such an immunoaffinity column is utilized in the purification of PRO polypeptide by preparing a fraction from cells containing PRO polypeptide in a soluble form. This preparation is derived by solubilization of the whole cell or of a subcellular fraction obtained via differential centrifugation by the addition of detergent or by other methods well known in the art. Alternatively, soluble PRO polypeptide containing a signal sequence may be secreted in useful quantity into the medium in which the cells are grown.

A soluble PRO polypeptide-containing preparation is passed over the immunoaffinity column, and the column is washed under conditions that allow the preferential absorbance of PRO polypeptide (*e.g.*, high ionic strength buffers in the presence of detergent). Then, the column is eluted under conditions that disrupt

antibody/PRO polypeptide binding (*e.g.*, a low pH buffer such as approximately pH 2-3, or a high concentration of a chaotrope such as urea or thiocyanate ion), and PRO polypeptide is collected.

EXAMPLE 9: Drug Screening

5 This invention is particularly useful for screening compounds by using PRO polypeptides or binding fragment thereof in any of a variety of drug screening techniques. The PRO polypeptide or fragment employed in such a test may either be free in solution, affixed to a solid support, borne on a cell surface, or located intracellularly. One method of drug screening utilizes eukaryotic or prokaryotic host cells which are stably transformed with recombinant nucleic acids expressing the PRO polypeptide or fragment.

10 Drugs are screened against such transformed cells in competitive binding assays. Such cells, either in viable or fixed form, can be used for standard binding assays. One may measure, for example, the formation of complexes between PRO polypeptide or a fragment and the agent being tested. Alternatively, one can examine the diminution in complex formation between the PRO polypeptide and its target cell or target receptors caused by the agent being tested.

15 Thus, the present invention provides methods of screening for drugs or any other agents which can affect a PRO polypeptide-associated disease or disorder. These methods comprise contacting such an agent with an PRO polypeptide or fragment thereof and assaying (i) for the presence of a complex between the agent and the PRO polypeptide or fragment, or (ii) for the presence of a complex between the PRO polypeptide or fragment and the cell, by methods well known in the art. In such competitive binding assays,
20 the PRO polypeptide or fragment is typically labeled. After suitable incubation, free PRO polypeptide or fragment is separated from that present in bound form, and the amount of free or uncomplexed label is a measure of the ability of the particular agent to bind to PRO polypeptide or to interfere with the PRO polypeptide/cell complex.

 Another technique for drug screening provides high throughput screening for compounds having
25 suitable binding affinity to a polypeptide and is described in detail in WO 84/03564, published on September 13, 1984. Briefly stated, large numbers of different small peptide test compounds are synthesized on a solid substrate, such as plastic pins or some other surface. As applied to a PRO polypeptide, the peptide test compounds are reacted with PRO polypeptide and washed. Bound PRO polypeptide is detected by methods well known in the art. Purified PRO polypeptide can also be coated directly onto plates for use in the
30 aforementioned drug screening techniques. In addition, non-neutralizing antibodies can be used to capture the peptide and immobilize it on the solid support.

 This invention also contemplates the use of competitive drug screening assays in which neutralizing antibodies capable of binding PRO polypeptide specifically compete with a test compound for binding to PRO polypeptide or fragments thereof. In this manner, the antibodies can be used to detect the presence of
35 any peptide which shares one or more antigenic determinants with PRO polypeptide.

EXAMPLE 10: Rational Drug Design

 The goal of rational drug design is to produce structural analogs of biologically active polypeptide of interest (*i.e.*, a PRO polypeptide) or of small molecules with which they interact, *e.g.*, agonists,
40 antagonists, or inhibitors. Any of these examples can be used to fashion drugs which are more active or

stable forms of the PRO polypeptide or which enhance or interfere with the function of the PRO polypeptide *in vivo* (c.f., Hodgson, Bio/Technology, 9: 19-21 (1991)).

In one approach, the three-dimensional structure of the PRO polypeptide, or of a PRO polypeptide-inhibitor complex, is determined by x-ray crystallography, by computer modeling or, most typically, by a combination of the two approaches. Both the shape and charges of the PRO polypeptide must be ascertained to elucidate the structure and to determine active site(s) of the molecule. Less often, useful information regarding the structure of the PRO polypeptide may be gained by modeling based on the structure of homologous proteins. In both cases, relevant structural information is used to design analogous PRO polypeptide-like molecules or to identify efficient inhibitors. Useful examples of rational drug design may include molecules which have improved activity or stability as shown by Braxton and Wells, Biochemistry, 31:7796-7801 (1992) or which act as inhibitors, agonists, or antagonists of native peptides as shown by Athauda *et al.*, J. Biochem., 113:742-746 (1993).

It is also possible to isolate a target-specific antibody, selected by functional assay, as described above, and then to solve its crystal structure. This approach, in principle, yields a pharmacore upon which subsequent drug design can be based. It is possible to bypass protein crystallography altogether by generating anti-idiotypic antibodies (anti-ids) to a functional, pharmacologically active antibody. As a mirror image of a mirror image, the binding site of the anti-ids would be expected to be an analog of the original receptor. The anti-id could then be used to identify and isolate peptides from banks of chemically or biologically produced peptides. The isolated peptides would then act as the pharmacore.

By virtue of the present invention, sufficient amounts of the PRO polypeptide may be made available to perform such analytical studies as X-ray crystallography. In addition, knowledge of the PRO polypeptide amino acid sequence provided herein will provide guidance to those employing computer modeling techniques in place of or in addition to x-ray crystallography.

The foregoing written specification is considered to be sufficient to enable one skilled in the art to practice the invention. The present invention is not to be limited in scope by the construct deposited, since the deposited embodiment is intended as a single illustration of certain aspects of the invention and any constructs that are functionally equivalent are within the scope of this invention. The deposit of material herein does not constitute an admission that the written description herein contained is inadequate to enable the practice of any aspect of the invention, including the best mode thereof, nor is it to be construed as limiting the scope of the claims to the specific illustrations that it represents. Indeed, various modifications of the invention in addition to those shown and described herein will become apparent to those skilled in the art from the foregoing description and fall within the scope of the appended claims.

What is claimed:

- 5 1. Isolated nucleic acid having at least 80% nucleic acid sequence identity to a nucleotide sequence identity to:
 - (a) the nucleotide sequence shown in any one of the Figures 1-1477 (SEQ ID NOS: 1-1477); or
 - (b) the nucleotide sequence encoding the polypeptide shown in any one of the Figures 1-1477 (SEQ ID NOS: 1-1477).
- 10 2. A vector comprising the nucleic acid of Claim 1.
- 15 3. The vector of Claim 2 operably linked to control sequences recognized by a host cell transformed with the vector.
4. A host cell comprising the vector of Claim 2.
5. The host cell of Claim 4, wherein said cell is a CHO cell, an *E.coli* cell or a yeast cell.
- 20 6. A process for producing a PRO polypeptide comprising culturing the host cell of Claim 5 under conditions suitable for expression of said PRO polypeptide and recovering said PRO polypeptide from the cell culture.
- 25 7. An isolated polypeptide having at least 80% amino acid sequence identity to:
 - (a) a polypeptide shown in any one of Figures 1-1477 (SEQ ID NOS: 1-1477); or
 - (b) a polypeptide encoded by the full length coding region of the nucleotide sequence shown in any one of Figures 1-1477 (SEQ ID NOS: 1-1477).
- 30 8. A chimeric molecule comprising a polypeptide according to Claim 7 fused to a heterologous amino acid sequence.
9. The chimeric molecule of Claim 8, wherein said heterologous amino acid sequence is an epitope tag sequence or an Fc region of an immunoglobulin.
- 35 10. An antibody which specifically binds to a polypeptide according to Claim 7.
11. The antibody of Claim 10, wherein said antibody is a monoclonal antibody, a humanized antibody or a single-chain antibody.

12. A composition of matter comprising (a) a polypeptide of Claim 7, (b) an agonist of said polypeptide, (c) an antagonist of said polypeptide, or (d) an antibody that binds to said polypeptide, in combination with a carrier.

5 13. The composition of matter of Claim 12, wherein said carrier is a pharmaceutically acceptable carrier.

14. The composition of matter of Claim 13 comprising a therapeutically effective amount of (a), (b), (c) or (d).

10 15. An article of manufacture, comprising:
a container;
a label on said container; and
a composition of matter comprising (a) a polypeptide of Claim 7, (b) an agonist of said polypeptide,
15 (c) an antagonist of said polypeptide, or (d) an antibody that binds to said polypeptide, contained within said container, wherein label on said container indicates that said composition of matter can be used for treating an immune related disease.

20 16. A method of treating an immune related disorder in a mammal in need thereof comprising administering to said mammal a therapeutically effective amount of (a) a polypeptide of Claim 7, (b) an agonist of said polypeptide, (c) an antagonist of said polypeptide, or (d) an antibody that binds to said polypeptide.

25 17. The method of Claim 16, wherein the immune related disorder is systemic lupus erythematosus, rheumatoid arthritis, osteoarthritis, juvenile chronic arthritis, a spondyloarthropathy, systemic sclerosis, an idiopathic inflammatory myopathy, Sjögren's syndrome, systemic vasculitis, sarcoidosis, autoimmune hemolytic anemia, autoimmune thrombocytopenia, thyroiditis, diabetes mellitus, immune-mediated renal disease, a demyelinating disease of the central or peripheral nervous system, idiopathic demyelinating polyneuropathy, Guillain-Barré syndrome, a chronic inflammatory demyelinating
30 polyneuropathy, a hepatobiliary disease, infectious or autoimmune chronic active hepatitis, primary biliary cirrhosis, granulomatous hepatitis, sclerosing cholangitis, inflammatory bowel disease, gluten-sensitive enteropathy, Whipple's disease, an autoimmune or immune-mediated skin disease, a bullous skin disease, erythema multiforme, contact dermatitis, psoriasis, an allergic disease, asthma, allergic rhinitis, atopic dermatitis, food hypersensitivity, urticaria, an immunologic disease of the lung, eosinophilic pneumonias,
35 idiopathic pulmonary fibrosis, hypersensitivity pneumonitis, a transplantation associated disease, graft rejection or graft-versus-host-disease.

18. A method for determining the presence of a PRO polypeptide of the invention as described in Figures 1-1477 (SEQ ID NOS: 1-1477), in a sample suspected of containing said polypeptide, said

method comprising exposing said sample to an anti-PRO antibody, where the and determining binding of said antibody to a component of said sample.

19. A method of diagnosing an immune related disease in a mammal, said method comprising detecting the level of expression of a gene encoding a PRO polypeptide of the invention as described in Figures 1-1477 (SEQ ID NOS: 1-1477), (a) in a test sample of tissue cells obtained from the mammal, and (b) in a control sample of known normal tissue cells of the same cell type, wherein a higher or lower level of expression of said gene in the test sample as compared to the control sample is indicative of the presence of an immune related disease in the mammal from which the test tissue cells were obtained.

20. A method of diagnosing an immune related disease in a mammal, said method comprising (a) contacting a PRO polypeptide of the invention as described in Figures 1-1477 (SEQ ID NOS: 1-1477), anti-PRO antibody with a test sample of tissue cells obtained from said mammal and (b) detecting the formation of a complex between the antibody and the polypeptide in the test sample, wherein formation of said complex is indicative of the presence of an immune related disease in the mammal from which the test tissue cells were obtained.

21. A method of identifying a compound that inhibits the activity of a PRO polypeptide of the invention as described in Figures 1-1477 (SEQ ID NOS: 1-1477), said method comprising contacting cells which normally respond to said polypeptide with (a) said polypeptide and (b) a candidate compound, and determining the lack responsiveness by said cell to (a).

22. A method of identifying a compound that inhibits the expression of a gene encoding a PRO polypeptide of the invention as described in Figures 1-1477 (SEQ ID NOS: 1-1477), said method comprising contacting cells which normally express said polypeptide with a candidate compound, and determining the lack of expression said gene.

23. The method of Claim 22, wherein said candidate compound is an antisense nucleic acid.

24. A method of identifying a compound that mimics the activity of a PRO polypeptide of the invention as described in any one of Figures 1-1477 (SEQ ID NOS: 1-1477), said method comprising contacting cells which normally respond to said polypeptide with a candidate compound, and determining the responsiveness by said cell to said candidate compound.

25. A method of stimulating the immune response in a mammal, said method comprising administering to said mammal an effective amount of a PRO polypeptide of the invention as described in any one of Figures 1-1477 (SEQ ID NOS: 1-1477), antagonist, wherein said immune response is stimulated.

26. A method of diagnosing an inflammatory immune response in a mammal, said method comprising detecting the level of expression of a gene encoding a PRO polypeptide of the invention as described in any one of Figures 1-1477 (SEQ ID NOS: 1-1477), (a) in a test sample of tissue cells obtained from the mammal, and (b) in a control sample of known normal tissue cells of the same cell type, wherein a higher or lower level of expression of said gene in the test sample as compared to the control sample is indicative of the presence of an inflammatory immune response in the mammal from which the test tissue cells were obtained.
- 5

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FIGURE 1

CTGCAGGCGTCGCGCCAATCTTCGCTCTGAGGTGCTGTCTCACCGGTGAGACCTGGAAGCGGGCGAGTCTCGTGC
TGTGTCGGACCTGCAGCCCCCTGGCCTTCCGCCACCATGGAGTACCTCATCGGTATCCAAGGCCCCGACTATGTTC
TTGTGCGCTCCGACCGGGTGGCCGCCAGCAATATTGTCCAGATGAAGGACGATCATGACAAGATGTTTAAGATGA
GTGAAAAGATATTACTCCTGTGTGTTGGAGAGGCTGGAGACACTGTACAGTTTGCAGAATATATTCAGAAAAACG
TGCAACTTTATAAGATGCGAAATGGATATGAATTGTCTCCACGGCAGCAGCTAACTTCACACGCCGAAACCTGG
CTGACTGTCTTTCGGAGTCGGACCCCATATCATGTGAACCTCCTCCTGGCTGGCTATGATGAGCATGAAGGGCCAG
CGCTGTATTACATGGACTACCTGGCAGCCTTGGCCAAGGCCCTTTTGCAGCCCACGGCTATGGTGCCTTCCTGA
CTCTCAGTATCCTCGACCGATACTACACACCGACTATCTCACGTGAGAGGGCAGTGGAACCTCTTAGGAAATGTC
TGGAGGAGCTCCAGAAACGCTTCATCCTGAATCTGCCAACCTTCAGTGTTTGAATCATTGACAAAAATGGCATCC
ATGACCTGGATAACATTTCTTCCCCAAACAGGGCTCCTTAACATCATGTCCTCCCTCCCACTTGCCAGGGAACCTT
TTTTTTGATGGGCTCCTTTATTTTTTTCTACTCTTTTCAGGCGCACTCTTGATAAATGGTTAATTGAGAATAAAG
GTGACTATGGATATAATTGAAAAAA

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FIGURE 2

MEYLGIGQGPDYVLVASDRVAASNIVQMKDDHDKMFKMSEKILLLCVGEAGDTVQFAEYIQKNVQLYKMRNGYEL
SPTAAANFTRRNADCLRSRTPYHVNLLLAGYDEHEGPALYYMDYLAALAKAPFAAHGYGAFTLSILDRIYTPT
ISRERAVELLRKCLEELQKRFILNLPFVSRIIDKNGIHDLDNISFPKQGS

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FIGURE 3

CTCCGGCGCAGTGTTGGGACTGTCTGGGTATCGGAAAGCAAGCCTACGTTGCTCACTATTACGTATAATCCTTTT
CTTTTCAAGATGCCTGAGGAAGTGCACCATGGAGAGGAGGAGGTGGAGACTTTTGCCTTTCAGGCAGAAATTGCC
CAACTCATGTCCCTCATCATCAATACCTTCTATTCCAACAAGGAGATTTTCCTTCGGGAGTTGATCTCTAATGCT
TCTGATGCCTTGGACAAGATTTCGCTATGAGAGCCTGACAGACCCCTTCGAAAGTTGGACAGTGGTAAAGAGCTGAAA
ATTGACATCATCCCCAACCCCTCAGGAACGTACCCTGACTTTGGTAGACACAGGCATTGGCATGACCAAAGCTGAT
CTCATAAATAATTTGGGAACCATTGCCAAGTCTGGTACTAAAGCATTTCATGGAGGCTCTTCAGGCTGGTGCAGAC
ATCTCCATGATTGGGCGAGTTTGGTGTGGCTTTTATTCTGCCTACTTGGTGGCAGAGAAAGTGGTTGTGATCACA
AAGCACAACGATGATGAACAGTATGCTTGGGAGTCTTCTGCTGGAGGTTCCCTTCACTGTGCGTGCTGACCATGGT
GAGCCCATTTGGCAGGGGTACCAAAGTGATCCTCCATCTTAAAGAAGATCAGACAGAGTACCTAGAAGAGAGGCGG
GTCAAAGAAGTAGTGAAGAAGCATTCTCAGTTTCATAGGCTATCCCATCACCTTTTATTGGAGAAGGAACGAGAG
AAGGAAATTAGTGATGATGAGGCAGAGGAAGAGAAAGGTGAGAAAGAAGAGGAAGATAAAGATGATGAAGAAAAA
CCCAAGATCGAAGATGTGGGTTCAGATGAGGAGGATGACAGCGGTAAGGATAAGAAGAAGAAACTAAGAAGATC
AAAGAGAAATACATTGATCAGGAAGAACTAAACAAGACCAAGCCTATTTGGACCAGAAACCCTGATGACATCACC
CAAGAGGAGTATGGAGAATTCTACAAGAGCCTCACTAATGACTGGGAAGACCACTTGGCAGTCAAGCACTTTTCT
GTAGAAGGTCAGTTGGAATTCAGGGCATTGCTATTTATTCTCGTCGGGCTCCCTTTGACCTTTTTGAGAACAAG
AAGAAAAAGAACAACATCAAACCTCTATGTCCGCCGTGTGTTTCATCATGGACAGCTGTGATGAGTTGATACCAGAG
TATCTCAATTTTATCCGTGGTGTGGTTGACTCTGAGGATCTGCCCTGAACATCTCCCGAGAAATGCTCCAGCAG
AGCAAAATCTTGAAAGTCATTTCGCAAAAACATTGTTAAGAAGTGCCTTGAGCTCTTCTCTGAGCTGGCAGAAGAC
AAGGAGAATTACAAGAAATTCTATGAGGCATTCTCTAAAAATCTCAAGCTTGGAATCCACGAAGACTCCACTAAC
CGCCGCCGCTGTCTGAGCTGCTGCGCTATCATACCTCCCAGTCTGGAGATGAGATGACATCTCTGTGAGAGTAT
GTTTCTCGCATGAAGGAGACACAGAAGTCCATCTATTACATCACTGGTGAGAGCAAAGAGCAGGTGGCCAACTCA
GCTTTTGTGGAGCGAGTGCAGGAAACGGGGCTTCGAGGTGGTATATATGACCGAGCCCATTGACGAGTACTGTGTG
CAGCAGCTCAAGGAATTTGATGGGAAGAGCCTGGTCTCAGTTACCAAGGAGGGTCTGGAGCTGCCTGAGGATGAG
GAGGAGAAGAAGAAGATGGAAGAGAGCAAGGCAAAGTTTGAGAACCTCTGCAAGCTCATGAAAGAAATCTTAGAT
AAGAAGGTTGAGAAGGTGACAATCTCCAATAGACTTGTGTCTTCACCTTGCTGCATTGTGACCAGCACCTACGGC
TGGACAGCCAATATGGAGCGGATCATGAAAGCCCAGGCACTTCGGGACAACTCCACCATGGGCTATATGATGGCC
AAAAAGCACCTGGAGATCAACCCTGACCACCCATTGTGGAGACGCTGCGGCAGAAGGCTGAGGCCGACAAGAAT
GATAAGGCAGTTAAGGACCTGGTGGTGTGCTGTTTGAAACCGCCCTGCTATCTTCTGGCTTTTCCCTTGAGGAT
CCCCAGACCCACTCCAACCGCATCTATCGCATGATCAAGCTAGGTCTAGGTATTGATGAAGATGAAGTGGCAGCA
GAGGAACCCAATGCTGCAGTTCCTGATGAGATCCCCCTCTCGAGGGCGATGAGGATGCGTCTCGCATGGAAGAA
GTCGATTAGGTTAGGAGTTCATAGTTGGAACCTTGTGCCCTTGATAGTGTCCCCATGGGCTCCCACTGCAGCC
TCGAGTGCCCTGTCCCACCTGGCTCCCCCTGCTGGTGTCTAGTGTTTTTTCCCTCTCCTGTCTTGTGTTGAA
GGCAGTAAACTAAGGGTGTCAAGCCCCATTCCCTCTCTACTCTTGACAGCAGGATTGGATGTTGTGTATTGTGGT
TTATTTTATTTTCTTCATTTTGTCTGAAATTAAAGTATGCAAAATAAAGAATATGCCGTTTTAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAA

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FIGURE 4

MPEEVHHGEEEVETFAFQAEIAQLMSLIINTFYSNKEIFLRELI SNASDALDKIRYESLTDP SKLDSGKELKIDI
IPNPQERTLTLDVTGIGMTKADLINNLGTIAKSGTKAFMEALQAGADISMIGQFGVGFYSAYLVAEKVVVITKHN
DDEQYAWESSAGGSFTVRADHGEP IGRGTKVILHLKEDQTEYLEERRVKEVVKKHSQFIGYPITLYLEKEREKEI
SDDEAEEEEKGEKEEEDKDDEEKPKIEDVGSDEEDDSGDKKKKTKKIKEKYIDQEELNKTPIWTRNPDDITQEE
YGEFYKSLTNDWEDHLAVKHFSVEGQLEFRALLFIPRRAPFDLFENKKKKNNIKLYVRRVFIMDSCDELIPEYLN
FIRGVVDSEDLPLNISREMLQQSKILKVIRKNIVKKCLELFSELAEDKENYKKFYEAFSKNLKLGIHEDSTNRRR
LSELLRYHTSQSGDEMTSLSEYVSRMKETQKSIYYITGESKEQVANSFAVERVRKRGFEVVYMTPEID EYCVQQL
KEFDGKSLVSVTKEGLELPEDEEEKKKMEESKAKFENLCKLMKEILDKKVEKVTISNRLVSSPCCIVTSTYGWTA
NMERIMKAQALRDNSTMGYMAKKHLEINPDHPIVETLRQKAEADKNDKAVKDLVVLLFETALLSSGFSLEDPQT
HSNRIYRMIKLGLGIDEDEVAAEEPNAAVPDEIPPLEGDEDA SRMEEVD

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FIGURE 5

GAATTCCGGGGCCATGAGCTGCCCCGTGCCCGCCTGCTGCGCGCTGCTGCTAGTCCTGGGGCTCTGCCGGGCGCGT
CCCCGGAACGCACTGCTGCTCCTCGCGGATGACGGAGGCTTTGAGAGTGGCGCGTACAACAACAGCGCCATCGCC
ACCCCGCACCTGGACGCCTTGGCCCGCCGACGCTCCTCTTCGCAATGCCTTCACCTCGGTGAGCAGCTGCTCT
CCCAGCCGCGCCAGCCTCCTCACTGGCCTGCCCCAGCATCAGAATGGGATGTACGGGCTGCACCAGGACGTGCAC
CACTTCAACTCCTTCGACAAGGTGCGGAGCCTGCCGCTGCTGCTCAGCCAAGCTGGTGTGCGCACAGGCATCATC
GGGAAGAAGCACGTGGGGCCGGAGACCCTGTACCCGTTTGACTTTGCGTACACGGAGGAGAATGGCTCCGTCCCTC
CAGGTGGGGCGGAACATCACTAGAATTAAGCTGCTCGTCCGGAAATTCCTGCAGACTCAGGATGACCGGCCCTTTC
TTCCTCTACGTGCGCTTCCACGACCCCCACCGCTGTGGGCACTCCCAGCCCCAGTACGGAACCTTCTGTGAGAAG
TTTGGCAACGGAGAGAGCGGCATGGGTGCTATCCAGACTGGACCCCCAGGCCTACGACCCACTGGACGTGCTG
GTGCCCTTACTTCGTCCCCAACACCCCGGCAGCCCCGAGCCGACCTGGCCGCTCAGTACACCACCGTCGGCCGCATG
GACCAAGGAGTTGGACTGGTGTCCAGGAGCTGCGTGACGCCGCTGCTCCTGAACGACACACTGGTGATCTTCACG
TCCGACAACGGGATCCCCCTTCCCCAGCGGCAGGACCAACCTGTACTGGCCGGGCACTGCTGAACCCCTTACTGGTG
TCATCCCCGGAGCACCCAAAACGCTGGGGCCAAGTCAGCGAGGCCTACGTGAGCCTCCTAGACCTCACGCCCCACC
ATCTTGGATTGGTTCTCGATCCCGTACCCAGCTACGCCATCTTTGGCTCGAAGACCATCCACCTCACTGGCCGG
TCCCTCCTGCCGGCGCTGGAGGCCGAGCCCCCTCTGGGCCACCGTCTTTGGCAGCCAGAGCCACCACGAGGTACC
ATGTCTTACCCCATGCGCTCCGTGCAGCACCGGCACTTCCGCCTCGTGACAACTCAACTTCAAGATGCCCTTT
CCCATCGACCAGGACTTCTACGTCTACCCACCTTCCAGGACCTCCTGAACCGCACCACAGCTGGTCAGCCACG
GGCTGGTACAAGGACCTCCGTCACTACTACTACCGGGCGCGCTGGGAGCTCTACGACCGGAGCCGGGACCCCCAC
GAGACCCAGAACCTGGCCACCGACCCGCGCTTTGCTCAGCTTCTGGAGATGCTTCGGGACCAGCTGGCCAAGTGG
CAGTGGGAGACCCACGACCCCTGGGTGTGCGCCCCCGACGGCGTCTGGAGGAGAAGCTCTCTCCCCAGTGCCAG
CCCCCTCCACAATGAGCTGTGACCATCCAGGAGGCCTGTGCACACATCCAGGCATGTCCCAGACACATCCACA
CGTGTCCGTGTGGCCGGCCAGCCTGGGGAGTAGTGGCAACAGCCCTTCCGTCCACACTCCCATCCAAGGAGGGTT
CTTCCTTCTGTGGGGTCACTCTTGCCATTGCCTGGAGGGGGACCAGAGCATGTGACCAGAGCATGTGCCAGCC
CCTCCACCACCAGGGGCACTGCCGTGATGGCAGGGGACACAGTTGTCTTGTGTCTGAACCATGTCCCAGCACGG
GAATTCTAGACATACGTGGTCTGCGGACAGGGCAGCGCCCCCAGCCCATGACAAGGGAGTCTTGTTTTCTGGCTT
GGTTTGGGGACCTGCAATGGGAGGCCTGAGGCCCTCTTACGGCTTTGGCAGCCACAGATACTTCTGAACCCCTC
ACAGAGAGCAGGCAGGGGCTTCGGTGCCGCGTGGGCAGTACGCAGGTCCCACCGACACTCACCTGGGAGCACGGC
GCCTGGCTCTTACCAGCGTCTGGCCTAGAGGAAGCCTTTGAGCGACCTTTGGGCAGGTTTCTGCTTCTTCTGTTT
TGCCCATGGTCAAGTCCCTGTTCCCCAGGCAGGTTTTCAGCTGATTGGCAGCAGGCTCCCTGAGTGATGAGCTTGA
ACCTGTGGTGTCTTGGGCAGAAGCTTATCTTTTTTGAGAGTGTCCGAAGATGAAGGCATGGCGATGCCCGTCCT
CTGGCTTGGGTTAATTCTTCGGTGACACTGGCATTGCTGGGTGGTGATGCCCGTCTCTGGCTTGGGTTAATTCT
TCGGTGACACTGGCGTTGCTGGGTGGCAATGCCCGTCTCTGGCTTGGGTTAATTCTTCGGTGACACTGGCGTTG
CTGGGTGGCGATGCCCGTCTCTGGCTTGGGTTAATTCTTGGATGACGTCGGCGTTGCTGGGAGAATGTGCCGTT
CCTGCCCTGCCCTCCACCCACCTCGGGAGCAGAAGCCCGCCTGGACACCCCTCGGCCTGGACACCCCTCGAAGGA
GAGGGCGCTTCCCTTGTAGTAGGTGGGCTCCCCTTGCCCTTCCCTCCCTATCACTCCATACTGGGGTGGGCTGGAGG
AGGCCACAGGCCAGCTATTGTAAAAGCTTTTT

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FIGURE 6

MSCPVPACCALLLVGLCRARPRNALLLLADDGGFESGAYNNSAIATPHLDALARRSLLFRNAFTSVSSCSPSRA
SLLTGLPQHONGMYGLHQDVHHFNSFDKVRSLPLLLSQAGVRTGIIGKKHVGPETVYPFDFAYTEENGSVLQVGR
NITRIKLLVRKFLQTQDDRPFFLYVAFHDPHRCGHSQPQYGTFCFKGNGESGMGRIPDWTPQAYDPLDVLVPYF
VPNTPAARADLAAQYTTVGRMDQGVGLVLQELRDAGVLNDTLVIFTSDNGIPFPGRTNLYWPGTAEP LLVSSE
HPKRWGQVSEAYVSLDLTPTILDWFSIPYPSYAIFGSKTIHLTGRSLLPALEAEPLWATVFGSQSHHEVTMSYP
MRSVQHRHFRVLVHNLNFKMPFPIDQDFYVSPTFQDLLNRTTAGQPTGWYKDLRHYYYRARWELYDRSRDPHETQN
LATDPRFAQLLEMLRDQLAKWQWETHDPWVCAPDGVLEEKLSPOCPLHNEL

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FIGURE 7

TATATTGGCAGTTATTGAGGGTAAAGCAATATATTGTAACAGAATGTATAAATATTTTTGATAAAACAGTCTATA
TTTTATTAAAAAATGAATTATAACCCATTTTCAGTTTTGCCTGCATCATAAGAGTGAGCACTCCATTGCTTTCTT
TCCTGGCCACACTGCTACAATCCAGCACTAACTATCCATGTCCAGGGTAAGGATCGAGATCGAGAAGCCACACT
GCCAGTGAAAAAGCTACGTCTTTACTGCATAAATTAGAGGAAGCAATTCGGAACAACGGAACCTTCAAACCTATA
AATACTGAATTATCGAACACTTGCCAGGCACTTCAGCAGAAGACAAGGAACTGAAGAAGCTTTTTAGATGAGGA
ATTTCCCTCACTATGATTCCCTGTCTGCGCAGATGCAATTCACCAACCTCTTCAAGAAAAATTGAAGCAGTGTTG
CCACAACTATATGGTGGTCAAGAAGCAAGAATACATCAGACACCCCTGACCTTGAAACATACGTGCTGGTACAC
ACCTCTGCTGGATGCTTATCTCTGGATAGTTTTACAGCAGTTCCAACCCCTGGAATCAACACCTTTCTCAGGTGT
AGCCAACCAAATCCACACTCTGTGTGAAAGGCCACATATGGAGAAGTAAAGGATGGTGCTTTGGATGTAAAAAG
ACAACACAAGTGCCAGGCCCCACAAGTGGCCCCAGCCAGGAACGAATCTCTCAGGCTGCATCAGGATGAATGA
TGACCCAAGTATGGAAGAGAATGGTGTGTAACGCGTGTGTCTGAGAGCCTGCTGCAGTCCAGGGGATATTCCTC
ACTACCATTACCCAGACACACTTCATCGACAGACGGTACTATAACTTCAAGTGATCCTGGATTAGAAATTCTGAA
TATGGCTTCTTGTGACCTTGACAGAACTCGCTCTGTAAGAAAGAGGAGGATACAAGATCAGCTTCTCCACGAT
AGAGGCCCAAGGCACAAGTCCAGCTCATGATAATATTGCATTCCAAGACTCTACGAGTAAGGATAAAACCATATT
AAATCTGGAAGCCAAAGAGGAACAGAAACAATAGAAGAACATAAAAAAGAACATGCTTCAGGAGACTCTGTGGT
TTCCCTCTTCTGTGTAACCACTGTGAAATCGGTAAACGTTAGACAAAGTGAGAACACTTCTGCTAATGAGAAGGA
GGTGGAGGCAGAATTTCTCAGATTATCTTTGGGATTTAAGTGTGACTGGTTTACCTTGGAGAAGAGAGTGAAGCT
TGAAGAGAGGTCCCGTGAAGTGGGAGAGAAAATTTGAAGAAAGAAATCACTAACTCTTTAAACTATTAGAGTC
TTTAACACCTCTGTGTGAAGATGACAACCAGGCACAGGAAATCATTAGAAGCTGGAGAAGAGTATAAAGTTTCT
TAGCCAGTGTGCAGCACGAGTGGCCAGTAGGGCTGAGATGTTGGGAGCCATCAATCAGGAAAGCCGGGTTAGTAA
AGCAGTTGAAGTGATGATTACGACAGTAGAAAACCTGAAGAGGATGTATGCCAAAGAGCACGCTGAATTAGAAGA
ACTGAAACAGGTTCTTCTGCAGAATGAAAGGTCTTTCAATCCTCTTGAAGATGATGATGACTGCCAAATTAAAAA
ACGTTACGTTCTCTAACTCCAAGCCATCTTCTCTACGAAGAGTGACTATTGCCTCTTTACCCAGAAATATTGG
AAATGCAGGAATGGTGGCTGGGATGGAAAATAATGATCGATTAGTAGAAGGTCAGCAGTTGGCGTATTTTGGG
GTCAAAGCAGAGTGAACACCGTCCCTCATTACCTCGATTTATTAGCACCTATTCTGGGCAGATGCTGAAGAAGA
AAAATGTGAACATAAACTAAAGATGACTCAGAGCCATCTGGAGAAGAAACAGTAGAAAGGACAAGGAAGCCAAG
TCTTTCTGAAAAGAAAAATAATCCATCAAAGTGGGATGTCTCTTCAGTTTATGACACAATAGCTTCTGGGCAAC
AAATCTCAAGTCCCTCCATCAGAAAGGCTAATAAGGCCCTCTGGCTCTCTATTGCATTCAATTGTACTGTTTGCAGC
TTTGATGAGCTTCTCACAGGCCAATTATTCCAGAAGTCTGTGGATGCCGCTCCACACAGCAAGAGGACTCATG
GACGTCTCTAGAACATATCTTGTGGCCATTTACCAGACTCCGACACAATGGGCCACCACCAGTGTGACAGCAGGA
CATCCTAATATATGGATCTTGATTTTTAAGTTTCAGTATCTGAACTTCGTAAATTAGTAACTTTTAGCTGGGAAA
GTATAGCATGAAACCAGAGGTTCTCAGAATGACCGTAAGATAGCTTACATTTCTCTTTTTGCCTTTATCTCCCC
AACTAAAAATACAATGGG

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FIGURE 8

MESTPFSGVANQIHTLCERPTYGEVKDGDALDVKRQHKCPGPTSGPSPGTNLSGCIRMNDPSMEENGVERVCPES
LLQSRGYSSLPLPRHTSSTDGTITSSDPGLEILNMASCDLDRNSLCKKEEDTRSASPTIEAQTSPAHDNIAFQD
STSKDKTILNLEAKEEPETIEEHKKEHASGDSVVSPLPVTTVKSVNVRQSENTSANEKEVEAEFLRLSLGFKCDW
FTLEKRVKLEERSRDWAEENLKKEITNSLKLLESLTPLCEDDNQAQEI IKKLEKSIKFLSQCAARVASRAEMLGA
INQESRVSKAVEVMIQHVENLKRMYPKEHAELEELQVLLQNERSFNPLEDDDDCQIKKRSASLNSKPSSLRRVT
IASLPRNIGNAGMVAGMENNDRF SRRSSWRILGSKQSEHRPSLPRFISTYSWADAEKCEKTKDDSEPSGEE
TVERTRKPSLSEKKNNPSKWDVSSVYDTIASWATNLKSSIRKANKALWLSIAFIVLFAALMSFLTGLFQKSVDA
APTQQEDSWTSLEHILWPFTRLRHNGPPP

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FIGURE 9

AGTAATTCCGGGAAGCTCGCCTTACAACCTCCGCGCGGCCTCGGCCCCCTGCGCCGCCCGCCCCACAACAAAACCTC
AGCGCAGCGCTCCCGGGCGCCCGGTTTCAGAGCGACCTGCGGCTCAGAGCGGAGGGGAGACTGACCGGAGCGCGGA
TCGGGACAGCGGCCGGGACAGCGGCGAGACGCGCGTGTGTGAGCGCGCCGGACCAAGCGGGCCAGAAAGCGGGTC
TGCAGCCCAGAGGGGCACCTTCTGCAAACATGTTCTGTGGATCCCCTATCCAGCAAAGCTCTAAAGATCAAGCGAGA
GCTGAGCGGAGAACACGCCGCACCTGTTCGGACGAGGCGCTGATGGGGCTGTTCGGTTCGCGGAGCTGAACCGGCATCT
GCGCGGGCTCTCCGCCGAGGAGGTGACACGGCTCAAGCAGCGGCGCCGCACACTCAAAAACCGTGGCTACGCCGC
CAGCTGCCGCGTGAAGCGCGTGTGCCAGAAGGAGGAGCTGCAGAAGCAGAAGTCGGAGCTGGAGCGCGAGGTGGA
CAAGCTGGCGCGCGAGAACGCCGCCATGCGCCTGGAGCTCGACGCGCTGCGCGGCAAGTGCAGGGCGCTGCAGGG
CTTCGCGCGCTCCGTGGCCGCCGCCCGCGGGCCCCGCCACGCTCGTGGCGCCGGCCAGCGTCATCACCATCGTCAA
GTCCACCCCGGGCTCGGGGTCTGGCCCCGCCACGGCCCGGACCCCGCCACGGCCCGGCCTCCTGCTCCTAGTG
CCCCCCCCGCCATGCCTCAGCCACGCCCCCTCCGGCCTCAGCTCCCTCCCCAAAGTGCCTGAGCGCCGCCTCTGT
GCCAGGTCCCATTCTCTGCGACTGGCCCCCTTGGTGCACACACATTCCCTTCGTGGGGCCCTGTCTTCTCTT
GCAGCCCCCAAACCTGGGACCGAATGACCCTGGGAAGGGGAACCTGGGTAGGTTGGGGATGGGGCAGAGGTCTGG
ATCTGGGATCGCCCTTGGCTGAAAGTTTAGCCTTTTTAGATTGAGAGATACAGAGCCGGCTTAGAGAACAGCTGT
TGGGGGAGAAGAGGGCACCCCTCATCTTGGAACTGCTCTTATTGTGCCAATATGCCCTCCAAACCCTCCCAGGA
TTCAAAGCTAGGTTTGGCTGTCTGTGACTTACGGGACCGTCTCTGCTGAGAAATTGCACTGAAGAGATGCCCCAC
CTCTGGTTGGGCTTGGGGTGCCTGGCCTTCCGAACTAAAAGAGTGGGTGGGAAGACTAGTGAACCCAGTTCA
CGGATGGGGAACAGGCCTGAGGTCACATTTCACTTAGTGTTGTGTTGGGACCAAAACCTGGGTGTCTCACTG
CTGCCCTGAGTCCAGCCATGGTTTTCAGGGGACAGTGGACAGGGACTCAGAAATGTGGTGGGAGGGCCTCCCTG
GCTTGGGAGACCGCTCTCTGCAAGGGAGGGGAGAGAAGCAGAGGGAGAGAGAAGGTGACACGGATGGAAGAGTG
GGAAGGAGCTGGCCTGGCTCAGCCCTAGGCTGTCCCTGCAGCCAGGGTGTCCGGGGGCTGGCCAGTCAGAGAAAG
GGGGCCATGGACTGCTGTGGCAAATAGGGAGACAAGGAGACAGACCCTGCAGTCCTACTACAGTCTGGAGTGGGG
TCCTAAGAAGAAGGGTCCCACCTCAACCCCTGTCACTGTCCACTGTGGGGTGGGGGCTGACCCCTGCCTTTGATT
GTCATTCTCCTGGGAAGCCCAGTCTCAGTCCCTCCCCAACACTGTCCACACTGCCCTCCCCACTGTTTATTTA
TTGCACGGATCTAAGTTATTCTCCCCAGCCAGAGCCGAGCTCCTGCTCCCTGGGAAAAGTGGCGTATGGCCCTG
AGCTGGGCTTTATATTTTATATCTGCAAATAAATCACATTTTATCTTATATTTAGGGAAAGCCGGAGAGCAACAA
CAAAAAATGTTTAAGCCGGGCGCGGTGGCTCACATCTGTAATCCCAGCACTTTGGGAGTCCAAGGAGGGGGATCG
CTTGAGTCCAGGAGTTTGAAGACAGCCTGGACAACATGGTGAACCCCGTCTCTACAAAAAATACAAAAATTAGC
CATGCATGGTGGCTCATGCCTGTAGTCCAGCTACTTGGGAGGCTGAGGCAGGAGGATCACTTAAGCCCAGAAGG
CAGAGGTTGTAGTGAGCTGAGATCGCACCCTGCACTCCAGCCTGGGCAACATAGCAAAATCCTGTCTCAAAAAA
AAAGTTAAAAAATATTGCCCGGCTCCTAGAATTTATTTATTTCTGACTTACAGCAAGCGAGTTATCGTCTTCTG
TATTTTGTAGACTTTCTAAATAAAGTCAAATTCCTTTCTTTTCCACAGAGAAAAAA

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FIGURE 10

MSVDPLSSKALKIKRESENTPHLSDEALMGLSVRELNRLRGLSAEEVTRLKQRRRTLKNRGYAASCRVKRVCQ
KEELQKQKSELEREVDKLARENAAMRLELDALRGKCEALQGFARSVAAARGPATLVAPASVITIVKSTPGSGSGP
AHGPDPAHGPASCS

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FIGURE 11

ACGCGTCCGCTTCGGAATGAGAGACTCAACCATAATAGAAAGAATGGAGAACTATTAACCACCATTCTTCAGTGG
GCTGTGATTTTCAGAGGGGAATACTAAGAAATGGTTTTCCATACTGGAACCCAAAGGTAAAGACACTCAAGGACA
GACATTTTTGGCAGAGCATAGATGAAAATGGCAAGTTCCTGGCTTTCTTCTGCTCAACTTTTCATGTCTCCCTC
TTCTTGGTCCAGCTGCTCACTCCTTGCTCAGCTCAGTTTTCTGTGCTTGGACCTCTGGGCCCATCCTGGCCATG
GTGGGTGAAGACGCTGATCTGCCCTGTCACCTGTTCCCGACCATGAGTGCAGAGACCATGGAGCTGAGGTGGGTG
AGTTCCAGCCTAAGGCAGGTGGTGAACGTGTATGCAGATGGAAGGAAGTGGAAAGACAGGCAGAGTGCACCATAT
CGAGGGAGAACTTCGATTCTGCGGGATGGCATCACTGCAGGGAAGGCTGCTCTCCGAATACACAACGTCACAGCC
TCTGACAGTGGAAAGTACTTGTGTTATTTCCAAGATGGTGACTTCTACGAAAAAGCCCTGGTGGAGCTGAAGGTT
GCAGCATTGGGTCTGATCTTCACATTGAAGTGAAGGGTTATGAGGATGGAGGGATCCATCTGGAGTGCAGGTCC
ACTGGCTGGTACCCCCAACCCCAAATAAAGTGGAGCGACACCAAGGGAGAGAACATCCCGGCTGTGGAAGCACCT
GTGGTTGCAGATGGAGTGGGCCTGTATGCAGTAGCAGCATCTGTGATCATGAGAGGCAGCTCTGGTGGGGGTGTA
TCCTGCATCATCAGAAATTCCTCCTCGGCCTGGAAGAGACAGCCAGCATATCCATCGCAGACCCCTTCTTCAGG
AGCGCCAGCCCTGGATCGCGGCCCTGGCAGGGACCTGCCTATCTCGTTGCTTCTCGCAGGAGCCAGTTAC
TTCTTGTGGAGACAACAGAAGGAAAAAATTGCTCTGTCCAGGGAGACAGAAAGAGAGCGAGAGATGAAAGAAATG
GGATACGCTGCAACAGAGCAAGAAATAAGCCTAAGAGAGAAGCTCCAGGAGGAACCTCAAGTGGAGGAAAATCCAG
TACATGGCTCGTGGAGAGAAAGTCTTTGGCCTATCATGAATGGAAAATGGCCCTCTTCAAACCTGCGGATGTGATT
CTGGATCCAGACACGGCAAACGCCATCCTCCTTGTCTGAGGACCAGAGGAGTGTGCAGCGTGCTGAAGAGCCG
CGGGATCTGCCAGACAACCCCTGAGAGATTTGAATGGCGTTACTGTGTCCTTGGCTGTGAAAACCTTCACATCAGGG
AGACATTACTGGGAGGTGGAAGTGGGGGACAGAAAAGAGTGGCATATTGGGGTATGTAGTAAGAACGTGGAGAGG
AAAAAAGGTTGGGTCAAAATGACACCGGAGAACGGATACTGGACTATGGGCCTGACTGATGGGAATAAGTATCGG
GCTCTCACTGAGCCCAGAACCAACCTGAACTTCTGAGCCTCCTAGGAAAGTGGGGATCTTCTGGACTATGAG
ACTGGAGAGATCTCGTTCTATAATGCCACAGATGGATCTCATATCTACACCTTTCCGCACGCCCTCTTCTCTGAG
CCTCTATATCCTGTTTTGAGAAATTTGACCTTGGAGCCCACTGCCCTGACCATTTGCCCAATACCAAAGAAGTA
GAGAGTTCCTCCGATCCTGACCTAGTGCTGATCATTCCCTGGAGACACCACTGACCCCGGGCTTAGCTAATGAA
AGTGGGGAGCCTCAGGCTGAAGTAACATCTCTGCTTCTCCCTGCCACCCCTGGAGCTGAGGTCTCCCTTCTGCA
ACAACCAATCAGAACCATAAGCTACAGGCACGCACTGAAGCACTTTACTGATATTCAATTCATTATTCCATATGA
CAGTTGTTTTGAGTTTCGTACCACCTTATTGTCCCTTATACAGATAAGGAAACTGGGGTGCAGAAAGGTGAATT
AACTTTACAAAGTAGACATGACAAGTGAACAGCAGAGCTGGGATCTAAACAGCAATAACTAACATTAACAGAGAA
TTTAAATGTTCTTAGTGCTGTGTTATAAGCTTTGGTGGATGTCACTCCTTTAATCCTCACAACACCCGTGTCGGG
TAGTCATATTTTGCAAGTATGGAAGCTGAGGCAGGGCAACATGAAGTAACTTACATAATTCAACAGTAATTTGT
GCAGTTGGGAGATGTTTACGCTTAGTCCCTGGCTAATTGCCTGTTCTTTTCCAGCCTGATTTTTTTTCCACAGG
AAGAGCCCATGTAGCCCTGAGGTTTCTTCCCAGGACAGCTGCAGGGTAGAGATCATTTTAAGTGCTTGTGGA
GTTGACATCCCTATTGACTCTTTCCAGCTGATATCAGAGACTTAGACCCAGCACTCCTTGGATTAGCTCTGCAG
AGTGTCTTGGTTGAGAGAATAACCTCATAGTACCAACATGACATGTGACTTGGAAAGAGACTAGAGGCCCACTT
GATAAATCATGGGGCACAGATATGTTCCCAACCAAAATGTGATAAGTGATTGTGCAGCCAGAGCCAGCCTTCC
TTCAATCAAGGTTTCCAGGCAGAGCAAATACCTAGAGATTCTCTGTGATATAGGAAATTTGGATCAAGGAAGCT
AAAAGAATTACAGGGATGTTTTTAATCCCACTATGGACTCAGTCTCCTGGAAATAGGTCTGTCCACTCCTGGTCA
TTGGTGGATGTTAAACCCATATTCTTTCAACTGCTGCCTGCTAGGGAAAAGTCTCCTCATTATCATCACTATT
ATTGCTCACCCTGTATCCCTCTACTTGGCAAGTGGTTGTCAAGTTCTAGTTGTTCAATAAATGTGTTAATAAT
GAAAAA

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FIGURE 12

MKMASSLAFLLLNFHVSFLVQLLTPCSAQFSVLGFSGPILAMVGEDADLPCHLFPTMSAETMELRWVSSSLRQV
VNVYADGKEVEDRQSAPYRGRTSILRDGITAGKAALRIHNVTASDSGKYLCYFQDGDYFYEKALVELKVAALGSDL
HIEVKGYEDGGIHLECRSTGWYPQPQIKWSDTKGENIPAVEAPVVADGVGLYAVAASVIMRGSSGGGVSCIIRNS
LLGLEKTASISIADPFFRSAQPWIAALAGTLPISLLLLAGASYFLWRQQKEKIALSRETEREREMKEMGYAATEQ
EISLREKLQEELKWRKIQYMARGEKSLAYHEWKMALEKPADVILDPDTANAILLVSEDQRSVQRAEEPRLDPDNP
ERFEWRYCVLGCENFTSGRHYWEVEVGDRKEWHIGVCSKNVERKKGWVKMTPENGYWTMGLTDGNKYRALTEPRT
NLKLPEPPPRKVGIFLDYETGEISFYNDGSHIYTFPHASFSEPLYPVFRILTLEPTALTICPIPKEVESSPDDE
LVPDHSLETPLTPGLANESGEPQAEVTSLLLPAHPGAEVSPSATNQNHLQARTEALY

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FIGURE 13A

CCGGGCTGCGCGGCGAGGCTGAGCCGGGCCCCGGGCGCCGGGGCCGGGGGCGGCTGGCGCGGGCAGGAAGCGCCTC
GCGGACCCGGGCCCCGCCCCCGCTCCCGCCGCTCCGGGCTCCCGGCTCCCGGCCGCGCTCGCCCCATGCACT
CGCCGCGCCGCGCAGCCCGCGCACGCCCGGATGGCTCCTCGCGCCGCGGGGCGCGCACCCCTTAGCGCCGGGCC
GCCGCCGCCAGCCCCCGCGTTCAGACGCCCGCGCGGTGCCCGGTGCCGCTGCTGTTGCTGCTGCTCCTGGGG
GCGGCGCGGGCCGGCGCCCTGGAGATCCAGCGTCGGTTCCCTCGCCACGCCCACCAACAACCTTCGCCCTGGAC
GGCGCGGGGGACCGTGACCTGGCGGCCGTCAACCGCCTCTATCAGCTGTCGGGCGCCAACCTGAGCCTGGAG
GCCGAGGCGGGCGTGGGCCCGGTGCCGACAGCCCGCTGTGTACGCTCCGACGCTGCCGAGGCCTCGTGCGAG
CACCCGCGGGCGCCTCACGGACAACATAACAAGATCCTGCAGCTGGACCCCGGCCAGGGCCTGGTAGTCGTGTGC
GGGTCCATCTACCAGGGCTTCTGCCAGCTGCGGCGCCGGGTAAACATCTCGGCCGTGGCCGTGCGCTTCCCGCCC
GCCGCGCCGCCCGCGAGCCCGTACGGTGTTCGCCAGCATGCTGAACGTGGCGGCCAACACCCGAACCGCTCC
ACCGTGGGGCTAGTTCTGCCTCCCGCCGCGGGCGCGGGGGGAGCCGCTGCTCGTGGGCGCCACGTACACCGGT
TACGGCAGCTCCTTCTTCCCGCGCAACCGCAGCCTGGAGGACCACCGCTTCGAGAACACGCCCCGAGATCGCCATC
CGTCCCTGGACACGCGCGGCGACCTGGCCAAGCTCTTACCTTCGACCTCAACCCCTCCGACGACAACATCCTC
AAGATCAAGCAGGGCGCCAAGGAGCAGCACAAGCTGGGCTTCGTGAGCGCCTTCTGCAACCCGTCCGACCCGCCG
CCGGGTGCACAGTCTACGCGTACCTGGCGCTCAACAGCGAGGCGCGCGGGGCGACAAGGAGAGCCAGGCGCGG
AGCCTGCTGGCGCGCATCTGCCTGCCCCACGGCGCCGGCGGCGACGCCAAGAAGCTCACCGAGTCTACATCCAG
TTGGGCTTGCACTGCGCGGGCGGCGGGGCCGCGGCGACCTCTACAGCCGCTGGTGTGGTCTTCCAGCCCGG
GAGCGGCTCTTTGCTGTCTTCGAGCGGCCCCAGGGGTCCCCCGCGGCCCGCGCTGCTCCGGCCGCACTCTGCGCC
TTCCGCTTCGCGGACGTGCGAGCCGCCATCCGAGCTGCGCGCACCGCCTGCTTCGTGGAACCGGCGCCCCGACGTG
GTGGCGGTGCTCGACAGCGTGGTGCAGGGCACGGGACCGCCTGCGAGCGCAAGCTCAACATCCAGCTCCAGCCA
GAGCAGCTGGACTGTGGAGCTGCTACCTGCAGCACCCGCTGTCCATCCTGCAGCCCTGAAGGCCACGCCCCGTG
TTCCGCGCCCCGGGCTCACCTCCGTGGCCGTGGCCAGCGTCAACAACCTACACAGCGGTCTTCTGGGCACGGTC
AACGGGAGGCTTCTCAAGATCAACCTGAACGAGAGCATGCAGGTGGTGAAGCGGGTGGTGAAGTGTGGCCTAT
GGGGAGCCCGTGACCATGTGCAGTTTGACCCAGCAGACTCCGTTTACCTTTACCTGATGACGTCCACCAG
ATGGCCAGGGTGAAGGTGCGCGCCTGCAACGTGCACTCCACCTGTGGGGACTGCGTGGGTGCGGCGGACGCCTAC
TGCGGCTGGTGTGCCCTGGAGACGCGGTGCACCTTGACGAGGACTGCACCAATTCCAGCCAGCAGATTTCTGG
ACCAGTGCCAGCGAGGGCCCCAGCCGCTGTCTCCTGCCATGACCGTCTGCTTCCGAGATCGATGTGCGCCAGGAG
TACCCAGGCATGATCCTGCAGATCTCGGGCAGCCTGCCAGCCTCAGTGGCATGGAGATGGCCTGTGACTATGGG
AACAACATCCGCACTGTGGCTCGGGTCCCAGGCCCTGCCTTTGGTCAACAGATTGCCTACTGCAACCTCCTGCCG
AGGGACCAGTTTCCGCCCTTCCCCCCCCAACCAGGACCAGTGACTGTTGAGATGTCTGTGAGGGTCAATGGGCGG
AACATCGTCAAGGCCAATTTACCATCTACGACTGCAGCCGCACTGCACAAGTGTACCCCCACACAGCCTGTACC
AGCTGCCTGTGCGCACAGTGGCCCTGTTTCTGGTGCAGCCAGCAGCACTCCTGTGTTTCCAACCAGTCTCGGTGC
GAGGCCTACCAAACCCACGAGCCCTCAGGACTGCCCCCGGACCCGTGCTCTACCCCTGGCACCCGTGCTTACG
GGTGGCTCCCGAAGATCCTGGTGCCTCTGGCCAACACTGCCTTTTCCAGGGTGCAGCCCTGGAGTGTAGTTTT
GGGCTGGAGGAGATCTTCGAGGCTGTGTGGGTGAATGAGTCTGTTGTACGCTGTGACCAGGTGGTGTGACACG
ACCCGGAAGAGCCAGGTGTTCCCGCTCAGCCTCCAATAAAGGGGCGGCCAGCCGATTCTGGACAGCCCTGAG
CCCATGACAGTCATGGTCTATAACTGTGCCATGGGCAGCCCCGACTGTTCCAGTGCCTGGGCCGCGAAGACCTG
GGTCACTGTGCATGTGGAGTGATGGCTGCCGCTGCGGGGGCTCTGCAGCCATGGCTGGCACCTGCCCCGCC
CCCGAGATCCGCGGATTGAGCCCTGAGTGGCCCGTTGGACGGTGGGACCTGCTGACCATCCGAGGAAGGAAC
CTGGGCCGGCGGCTCAGTGACGTGGCCACGGCGTGTGGATTGGTGGTGTGGCCTGTGAGCCACTGCCTGACAGA
TACACGGTGTGCGAGGAGATCGTGTGTGTACAGGGCCAGCCCCAGGACCACTCTCAGGTGTGGTGAACGTGAAC
GCCTCTAAGGAGGGCAAGTCCCGGGACCGCTTCTCCTACGTGCTGCCCTGGTCCACTCCCTGGAGCCTACCATG
GGCCCCAAGGCCGGGGGACCAAGGATCACCATCCATGGGAATGACCTCCATGTAGGCTCCGAGCTCCAGGTCTG
GTGAACGACACAGACCCCTGCACGGAGCTGATGCGCACAGATAACAGCATCGCCTGCACCATGCCTGAGGGGGCC
CTGCCGGCTCCGGTGCCGTGTGTGTGTGCGCTTCGAGCGTCGGGGCTGCGTGCACGGCAACCTCACCTTCTGGTAC
ATGCAGAACCCGGTCATCACGGCCATCAGTCCCCGCCGAGCCCTGTGAGTGGCGGCAGGACCATCACAGTGGCT
GGTGAAGCGTTTCCACATGGTGCAGAATGTGTCCATGGCCGTCCACCACATTGGCCGGGAGCCACGCTCTGCAAG
GTTCTCAACTCCACCCCTCATCACCTGCCCGTCCCCGGGGCCCTGAGCAACGCATCAGCGCCAGTGGACTTCTTC

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FIGURE 13B

ATCAATGGGCGGGCCTACGCAGACGAGGTGGCTGTGGCTGAGGAGCTACTGGACCCCGAGGAGGCACAGCGGGGC
AGCAGGTTCCGCGCTGGACTACCTCCCCAACCCACAGTTCTCTACGGCCAAGAGGGAGAAGTGGATCAAGCACCAC
CCCGGGGAGCCTCTCACCCCTCGTTATCCACAAGGAGCAGGACAGCCTGGGGCTCCAGAGTCACGAGTACCGGGTC
AAGATAGGCCAAGTAAGCTGCGACATCCAGATTGTCTCTGACAGAATCATCCACTGCTCGGTCAACGAGTCCCTG
GGCGCGCCCGTGGGGCAGCTGCCCATCACAATCCAGGTAGGGAACCTCAACCAGACCATCGCCACACTGCAGCTG
GGGGTAGCGAGACGGCCATCATCGTGTCCATCGTCATCTGCAGCGTCTTGCTGCTGCTCTCCGTGGTGGCCCTG
TTCGTCTTCTGTACCAAGAGCCGACGTGCTGAGCGTTACTGGCAGAAGACGCTGCTGCAGATGGAGGAGATGGAA
TCTCAGATCCGAGAGGAAATCCGCAAAGGCTTCGCTGAGCTGCAGACAGACATGACAGATCTCACCAGGAGCTG
AACCGCAGCCAGGGCATCCCCCTTCTGGAGTATAAGCACTTCGTGACCCGCACCTTCTTCCCCAAGTGTTCTCTCC
CTTTATGAAGAGCGTTACGTGCTGCCCTCCAGACCCCTCAACTCCCAGGGCAGCTCCAGGCACAGGAAACCCAC
CCACTGCTGGGAGAGTGGAAAGATTCTTGAGAGCTGCCGGCCCAACATGGAAGAGGGAATTAGCTTGTTCTCTCTCA
CTACTCAACAACAAGCACTTCTCTATCGTCTTTGTCCACGCGCTGGAGCAGCAGAAGGACTTTGCGGTGCGCGAC
AGGTGCAGCCTGGCCTCGCTGCTGACCATCGCGCTGCACGGCAAGCTGGAGTACTACACCAGCATCATGAAGGAG
CTGCTGGTGGACCTCATTGACGCTCGGCCGCCAAGAACCCCAAGCTCATGCTGCGGCGCACAGAGTCTGTGGTG
GAGAAGATGCTCACCAGTGGATGTCCATCTGCATGTACAGCTGTCTGCGGGAGACGGTGGGGGAGCCATTCTTC
CTGCTGCTGTGTGCCATCAAGCAGCAAATCAACAAGGGCTCCATCGACGCCATCACAGGCAAGGCCCGCTACACA
CTCAATGAGGAGTGGCTGCTGCGCGAGAACATCGAGGCCAAGCCCCGGAACCTGAACGTGTCTTCCAGGGCTGT
GGCATGGACTCGCTGAGCGTGGGGCCATGGACACCGACACGCTGACACAGGTCAAGGAGAAGATCCTGGAGGCC
TTCTGCAAGAATGTGCCCTACTCCAGTGGCCGCGTGCAGAGGACGTCGACCTTGAGTGGTTTCGCTCCAGCACA
CAGAGCTACATCCTTCGGGACCTGGACGACACCTCAGTGGTGGAAGACGGCCGCAAGAAGCTTAACACGCTGGCC
CATTACAAGATCCCTGAAGGTGCCTCCCTGGCCATGAGTCTCATAGACAAGAAGGACAACACACTGGGCCGAGTG
AAAGACTTGGACACAGAGAAGTATTTCCATTTGGTGCTGCCTACGGACGAGCTGGCGGAGCCCCAAGAAGTCTCAC
CGGCAGAGCCATCGCAAGAAGGTGCTCCCGGAAATCTACCTGACCCGCTGCTCTCCACCAAGGGCAGCTTGCA
AAGTTTCTGGATGACCTGTTCAAGGCCATTCTGAGTATCCGTGAAGACAAGCCCCACTGGCTGTCAAGTACTTT
TTCGACTTCTGGAGGAGCAGGCTGAGAAGAGGGGAATCTCCGACCCCGACACCCTACACATCTGGAAGACCAAC
AGCCTTCTCTCCGTTCTGGGTGAACATCCTGAAGAACCCCCAGTTTGTCTTTGACATCGACAAGACAGACCAC
ATCGACGCTGCTTTTCAGTCATCGCGCAGGCCTTCATCGACGCTGCTCCATCTCTGACCTGCAGCTGGGCAAG
GATTCGCCAACCAACAAGCTCCTCTACGCCAAGGAGATTCTGAGTACCGGAAGATCGTGCAGCGCTACTACAAG
CAGATCCAGGACATGACGCCGCTCAGCGAGCAAGAGATGAATGCCCATCTGGCCGAGGAGTCGAGGAAATACCAG
AATGAGTTCAACACCAATGTGGCCATGGCAGAGATTTATAAGTACGCCAAGAGGTATCGGCCGAGATCATGGCC
GCGCTGGAGGCCAACCCACGGCCCGGAGGACACAAGTTCGAGCAGGTGGTGGCTTTGATGGAG
GACAACATCTACGAGTGCTACAGTGAGGCCTTGAGACACATGGAGAGTTGGTCAGGCTGCTGCTGGGAGAAATGGA
CGCCCACTGGGCCTCAACTTGATCTTCTACCCCGTGCCTGTGACTCAGACTGGGAAATACTGAGCAGAGACGGCT
GGGGCGGGGGCAGGAGGAGGGGCTGCTCTCTGAGACAGGGGCGCCCCCGCTTGACCCCTGGGCACCTCCATCCC
CTCCCACCTGTCCCCAGATCAGTCTCTGGGATGGAGGCCAGAGAGCTGGTCAGGCTCCCCCATCTGCCCAGCACG
GCCTGCACTGTGCCCACCCACTTGCTCCACAACGTCCAGTTGGTCCTGCTGCCAAGAGCCCCGTGCATCCAGGCG
GCCAAGCACAACTGGGGGAGAGGAGGCCGCCAGCCCGGAGGCTGCAGCCCAGAACTCTACCTCATCCACACTG
GTGCAGGGAGCCCTCCTTGAAGTACCTTTGATTGGTTTCTGCTTCAACTACCAAAATGTTATCTCCACTTCCCC
CTCAGCCGTAGAGGATCCTGGCCACAGACAGTTTCAAGTAGTGTGAGATTTTGTGCTTGGGCGGCTGTTGGTA
GAGTGGGCAGTGCCCGCGCCATGGGGTGCTCTGTGGGCTTCTCCAGGAGCAGGGAGGGTGGAGGGGAGGGATGGG
GGGCACAGGAGCTGGGAGCCCCGTCTCCAGGAAAAGGAGAGGGGTAAAGATGCACCGAGGCTGTAGCTGGGCTAC
TTGATCTTGCTGAAAAGTGTCTTAAAGATAGCACCACTTTTTTTTTTAAAGCTTTTATATATTAATAAACGTATC
ATGC

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FIGURE 14

PGCAARLSRARAPGPGAAGAGRKRLADPGPPPASRRLRAPGSRPRLAPCTRRAAQPAHARMAPRAAGGAPLSARA
AAASPPPFQTPPRCPVPLLLLLLLLGAARAGALEIQRRFSPPTPTNNFALDGAAGTVYLAAVNRLYQLSGANLSLE
AEAAGVPVDPDPLCHAPQLPQASCEHPRRLTDNYNKILQLDQGLVVCVGSIIYQGFQQLRRRGNISAVAVRFPP
AAPPAEPVTVFPSMLNVAANHPNASTVGLVLPAAAGAGGSRLLVGATYTYGYSSFFPRNRSLEDHRFENTPEIAI
RSLDTRGDLAKLFTFDLNP SDDNILKIKQGAKEQHKLGFSVSAFLHPSDPPPGAQSYAYLALNSEARAGDKESQAR
SLLARICLPHGAGGDAKKLTESIQLGLQCAGGAGRGDLYSRLVSVFPARERLFAVFERPQGSFAARAAPAALCA
FRFADVRAAIRAARTACFVEPAPDVVAVLDSVVQGTGPACERKLNILQPEQLDCGAHLQHPLSLILQPLKATPV
FRAPGLTSVAVASVNNYTAVFLGTVNGRLLKINLNEISMVVSRRVTVAYGEPVHHVMQFDPADSVLYLMTSHQ
MARVKVAACNVHSTCGDCVGAADAYCGWCALETRCTLQQDCTNSSQQHFWTSASEGPSRCPAMTVLPSEIDVRQE
YPMILQISGSLPSLSGMEMACDYGNIRTVARVPGPAFGHQIAYCNLLPRDQFPFPFNQDHVTVEMSVRVNGR
NIVKANFTIYDCSRTAQVYPHTACTSCLSAQWPCFWCSQQHSCVSNQSRCEASPNPTSPQDCPRTLSPAPVPT
GCSQNILVPLANTAFFQGAALCESFGLLEIFEAVVWNESVVRCDQVVLHTRKSQVFPLSLQLKGRPARFLDSPE
PMTVMVYNCAMGSPDCSQCLGREDLGHLGCMWSDGCRRLRGPLQPMAGTCPAPEIRAIEPLSGPLDGGTLLTIRGRN
LGRRLSDVAHGVWIGGVACEPLPDRTVTVSEEIVCVTGPAAGPLSGVTVNASKEGKSRDRFSYVLPLVHSLEPTM
GPKAGGTRITIHGNDLHVGSSELQVLVNDTDPCTELMRTDTSIAC TMPEGALPAPVPVCVRFRERRGCVHGNLTFWY
MQNPVITAI SPRRSPVSGGRTITVAGERFHMVQNVSMVHHIGREPTLCKVLNSTLITCSPGALSNASAPVDF
INGRAYADEVAVAEELLDPEEAQGRSRFLDYLPNPQFSTAKREKWKHHHPGEPLTLVIHKEQDSLGLQSHEYRV
KIGQVSCDIQIVSDRIIHCSVNESLGAAVGQLPITIQVGNFNQTIATLQLGGSETAIIVSIVICSVLLLLSVVAL
FVFCTKSRRARYWQKTLQMEEMESQIREEIRKGFAELQTDMDLTKELNRSQGIPLFLEYKHVTRTFFPKCSS
LYEERYVLPSQTLNSQSSQAQETHPLLGEWKIPESCRPNMEEGISLFSLLNNKHFLIVFVHALEQQKDFAVRD
RCSLASLLTIALHGKLEYYSIMKELLVDLIDASAANKPKMLLRRTESVVEKMLTNWMSICMYSCLRETVGEPFF
LLLCAIKQQINKGSIDAITGKARYTLNEEWLLRENIEAKPRNLNVSFQCGMDSL SVRAMD TDTLTQVKEKILEA
FCKNVPSQWPRAEDVDLEWFASSTQSYILRDLDTSVVEDGRKKLNTLAHYKIEGASLAMS LIDKKDNTLGRV
KDLDEKYFHLVLP TDELAEPKKSHRQSHRKKVLP EIIYLT RLLSTKGT LQKFLDDL FKA ILSIREDKPPLAVKYF
FDFLEEQA EKRGISDPDTLHIWKTNSLPLRFVWNILKNPQFVFDIDKTDHIDACLSVIAQAFIDACSIDLQLGK
DSPTNKLLYAKEIPEYRKIVQRYKQIQDMTPLSEQEMNAHLAEESRKYQNEFNTNVAMAEIYKYAKRYRPQIMA
ALEANPTARRTQLQHKFEQVVALMEDNIYECYSEA

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FIGURE 15A

CCCTTTTTCCTCCCGTTTTGAAGAGACAATGCTACTTCAGTTTGGAGCACAAACATATGATCAGCACATGGAAAT
GTGGTAATTCGGATGCATTTCGTGATTGCAACAGATTGAAGAAATTAGACCAGACAAAGAGTGTTTTTAGAGGAGA
GAGGAGGAGGAGGAGGCTGAGAGAGGGAGGGCGACGGGGGTGAGAAAGGGGAGGCCGCTCTGAGCGGGACGCCG
GGACTCCCGCCGCTGCTAAATATATCCGTAGAATGGAGAGGGACCGGATCTCAGCCTTGAAAAGATCTTTTGAGG
TCGAGGAGGTTCGAGACACCCAACCTCCACCCACCCCGGAGGGTCCAGACTCCCCTACTCCGAGCCACTGTGGCCA
GCTCCACCCAGAAATTCAGGACCTGGGCGTGAAGAACTCAGAACCTCGGCCCCGCGATGTGGACTCCCTAAGCC
AACGCTCCCCCAAGGCGTCCCTGCGGAGGGTGGAGCTCTCGGGCCCCAAGGCGGCCGAGCCGGTGTCCCGGCGCA
CTGAGCTGTCCATTGACATCTCGTCCAAGCAGGTGGAGAACGCCGGGGCCATCGGCCCCGTCCCGGTTCCGGGCTCA
AGAGGGCCGAGGTGTTGGGCCACAAGACGCCAGAACCGGCCCTCGGAGGACGGAGATCACCATCGTCAAACCCC
AGGAGTCAGCCACCGGAGGATGGAGCCCCCTGCCTCCAAGGTCCCCGAGGTGCCACTGCCCTGCCACCGACG
CAGCCCCAAGAGGGTGGAGATCCAGATGCCAAAGCCTGCTGAGGCGCCACCGCCCCAGCCCAGCCCAGACCT
TGGAGAATTCAGAGCCTGCCCTGTGTCTCAGCTGCAGAGCAGGCTGGAGCCCAAGCCCCAGCCCCCTGTGGCTG
AGGCTACACCCCGGAGCCAGGAGGCCACTGAGGCGGCTCCAGCTGCGTTGGCGACATGGCCGACACCCCCAGAG
ATGCCGGGCTCAAGCAGGCGCTGCATCACGGAACGAGAAGGCCCGGTGGACTTCGGCTACGTGGGGATTGACT
CCATCCTGGAGCAGATGCGCCGGAAGGCCATGAAGCAGGGCTTCGAGTTCAACATCATGGTGGTGGGCGAGAGCG
GCTTGGGTAAATCCACCTTAATCAACACCTCTTCAAATCCAAAATCAGCCGGAAGTCGGTGCAGCCACCTCAG
AGGAGCGCATCCCCAAGACCATCGAGATCAAGTCCATCACGCACGATATTGAGGAGAAAGGCGTCCGGATGAAGC
TGACAGTGATTGACACACCAGGGTTCGGGGACCACATCAACAACGAGAAGTGTGGCAGCCCATCATGAAGTTCA
TCAATGACCAGTACGAGAAATACCTGCAGGAGGAGGTCAACATCAACCGCAAGAAGCGCATCCCGGACACCCGCG
TCCACTGCTGCCTCTACTTCATCCCCGCCACCGGCCACTCCCTCAGGCCCTGGACATCGAGTTTATGAAACGCC
TGAGCAAGGTGGTCAACATCGTCCCTGTCTCATCGCCAAGGCGGACACACTCACCTGGAGGAGAGGGTCCACTTCA
AACAGCGGATCACCGCAGACCTGCTGTCCAACGGCATCGACGTGTACCCCCAGAAGGAATTTGATGAGGACTCGG
AGGACCGGCTGGTGAACGAGAAGTTCCGGGAGATGATCCATTGCTGTGGTGGGCGAGTGACCACGAGTACCAGG
TCAACGGCAAGAGGATCCTTGGGAGGAAGACCAAGTGGGGTACCATCGAAGTTGAAAACACCACACTGTGAGT
TTGCCTACCTGCGGGACCTTCTCATCAGGACGCACATGCAGAACATCAAGGACATCACCAGCAGCATCCACTTCG
AGGCGTACCGTGTGAAGCGCCTCAACGAGGGCAGCAGCGCCATGGCCAACGGCGTGGAGGAGAAGGAGCCAGAAG
CCCCGGAGATGTAGACGCCCCCTGCCACCCCCGGGATCCTGCCCCAAGTCATTTCCGTCCCCCCCCCAGGCC
TCCCACCACCCATTTTATTTTATATGATTTTCTCCATTTGTCTATCGTTCCCCACCCCTTCGACATGCTGCCAGG
AAACAAGGGAAGGGGCTCCCTCCGAGTGAGTCAGTGATGAGGCCGCGGCTCCCCGAGGTTGTGGGGAGGCTGC
ACTGGAGCCACAGGCAGGGGTGAGAGCACCCACTGAATTGACATGACCCTCTGTCCCCAGGCCTGGCTCCCCGAG
GGCTCAGAAGAGCAGCTTCGGTGTGCAGATCATCCGTGCTGTGGGGTTCTCAGTGCCGGAGCTTGGGGTGGGGC
CAGGCCTCGCACTTGCAAGGAGGCCAGTGGGCTGCACGCTCCCCCTCCATCCCCATCGGCCCTGTCCCTGGAGT
GTGTGAGAGCCAGGGGAGATGCAGCCACCAGGAGCACCTGGACCCCTGCCCGCCACATGGTGTGGCCATCA
CTCAGCCCCTACCCCTGCCCTGCTCCTAAGGGTAGAAAATCCAGGGTCCCCCTGCCACCGACTGCCAGCCACTC
CAAGCCCCCTGGCAGCTGCCCTCCTGGAGCAGAAAGTGCCTTTATCTCAGCCATCCGCAGACTGCTGGCCAGAT
GCGGGGACAGGCTGGAATGAGGGAGGCGTCTTCATCTCCCTGCCATCCCCCTCTCACGCCACCCCCGCCCCACC
GGGCTGCAGGTGCTGCTGATGCGCTGGGATCTGATTGAGGATAAAAAGGAAGGAGAGATGACCCCTACCCCTCA
TCCCCAGTTTTGAAAAGGTCTAAGCAAGTGAGTCTGGTGGAGGAGCTGAGGGAGGGAGCCATGGAAGGTGCCAG
AAGGAAGGTTGGCGGGGGCACGTGTGGGCCGTGGCTTGGGCTGGTCAGAGTGGCGTGAGCTGCCGGCGCCTGCC
CTGCCCAAGTGACCAGGGAAGTGTGTGTGTGTCCATGTGTATGCGTGTCCGTCTGTCTGTCTAGTGTCTGGGTTT
GGCCCAAGACTGGGCTGTAGTTACATTAATGCCAGCCAGCCACCCCTGCCACTCACCCCTCCTGGCCCAGGCCT
TGCTGACTCTCTGAGCTGGGGAGGTGGGAGGCCAGGCGAGCCTGACTCTGTTGATCTACCCGTGCCTGGGCCCT
CCCCTCAGAGCCCATGGTAACGAACCCCTAGAAAGGAGAGAACGGGCGTCAGGGGTGCACAGTCCACAGCTGAAG
AGCAAGGTTTTCGTGGCAGCACGGCCCGGCCCTCACCTCTGTCCCCACGAGGGGACCCATGGGGGCTGTCTTTG
CAGGGCACAGATGACCAAAGTCCCTTCTGCTTCTGTACCTGTCTTGTCTCTGGGGAGAAAGAGGGGCTGAT
GAGACTCCACTCAGGTGCACACATCACCAGGTGCATCTGCAGGACCGGGCTGGCTGCTTGACGCCAGGAGAAGG
TCAGCGAGAAGGAGTGTATGAGTGTGAGTGTGTGTGCATGGAAGTTGGGGCACTGGGCGTCTGACTCCCTCCCCA
CCCAAGAGAGGAAGGACCCCTCACCACCCCCACTGGCGAGACAGTTTACTTTGCCGACTTGCCATGTTTTTGCCA

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FIGURE 15B

AAACCAAGATTTTGAAGGAAATGAGTGGCCAGCGCCAGGGCCCAGGCCATGTGGCCTGCCCAGCCTCAATGTCAC
TTGGCGGCGGGGTGGGGTGGGGGTGGGCAGCAGCATCCCAGCCTTGAGATGCTTCACTTTCCTTCTCTGTAACCA
GACTTTGAAAAATTGTTGTTTCATCAGGCTCTGTTCTCAATGGCCTTTTGCTACGTGCCTCCCGAGAAATTTG
TCTTTTTGTATAAATGACAAAGTGTGAAAATGTATTTCTGAAATAAATGTTTCAAATGCAGAAACCCAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 16

MERDRISALKRSFEVEEVETPNSTPPRRVQTPLLRA TVASSTQKFQDLGVKNSEPSARHVDSLSQRSPKASLRRV
ELSGPKAAEPVSRRTLSIDISSKQVENAGAIGPSRFG LKRAEVLGHKTPEPAPRRTEITIVKPQESAHR RMEPP
ASKVPEVPTAPATDAAPKRVEIQMPKP AEAPTAPSPAQTLENSEPAPVSQLQSRLEPKPQPPVAEATPRSQEATE
AAPSCVGDMA DTPRDAGLKQAPASRNEKAPVDFGYVGIDSILEQMRRKAMKQGFEFNIMVVGQSGLGKSTLINTL
FKSKISRKSVQPTSEERIPKTIEIKSITHDIEEKGV RMKLTVIDTPGFGDHINNENCWQPI MKFINDQYEKYLQE
EVNINRKKRIPDTRVHCCLYFIPATGHSLRPLDIEFMKRLSKVVNI VPVIAKADTLTLEERVHFKQRITADLLSN
GIDVYPQKEFDEDEDSEDLVNEKFREMIPFAVVGSDHEYQVNGKRILGRKTKWGTIEVENTTHCEFAYLRDLLIRT
HMQNIKDITSSIHFEAYRVKRLNEGSSAMANGVEEKEPEAPEM

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FIGURE 17

CCGCTTCCCCGTCTTGTACACCCCTAACTCCTGAGGCTCCTCCGAATCACGCGAGTGGAAGCGGAGAAGCTCAAG
TGGCCGCCATGTCAGAGGCTTATTTCCGAGTGAGTCGGGTGCGCTGGGGCCTGAGGAGAACTTTCTTTCTTTGG
ACGACATCCTGATGTCCCACGAGAAGCTGCCGGTGCGCACGGAGACCGCCATGCCTCGCCTTGGCGCTTTCTTCC
TGGAGCGGAGCGCAGGCGCCGAGACTGACAACGCGGTCCCACAGGGTTCCAAGCTTGAACCTACCCTTGTGGCTGG
CAAAAGGACTTTTTGACAACAAGCGACGGATCCTTTCTGTGGAACCTCCCCAAGATCTACCAAGAGGGTTGGAGGA
CTGTGTTTCACTGCAGATCCCAATGTGGTGGACCTCCACAAAATGGGGCCCCATTTCTACGGGTTTGGCTCCCAGC
TCCTGCATTTTGACAGTCCCAGAGAATGCAGACATTTCCAGTCTCTGCTGCAGACTTTTATCGGACGTTTTTCGCC
GCATCATGGACTCCTCACAGAATGCTTACAACGAAGACACTTCAGCCCTGGTAGCCAGGCTAGACGAGATGGAGA
GGGGCTTATTTCAAACAGGGCAGAAAGGACTGAATGACTTTCAGTGTGGGAGAAGGGGCAGGCTTCTCAGATCA
CAGCTTCCAACCTCGTTTCAAGATTACAAGAAGAGAAAATTCAGTGATATGGAAGACTTGAAAGCCGGAAGAACA
GAATGGCTCCTCACAGACGTATCCCTCCGTGTGTCTTGTATAGGAGCTGGTTGACCTTGTACAGAACCAGAATCC
TGTCCCATTTTATGAGCTTATTTCTGTGGCCATAGAGAATTATAGGGAAGTGGACATGCTGGAGGATGTGGGTGT
CCCTGGCTCTGTGAGTCTTCCAGGACCGTCCCACCCTGCTGACCCACAGCCAGGCCCTTTAACCCAAGAACCCA
TGGCCAAGGAGAAATCAAAGTCCTTCTAAATAAGAATCACTGCCATATAATATATCACAGTAGAGTTGCAACTG
AGATTCTTGTGTCTGGGAGTTTGGACAGCTTCAGATGTACAGTTTCACTAGCCACAAAGCACAGGTACAAACTG
GGTCATCGCCTGTTTACAAAATGCTCTCTTGATCTTATTTGCCTCATCTTCTCATGGTTGTACAGAGGATAGCA
CCCCACCATGCCAGCCTGACTTGGAGATATCTCCTGCTGCCTGCCTGCAGGGAGTTACCCCAGTTTCCAAAAACA
GTCGCCCAGATAAAGGAGGAAAAGGGAAAGGCAGACGAATGGCATGGCTTTTACTAAAGAAAAGATGTTGGCCTC
ATACTCTATACTCAGGGCTTAATGAACTGGAATCTGCATAACTCAGCAGTCAACCCAGAAGGGAAATGGTTAAAC
TGAGCTTGTATTATGCCTCGGAGAGCCTAAGAGCACCCGCACACTTAATTCTACTCCCTGTCTAGAAAAGCTGTCA
GGGAGTCGTTTGAATTGCAATGTAGTTATTAAGGGCTGTTAACCAGCCTGCATTACATCTGGAAGTCAGGACTT
GGGTGCTGACTATGAAGGGCCCTGTTTTCAAATCTAACATTGCAAGTGTAATGGGCAAGAAGCCTCCGTTGTG
CTTTTTTTTTTCTTCTTCACTAACTTTTGCAACATTATTGCATAGAAGATCCCTGACCATTTACTAGGAACCTGGT
TAAGCAAGCACTAATCTCTTTTCTGGAGATCAAGGATGCAACCTCAGGTTGAGAAAGAAACAGGGTTCCCTGGG
CCCATTAGACTGTTTGCAGGGCATCACTGCTTCCCCCTGCACCTCACAACTAGCAAAAATTGTCTTTGTCTTTG
GAAATTATAGAGGGATTTGGGTATCCAGATTGTGCAGATGCAAACTTAGGCTGTCTTGATGCAAACTTAGAACCA
CAGAAATGCTTTTAAATGCCTGTTTTAAGATGGAATTGTTGTTTTTATAATTTGATTTTAGTGCTAAATAAATG
ATTGGCTTTGTACATGAATATGTTCTGTACAAGTGCTCTTTCAGTACTACAGATAATCAAAGCTATCAGAAT
TGTGTCTTTGATCATATTTGACGGTAATACACAAATAAATCCATGTTTTAGCAAAAAAAAAAAAAAAAAAAAAA
A

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FIGURE 18

MSEAYFRVESGALGPEENFLSLDDILMSHEKLPVRTETAMPRLGAFFLERSAGAETDNAVPOGSKLELPLWLAKG
LFDNKRILSVELPKIYQEGWRTVFSADPNVVDLHKMGPHFYGFSGQLLHFDSPENADISQSLQTFIGRFRRIM
DSSQNAYNEDTSALVARLDEMERGLFQTGQKGLNDFQCWEKGQASQITASNLVQNYKKRKFTDMED

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FIGURE 19

GTTTACGTCTCGCTCCGGGGCGGAAAGTGGGTCAGGGCCGGGCTGGCGGAGCGCGCAGCGGGGGCTGCAGATTCT
TTCCACCATGGCCAGACGCCCCCGGAACAGCAGGGCCTGGCACTTCGTCTGAGTGCAGCCCGCCGAGACGCAGA
TGCCCGGGCCGTGGCTCTAGCGAGGCCTCCTTCTGTAGCAGCCTGCACTCGGCCCCACCGGGGCAGGGACTGCCGC
TGCGGAGAGGAAGACGAGTGTGAGCGTGGGGCCAGCCCCCTGCTGGGACTGCACTGCGGGCGGGCCTGGGGGTGG
GCAGGGCAGAGCCCCATGGAGCTCTCAGGGCTGCCCCAGCCTGGGCCTCTCTTGAGATTTCGACTGGGTCTGGG
ATGACTTAAATAAGTCATCAGCCACCCCTGCTGAGCTGTGACAACCGTAAGGTCAGCTTCCACATGGAGTACAGCT
GCGGCACAGCGGCCATCCGGGGCACCAAGGAGCTGGGGGAGGGCCAGCACTTCTGGGAGATCAAGATGACCTCTC
CCGTCTACGGCACACTCACCTTTTTCAAGAACAGGAAGTGTATAGGTGTGGCAGCCACCAAGCTGCAGAACAAGA
GATTCTACCCGATGGTGTGCTCCACGGCGGCCCGGAGCAGCATGAAGGTCACCCGCTCCTGTGCCAGCGCCACTT
CCCTCCAGTACCTGTGCTGCCACCGCCTGCGCCAGCTGCGGCCAGACTCGGGAGACACGCTGGAGGGTCTGCCGC
TGCCGCCGGGCCTCAAGCAGGTGCTACACAACAAGCTGGGCTGGGTCTTGAGCATGAGTTGCAGCCGCCGCAAGG
CTCCAGTGTCCGATCCCCAGGCAGCGACCTCCGCCCACCCCAGCAGTCGCGAGCCTCGGCCCTGCCAGAGGAAGC
GCTGCCGCCGGACCTGACTGACTTCCCAGTGGAAGTGCCTTCTTGGGCTGGGGCAGCCCCCTTTCCTCTGTCCCTT
CTTTCTCTGTCCCTTCCTTCCAGCCACACTCCAGGGCGGAGTTGGATGAGGCCCGTCCGGAGGGAGCCATCTCTT
GCTCCCGAGGCTGGGACAGTCCTTTCTGTGGGGCTCTAGGGCCCCCTCTGCTGCTGTGCTGGGTGGGGAAGCGGC
TGCCCTGAGCCCCAGGTCTTGTGGGAGGCTGCGAGGACGAGAGCCTGGCTGGAGCCCGCGTTGCTGTTCTAGAT
GGTGGGCATCGGGACGTCGGATGTGGACCTGGACAAATACCGCCACACGTTCTGCAGCCTGCTGGGCAGGGATGA
GGACAGCTGGGGCCTCTCCTACACGGGTGCGTGAGGCCAGGGTGGGGCGGGGCCGAGCCTGGAGCTCCCGGGCT
CACTGCGACCCTGGCTGCCCCCAGGCCTCCTCCACCACAAGGGCGACAAGACCAGCTTCTCGTCGCGGTTTCGGCC
AGGGCTCCATCATTTGGCGTGCACCTGGACACCTGGCACGGCACACTCACCTTTTTCTTAAGTTGCTCTGCATGCT
GTCAGCGGCTGCCCCGCCGTCATAGACTTAAAGGACTGCAATAAATGTAGAGTTGATGTCTAACACCC

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FIGURE 20

MEYSCGTAAIRGTELGEQHFWEIKMTSPVYGTLTFFKNRKCIGVAATKLQNKRFYPMVCSTAARSSMKVTRSC
ASATSLQYLCCHRLRQLRPDSGDTLEGLPLPPGLKQVLHNKLGWVLSMSCSRRKAPVSDPQAATSAHPSSREPRP
CQRKCRRT

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FIGURE 21

AGAAATCAACTGCTTAGCCGGGTTGTTAGGAGGATCTGATGAGACTAGGATGTGAGTTGAAACTGCTGTGCCAGG
CACACCTGTGTGGGTCTCACTTGTGCCAGGCATACCTGCGTGGGTCTCACCTGTGTAGGTCTCACCTGTGCCAGG
TGTACCTGTGTGGGTCTTACCTGTGCAGGTCTCCTGATGCAGGTCTCACCTGTGCCGAGTGTACCTACCTGTGCG
GGTCTCACCTGTGTGCAGGCGTACGTGTAGGGGTCTCACCTGTGAACGTCTCACCTGTGCCAGGTGTATACCTGTG
TGGCTCTCACTTGTGTGGGTCTGGTATGTGACAAAGGCCTGGGAATTGGCAGCTGTCACTGTGCCAGGAGCAGACC
CTGAGCCAAGTTCCCTGTGCCTTAGGCTCATTTCATGCCCTCAGCTCTGGGAGGCCAATCCCTTTACTGCCACAT
TTTATAAATGGAAGACTGAGGTTAAGCAGTGGGCCCAGGGCCATAGAACAGCTGAGCTGTGGAGCTGGACATCGA
CCTTGGGCAGGTGCTGCCAGGGGCCTGAGCCCAGGCCCTCCACTCCCGCATCCTCTGATGACCCATCCTGGGTGA
GTGGAGGCATCTGCCGCGCCAGTCAGGCCCAGTGGTGATGGCCCCCATGCCACAGGACAGAAGCTGCTGGACT
CACTGGCAGAGACCTGGGACTTCTTCTTCAGTGACGTGCTGCCCCATGCTGCAGGCCATCTTCTACCCGGTGCAGG
GCAAGGAGCCATCGGTGCGCCAGCTGGCCCTGCTGCACTTCCGGAATGCCATCACCCTCAGTGTGAAGCTAGAGG
ATGCGTGGCCCCGGGCCATGCCGCGTGCCCCCTGCCATCGTGCAGATGCTGCTGGTGTGTCAGGGGGTACATG
AGTCCAGGGGCGTGACTGAGGACTACCTGCGCCTGGAGACGCTGGTCCAGAAGGTGGTGTGCCATACCTGGGCA
CCTACGGCTCCACTCCAGCGAGGGGCCCTTCACCCATTCTGTCATCCTGGAAGAGCGCCTCTCCGCGCTCCC
GCTCGGGGGACGTGCTGGCCAAGAACCCTGTGGTGCCTCCAAGAGCTACAACACGCCTCTGCTGAACCCCGTGC
AGGAGCACGAGGCGGAGGGCGCGGCCGGCGGTACCAGCATCCGCTGGCACTCTGTGTGCGAGATGACGTCTT
GCCCCGAGCTCAGGGCTTCTCCGACCGCCCCGGCCAGGGCCCCACCGGGACCTTCAGGTCTCTCCCGGCGCCCC
ACTCAGGGCCCTGCCCCAGCAGACTGTACCCACGACCCAGCCCCCTGAGCAGGGCTTGATCCCACCCGCAGCT
CCCTGCCCCGCTCCAGCCCGGAGAACCTGGTGGACCAGATCCTGGAGTCCGTGGACTCGGATTCTGAAGGGATTT
TCATTGACTTTGGCCGGGGCCGGGGCTCTGGCATGTCCGACTTGGAGGGCTCTGGGGGCCGGCAGAGTGTGCTGT
GAGGCCTCACAGCTGGCCTTGAGTTTTTACTGACACGTCCCTGTGTGCGGGGTGTCCATGTGGCGTGTGTGTA
GTGAGACTTTTTTACTGCGTCCCGTCCCGCCAGCCCTGTGCGCTCGTCACTGGCCTTGGTCACTTTGTATTTCT
GTCTTGGTTGGAAATACCATCAGCCTTCTTGTGCTCGGCCAGGTCTGTTTCAGGCATCTGAGTCAGCGTTTACCC
AGGGGCCGGGCCAGAGACGGGGGCCGGCGCTCGCTCCACGCTCCTCCTGCCCCAGCCCTCTGGTGTCCACACC
TGCCACAGAGAAATGTAAACCCAGTGGGCTCTGCCCACGCGGGCCCCAAAGTGACCAGACTCCAGCACACCTGT
CTCCTCCTGCCTGGGGTGGCCATGGGGATGGAAGGGGTGGAATAAAACCTGTCAACCTGAAAAAAAAAAAAAA
AAAAAA

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FIGURE 22

MAPMPTGQKLLDSLAE TW DFF FSDVLPMLQAIFYPVQGKEPSVRQLALLHFRNAITLSVKLEDALARAHARVPPA
IVQMLLV LQGVHESRGVTEDYLRLET LVQKVVS PYLGT YGLHSSEGPFTHSCILEKRLLRRSRSGDVLAKNPVVR
SKSYNTPLLNPVQEHEAEGAAAGGTSIRWHSVSEMTSCPEPQGFSDPPGQGPTGTFRSSPAPHSGPCPSRLYPTT
QPPEQGLDPTRSSLPSSPENLVDQILESVDSDSEGI FIDFGRGRGSGMSDLEGS GGRQSVV

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FIGURE 23

GTTGCCGCTGCGCACCTGGCTCAGGTGAGCTGCCCCGCCCCGCCCCGGCGCGAGCCCCAGGTCCTGGCAGCAGCC
CCTGACCTGTCCAGGTGCCCTGTCCAGCTGACTGCAAGGACAGAGAGGAGTCCTGCCCAGCTCTTGGATCAGTCT
GCTGGCCGAGGAGCCCCGGTGGAGCCAGGGGTGACCCTGGAGCCCAGCCTGCCCCGAGGAGGCCCGGGCTCAGAGC
CATGCCAGGTGTCTGTGATAGGGCCCCCTGACTTCCTCTCCCCGTCTGAAGACCAGGTGCTGAGGCCTGCCTTGGG
CAGCTCAGTGGCTCTGAACTGCACGGCTTGGGTAGTCTCTGGGCCCCACTGCTCCCTGCCTTCAGTCCAGTGGCT
GAAAGACGGGCTTCCATTGGGAATTGGGGGCCACTACAGCCTCCACGAGTACTCCTGGGTCAAGGCCAACCTGTC
AGAGGTGCTTGTGTCCAGTGTCTGGGGGTCAACGTGACCAGCACTGAAGTCTATGGGGCCTTCACCTGCTCCAT
CCAGAACATCAGCTTCTCCTCCTTCACTCTTCAGAGAGCTGGCCCTACAAGCCACGTGGCTGCGGTGCTGGCCTC
CCTCCTGGTCTCTGCTGGCCCTGCTGCTGGCCGCCCTGCTCTATGTCAAGTGCCGTCTCAACGTGCTGCTCTGGTA
CCAGGACGCGTATGGGGAGGTGGAGATAAACGACGGGAAGCTCTACGACGCCTACGTCTCTACAGCGACTGCCC
CGAGGACCGCAAGTTCGTGAACCTTCATCCTAAAGCCGCAGCTGGAGCGGCGTCGGGGCTACAAGCTCTTCCTGGA
CGACCGCGACCTCCTGCCGCGCGCTGAGCCCTCCGCCGACCTCTTGGTGAACCTGAGCCGCTGCCGACGCCTCAT
CGTGGTGCTTTCGGACGCCTTCCTGAGCCGGGCCTGGTGCAGCCACAGCTTCCGGGAGGGCCTGTGCCGGCTGCT
GGAGCTACCCGCAGACCCATCTTCATCACCTTCGAGGGCCAGAGGCGCGACCCCGCGCACCCGGCGCTCCGCCT
GCTGCGCCAGCACCGCCACCTGGTGACCTTGCTGCTCTGGAGGCCCGGCTCCGTGACTCCTTCCTCCGATTTTTG
GAAAGAAGTGACGCTGGCGCTGCCGCGGAAGGTGCGGTACAGGCCGGTGGGAAGGAGACCCCCAGACGCAGCTGCA
GGACGACAAGGACCCCATGCTGATTCTTCGAGGGCCGAGTCCCTGAGGGCCGGGCCCTGGACTCAGAGGTGGACCC
GGACCTGAGGGCGACCTGGGTGTCCGGGGGCCTGTTTTTGGAGAGCCATCAGCTCCACCGCACACCAAGTGGGGT
CTCGCTGGGAGAGAGCCGGAGCAGCGAAGTGGACGTCTCGGATCTCGGCTCGCGAAACTACAGTGCCCGCACAGA
CTTCTACTGCCTGGTGTCCAAGGATGATATGTAGCTCCACCCACAGAGTGCAGGATCATAGGGACAGCGGGGGCC
AGGGCAGCGGCGTCGCTCCTCTGCTCAACAGGACCACAACCCCTGCCAGCAGCCCTGGGACCCTGCCAGCAGCCC
TGGGAAAAGGCTGTGGCCTCAGGGCGCCTCCAGTGCCAGAAAATAAAGTCCTTTTGGATTCTGAAAAAAAAAAAA
AA

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FIGURE 24

MPGVCDRAPDFLSPSEDQVLRPALGSSVALNCTAWVVS GPHCSLP SVQWLKDGLPLGIGGHYSLHEYSWVKANLS
EVLVSSVLGVNVTSTEVYGAFTCSIQNISFSSFTLQ RAGPTSHVAAVLASLLVLLALLLAALLYVKCRLNVLLWY
QDAYGEVEINDGKLYDAYVSYSDCPEDRK FVNFI LKPQLERRRGYKFLDDRDL LPRAEPSADLLVNLSRCRRLI
VVLSDAFLSRAWCSHSFREGLCRLLELTRRPIFITFEGQRRDPAHPALRLLRQHRHLVTLLWRPGSVTPSSDFW
KEVQLALPRKVRYRPVEGDPQTQLQDDKDPM LILRGRVPEGRALDSEVDPDPEGDLGVRGPVFGEPSAPPHTSGV
SLGESRSSEVDVSDLGSRNYSARTDFYCLVSKDDM

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FIGURE 25

GGCACGAGGGGAGCGCTTGTGCTGCTCGTACTCCTCCATTTATCCGCCATGATAAGTGCCAGCCGAGCTGCA
GCAGCCCGTCTCGTGGGCGCCGCAGCCTCCCGGGGCCCTACGGCCGCCCGCCACCAGGATAGCTGGAATGGCCTT
AGTCATGAGGCTTTTAGACTTGTTTCAAGGCGGGATTATGCATCAGAAGCAATCAAGGGAGCAGTTGTTGGTATT
GATTTGGGTACTACCAACTCCTGCGTGGCAGTTATGGAAGGTAAACGAGCAAAGGTGCTGGAGAATGCCGAAGGT
GCCAGAACCACCCCTTCAGTTGTGGCCTTTACAGCAGATGGTGAGCGACTTGTTGGAATGCCGCCAAGCGACAG
GCTGTACCAACCCAAACAATACATTTTATGCTACCAAGCGTCTCATTGGCCGGCGATATGATGATCCTGAAGTA
CAGAAAGACATTAAAAATGTTCCCTTTAAAATTGTCCGTGCCTCCAATGGTGATGCCTGGGTTGAGGCTCATGGG
AAATTGTATTCTCCGAGTCAGATTGGAGCATTGTGTTGATGAAGATGAAAGAGACTGCAGAAAATTACTTGGGG
CGCACAGCAAAAAATGCTGTGATCACAGTCCCAGCTTATTTCAATGACTCGCAGAGACAGGCCACTAAAGATGCT
GGCCAGATATCTGGACTGAATGTGCTTCGGGTGATTAATGAGCCACAGCTGCTGCTCTTGCCCTATGGTCTAGAC
AAATCAGAAGACAAAGTCATTGCTGTATATGATTTAGGTGGTGGAACTTTTGATATTTCTATCCTGGAAATTCAG
AAGAGGATTTTGGAGGTGAAATCCACAAATGGGGATACCTTCTTAGGTGGGGAAGACTTTGACCAGGCCTTGCTA
CGGCACATTGTGAAGGAGTTCAAGAGAGAGACAGGGGTTGATTTGACTAAAGACAACATGGCACTTCAGAGGGTA
CGGGAAGCTGCTGAAAAGGCTAAGTGTGAACCTCTCTCATCTGTGCAGACTGACATCAATTTGCCCTATCTTACA
ATGGATTCTTCTGGACCCAAAGCATTGAAATATGAAGTTGACCCGTGCTCAATTTGAAGGGATTGTCACTGATCTA
ATCAGAAGGACTATCGCTCCATGCCAAAAAGCTATGCAAGATGCAGAAGTCAGCAAGAGTGACATAGGAGAAGTG
ATTCTTGTGGGTGGCATGACTAGGATGCCAAAGGTTGAGCAGACTGTACAGGATCTTTTTGGCAGAGCCCCAAGT
AAAGCTGTCAATCCTGATGAGGCTGTGGCCATTGGAGCTGCCATTGAGGAGGTGTGTTGGCCGGCGATGTCACG
GATGTGCTGCTCCTTGATGTCACTCCCTGTCTCTGGGTATTGAACTCTAGGAGGTGTCTTTACCAAACCTTATT
AATAGGAATACCACTATTCCAACCAAGAAGAGCCAGGTATTCTCTACTGCCGCTGATGGTCAAACGCAAGTGGAA
ATTAAAGTGTGTCAGGGTGAAAGAGAGATGGCTGGAGACAACAACTCCTTGACAGTTTACTTTGATTGGAATT
CCACCAGCCCCCTCGTGGAGTTCCTCAGATTGAAGTTACATTGACATTGATGCCAATGGGATAGTACATGTTTCT
GCTAAAGATAAAGGCACAGGACGTGAGCAGCAGATTGTAATCCAGTCTTCTGGTGGATTAAAGCAAAGATGATATT
GAAAATATGGTTAAAAATGCAGAGAAATATGCTGAAGAAGACCGGCGAAAGAAGGAACGAGTTGAAGCAGTTAAT
ATGGCTGAAGGAATCATTACGACACAGAAACCAAGATGGAAGAATTCAAGGACCAATTACCTGCTGATGAGTGC
AACAAGCTGAAAGAAGAGATTCCAATAAGAGGGAGCTCCTGGCTAGAAAAGACAGCGAAACAGGAGAAAAATATT
AGACAGGCAGCATCCTCTCTTCAGCAGGCATCATTGAAGCTGTTGAAATGGCATACAAAAAGATGGCATCTGAG
CGAGAAGGCTCTGGAAGTTCTGGCACTGGGGAACAAAAGGAAGATCAAAAGGAGGAAAAACAGTAAATAATAGCAG
AAATTTTGAAGCCAGAAGGACAACATATGAAGCTTAGGAGTGAAGAGACTTCCTGAGCAGAAATGGGCGAACTTC
AGTCTTTTTACTGTGTTTTTGCAGTATTCTATATATAATTTCTTAATTTGTAAATTTAGTGACCATTAGCTAGT
GATCATTTAATGGACAGTGATTCTAACAGTATAAAGTTCACAATATTCTATGTCCCTAGCCTGTCATTTTTTCAGC
TGCATGTAAAAGGAGGTAGGATGAATTGATCATTATAAAGATTTAACTATTTTATGCTGAAGTGACCATATTTTC
AAGGGGTGAAACCATCTCGCACACAGCAATGAAGGTAGTCATCCATAGACTTGAAATGAGACCACATATGGGGAT
GAGATCCTTCTAGTTAGCCTAGTACTGCTGTACTGGCCTGTATGTACATGGGGTCCTTCAACTGAGGCCTTGCAA
GTCAAGCTGGCTGTGCCATGTTTGTAGATGGGGCAGAGGAATCTAGAACAATGGGAACTTAGCTATTTATATTA
GGTACAGCTATTAAAAACAAGGTAGGAATGAGGCTAGACCTTTAACTTCCCTAAGGCATACTTTTCTAGCTACCTT
CTGCCCTGTGTCTGGCACCTACATCCTTGATGATTGTTCTCTTACCCATTCTGGAATTTTTTTTTTTTTTAAATA
AATACAGAAAGCATCTTGAAAAA

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FIGURE 26

MISASRAAAARLVGAAASRGPTAARHQDSWNGLSHEAFRLVSRRDYASEAIKGAVVGIDLGTTNSCVAVMEGKRA
KVLNAEGARTTPSVVAFTADGERLVGMPAKRQAVTNPNNTFYATKRLIGRRYDDPEVQKDIKNVPFKIVRASNG
DAWVEAHGKLYSPSQIGAFVLMKMKETAENYLGRITAKNAVITVPAYFNDSQRQATKDAGQISGLNVLRVINEPTA
AALAYGLDKSEDKVIAYVDLGGGTDFDISILEIQKGVFEVKSTNGDTFLGGEDFDQALLRHIVKEFKRETGVDLTK
DNMALQVRVREAAEKAKCELSSSVQTDINLPYLTMDSSGPKHLNMKLTRAQFEGIVTDLIRRTIAPCQKAMQDAEV
SKSDIGEVLVGGMTRMPKVQQTVQDLFGRAPSKAVNPDEAVAIGAAIQGGVLAGDVTDVLLLDVTPLSLGIETL
GGVFTKLINRNTTPTTKKSQVFSTAADGQTQVEIKVCQGEREMAGDNKLLGQFTLIGIPPAPRGVPQIEVTFDID
ANGIVHVSADKGTGREQQIVIQSSGGLSKDDIENMVKNAEKYAEEDRRKKERVEAVNMAEGI IHD TETKMEEFK
DQLPADECNKLKEEISKMRELLARKDSETGENIRQAASSLQQASLKL FEMAYKKMASEREGSGSGTGEQKEDQK
EEKQ

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FIGURE 27

GGCACGAGGGGAGCGCTTGTGCTGCCTCGTACTCCTCCATTTATCCGCCATGATAAGTGCCAGCCGAGCTGCA
GCAGCCCGTCTCGTGGGCGCCGAGCCTCCCGGGGCCCTACGGCCGCCGCCACCAGGATAGCTGGAATGGCCTT
AGTCATGAGGCTTTTAGACTTGTTC AAGGCGGGATTATGCATCAGAAACAATCAAGGGAGCAGTTGTTGGTATT
GATTTGGGTACTACCAACTCCTGCGTGGCAGTTATGGAAGGTAAACGAGCAAAAGGTGCTGGAGAATGCCGAAGGT
GCCAGAACCAACCCCTTCAGTTGTGGCCTTTACAGCAGATGGTGAGCGACTTGTGGAATGCCGGCCAAGCGACAG
GCTGTCAACCAACCAACAAATACATTTTATGCTACCAAGCGTCTCATTGGCCGGCGATATGATGATCCTGAAGTA
CAGAAAGACATTAAAAATGTTCCCTTTAAAATTGTCCGTGCCTCCAATGGTGATGCCTGGGTTGAGGCTCATGGG
AAATTGTATTCTCCGAGTCAGATTGGAGCATTGTGTTGATGAAGATGAAAGAGACTGCAGAAAATTACTTGGGG
CGCACAGCAAAAAATGCTGTGATCACAGTCCCAGCTTATTTCAATGACTCGCAGAGACAGGCCACTAAAGATGCT
GGCCAGATATCTGGACTGAATGTGCTTCGGGTGATTAATGAGCCACAGCTGCTGCTCTTGCCTATGGTCTAGAC
AAATCAGAAGACAAAGTCATTGCTGTATATGATTTAGGTGGTGGAACCTTTGATATTTCTATCCTGGAATTCAG
AAAGGAGTATTTGAGGTGAAATCCACAAATGGGGATACCTTCTTAGGTGGGGAAGACTTTGACCAGGCCTTGCTA
CGGCACATTGTGAAGGAGTCAAGAGAGAGACAGGGGTTGATTTGACTAAAGACAACATGGCACTTCAGAGGGTA
CGGGAAGCTGCTGAAAAGGCTAAGTGTGAACCTCTCTCATCTGTGCAGACTGACATCAATTTGCCCTATCTTACA
ATGGATTCTTCTGGACCCAAGCATTGTAATATGAAGTTGACCCGTGCTCAATTTGAAGGGATTGCTACTGATCTA
ATCAGAAGGACTATCGTCTCATGCCAAAAGCTATGCAAGATGCAGAAAGTCAGCAAGAGTGACATAGGAGAAGTG
ATTCTTGTGGGTGGCATGACTAGGATGCCCAAGGTTGAGCAGACTGTACAGGATCTTTTTGGCAGAGCCCCAAGT
AAAGCTGTCAATCCTGATGAGGCTGTGGCCATTGGAGCTGCCATTGAGGGAGGTGTGTTGGCCGGCGATGTCAG
GATGTGCTGCTCCTTGATGTCACTCCCCTGTCTCTGGGTATTGAAACTCTAGGAGGTGTCTTTACCAAACCTTATT
AATAGGAATACCACTATTCCAACCAAGAAGAGCCAGGTATTCTCTACTGCCGCTGATGGTCAAACGCAAGTGGA
ATTAAAGTGTGTCAGGGTGAAAGAGAGATGGCTGGAGACAACAACTCCTTGGACAGTTTACTTTGATTGGAATT
CCACCAGCCCCCTCGTGGAGTTCCTCAGATTGAAGTTACATTTGACATTGATGCCAATGGGATAGTACATGTTTCT
GCTAAAGATAAAGGCACAGGACGTGAGCAGCAGATTGTAATCCAGTCTTCTGGTGGATTAAAGCAAAGATGATATT
GAAAATATGGTTAAAAATGCAGAGAAATATGCTGAAGAAGACCGGCGAAAAGGAACGAGTTGAAGCAGTTAAT
ATGGCTGAAGGAATCATTACGACACAGAAACCAAGATGGAAGAATTCAAGGACCAATTACCTGCTGATGAGTGC
AACAAAGCTGAAAGAGAGATTTCAAAATGAGGGAGCTCCTGGCTAGAAAAGACAGCGAAACAGGAGAAAATATT
AGACAGGCAGCATCCTCTCTTCAGCAGGCATCATTGAAGCTGTTGAAATGGCATACAAAAAGATGGCATCTGAG
CGAGAAGGCTCTGGAAGTTCTGGCACTGGGGAACAAAAGGAAGATCAAAAAGGAGGAAAAACAGTAATAATAGCAG
AAATTTTGAAGCCAGAAGGACAACATATGAAGCTTAGGAGTGAAGAGACTTCCTGAGCAGAAATGGGCGAACTTC
AGTCTTTTTACTGTGTTTTTGCAGTATTCTATATATAATTTCTTAATTTGTAAATTTAGTGACCATTAGCTAGT
GATCATTTAATGGACAGTGATTCTAACAGTATAAAGTTCACAATATTCTATGTCCCTAGCCTGTCAATTTTCAGC
TGCATGTAAAAGGAGGTAGGATGAATTGATCATTATAAAGATTTAACTATTTTATGCTGAAGTGACCATATTTTC
AAGGGGTGAAACCATCTCGCACACAGCAATGAAGGTAGTCATCCATAGACTTGAAATGAGACCACATATGGGGAT
GAGATCCTTCTAGTTAGCCTAGTACTGCTGTACTGGCCTGTATGTACATGGGGTCCTTCAACTGAGGCCTTGCAA
GTCAAGCTGGCTGTGCCATGTTTGTAGATGGGGCAGAGGAATCTAGAACAATGGGAACTTAGCTATTTATATTA
GGTACAGCTATTAAAACAAGGTAGGAATGAGGCTAGACCTTTAACTTCCCTAAGGCATACCTTTCTAGCTACCTT
CTGCCCTGTGTCTGGCACCTACATCCTTGATGATTGTTCTCTTACCCATTCTGGAATTTTTTTTTTTTTTAAATA
AATACAGAAAGCATCTTGAAAAA

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FIGURE 28

MISASRAAAARLVGAAASRGPTAARHQDSWNGLSHEAFRLVSRRDYASEAIKGAVVGIDLGTTNSCVAVMEGKRA
KVLNAEGARTTPSVVAFTADGERLVGMPAKRQAVTNPNNTFYATKRLIGRRYDDPEVQKDIKNVPFKIVRASNG
DAWVEAHGKLYSPSQIGAFVLMKMKETAENYLGRTAKNAVITVPAYFNDSQRQATKDAGQISGLNVLRVINEPTA
AALAYGLDKSEDKVIAVYDLGGGTFDISILEIQKGVFEVKSTNGDTFLGGEDFDQALLRHIVKEFKRETGVDLTK
DNMALQRVREAAEKAKCELSSSVQTDINLPYLTMDSSGPKHLNMKLTRAQFEGIVTDLIRRTIAPCQKAMQDAEV
SKSDIGEVIILVGGMTRMPKVQQTVDLFGRAPSKAVNPDEAVAIGAAIQGGVLAGDVTDVLLLDVTPLSLGIETL
GGVFTKLINRNTTIPTKKSQVFSTAADGQTQVEIKVCQGEREMAGDNKLLGQFTLIGIPPAPRGVPQIEVTFDID
ANGIVHVSADKGTGREQQIVIQSSGGLSKDDIENMVKNAEKYAEEDRRKKERVEAVNMAEGIIHDTETKMEEFK
DQLPADECNKLKEEISKMRELLARKDSETGENIRQAASSLQQASLKLFE MAYKKMASEREGSGSSGTGEQKEDQK
EEKQ

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FIGURE 29

GCCGTGTCGCCACCATGGCTCCGCACCGCCCCGCGCCCGCGCTGCTTTGCGCGCTGTCCCTGGCGCTGTGCGCGC
TGTCGCTGCCCGTCCGCGCGGCCACTGCGTCGCGGGGGCGTCCCAGGCGGGGGCGCCCCAGGGGCGGGTGCCCCG
AGGCGCGGCCAACAGCATGGTGGTGGAAACACCCCGAGTTCTCAAGGCAGGGAAGGAGCCTGGCCTGCAGATCT
GGCGTGTGGAGAAGTTTCGATCTGGTGCCCGTGCCACCAACCTTTATGGAGACTTCTTCACGGGCGACGCCTACG
TCATCTGAAGACAGTGCAGCTGAGGAACGGAAATCTGCAGTATGACCTCCACTACTGGCTGGGCAATGAGTGCA
GCCAGGATGAGAGCGGGGCGGCCGCCATCTTTACCGTGACGCTGGATGACTACCTGAACGGCCGGGCGCTGCAGC
ACCGTGAGGTCCAGGGCTTCGAGTCGGCCACCTTCCTAGGCTACTTCAAGTCTGGCCTGAAGTACAAGAAAGGAG
GTGTGGCATCAGGATTCAAGCACGTGGTACCCAACGAGGTGGTGGTGACAGAGACTCTTCCAGGTCAAAGGGCGGC
GTGTGGTCCGTGCCACCGAGGTACCTGTGTCTGGGAGAGCTTCAACAATGGCGACTGCTTCATCTGGACCTGG
GCAACAACATCCACAGTGGTGTGGTTCCAACAGCAATCGGTATGAAAGACTGAAGGCCACACAGGTGTCCAAGG
GCATCCGGGACAACGAGCGGAGTGGCCGGGCGCGAGTGACGTGTCTGAGGAGGGCACTGAGCCCGAGGCGATGC
TCCAGGTGCTGGGCCCCAAGCCGGCTCTGCCTGCAGGTACCGAGGACACCGCCAAGGAGGATGCGGCCAACCGCA
AGCTGGCCAAGCTCTACAAGGTCTCCAATGGTGCAGGGACCATGTCCGTCTCCCTCGTGGCTGATGAGAACCCCT
TCGCCCAGGGGGCCCTGAAGTCAGAGGACTGCTTCATCTGGACCACGGCAAAGATGGGAAAATCTTTGTCTGGA
AAGGCAAGCAGGCAAACACGGAGGAGAGGAAGGCTGCCCTCAAACAGCCTCTGACTTCATCACCAGATGGACT
ACCCCAAGCAGACTCAGGTCTCGGTCTTCCTGAGGGCGGTGAGACCCCACTGTTCAAGCAGTTCTTCAAGAACT
GGCGGGACCCAGACCAGACAGATGGCCTGGGCTTGCTACCTTTCCAGCCATATCGCCAACGTGGAGCGGGTGC
CCTTCGACGCGCCACCCTGCACACCTCCACTGCCATGGCCGCCAGCACGGCATGGATGACGATGGCACAGGCC
AGAAACAGATCTGGAGAATCGAAGGTTCCAACAAGGTGCCCGTGGACCCTGCCACATATGGACAGTTCTATGGAG
GCGACAGCTACATCATTCTGTACAACCTACCGCCATGGTGGCCGCCAGGGGCAGATAATCTATAACTGGCAGGGTG
CCCAGTCTACCCAGGATGAGGTGCGTGCATCTGCCATCTGACTGCTCAGCTGGATGAGGAGCTGGGAGGTACCC
CTGTCCAGAGCCGTGTGGTCCAAGGCAAGGAGCCCCGCCACCTCATGAGCCTGTTTGGTGGGAAGCCCATGATCA
TCTACAAGGGCGGCACCTCCCGCGAGGGCGGGCAGACAGCCCTGCCAGCACCCGCCTCTTCCAGGTCCGCGCCA
ACAGCGCTGGAGCCACCCGGGCTGTTGAGGTATTGCCTAAGGCTGGTGCCTGAAGTCCAACGATGCCTTTGTTC
TGAAAACCCCTCAGCCGCCTACCTGTGGGTGGGTACAGGAGCCAGCGAGGCAGAGAAGACGGGGGCCAGGAGC
TGCTCAGGGTGCTGCGGGCCCCAACCTGTGCAGGTGGCAGAAGGCAGCGAGCCAGATGGCTTCTGGGAGGCCCTGG
GCGGGAAGGCTGCCTACCGCACATCCCCACGGCTGAAGGACAAGAAGATGGATGCCCATCCTCCTCGCCTCTTTG
CCTGCTCCAACAAGATTGGACGTTTTGTGATCGAAGAGGTTCTGGTGAGCTCATGCAGGAAGACCTGGCAACGG
ATGACGTCATGCTTCTGGACACCTGGGACCAGGTCTTTGTCTGGGTTGGAAAGGATTCTCAAGAAGAAGAAAAGA
CAGAAGCCTTGACTTCTGCTAAGCGGTACATCGAGACGGACCCAGCCAATCGGGATCGGCGGACGCCCATCACCG
TGGTGAAGCAAGGCTTTGAGCCTCCCTCCTTTGTGGGCTGGTTCCCTTGGCTGGGATGATGATTACTGGTCTGTGG
ACCCCTTGGACAGGGCCATGGCTGAGCTGGCTGCCTGAGGAGGGGCGAGGGCCACCCATGTCACCGGTGAGTGCC
TTTTGAACTGTCTTCCCTCAAAGAGGCCTTAGAGCGAGCAGAGCAGCTCTGCTATGAGTGTGTGTGTGTGT
GTGTTGTTCTTTTTTTTTTTTTTACAGTATCCAAAAATAGCCCTGCAAAAATTCAGAGTCCTTGCAAAATTGTC
TAAATGTCAGTGTTTGGGAAATTAAATCCAATAAAAACATTTTGAAGTGTG

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FIGURE 30

MAPHRPAPALLCALSLALCALSLPVRAATASRGASQAGAPQGRVPEARPNMVEHPEFLKAGKEPGLQIWRVEK
FDLVPVPTNLYGDFFTGDAYVILKTVQLRNGNLQYDLHYWLGNECSQDESGAAAIFTVQLDDYLNGRAVQHREVQ
GFESATFLGYFKSGLKYKKGGVASGFKHVVPNEVVQRLFQVKGRRVVRATEVPVSWESFNNGDCFILDLGNNIH
QWCGSNSNRYERLKATQVSKGIRDNERSGRARVHVSEEGTEPEAMLQVLGPKPALPAGTEDTAKEDAANRKLAKL
YKVSNGAGTMSVSLVADENPFAQGALKSEDCFILDHGKDGKIFVWKGKQANTEERKAALKTASDFITKMDYPKQT
QVSVLPEGGETPLFKQFFKNWRDPDQTDGLGLSYLSSHIANVERVPFDAATLHTSTAMAAQHGMDDDG TGQKQIW
RIEGSNKVPVDPATYGGFYGGDSYIILYNRYRHGGRQGQIIYNWQGAQSTQDEVAASAILTAQLDEELGGTPVQSR
VVQGKEPAHLMSLFGGKPMIIYKGGTSREGGQTAPASTRLFQVRANSAGATRAVEVLPKAGALNSNDAFVLKTPS
AAYLWVGTGASEAEKTGAQELLRLVLAQPVQVAEGSEPDGFWEALGGKAAYRTSPRLKDKKMDAHPRLFACSNK
IGRFVIEEVPGELMQEDLATDDVMLLD TWDQVFVWVGKDSQEEEEKTEALTSAKRYIETDPANRDRRTPTITVVKQG
FEPPSFVGWFLGWDDDYWSVDPLDRAMAELAA

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FIGURE 31

CGCCCCCTGCTCTCGCGCCGGCGTGGGCTGCGTCTCCGGCGTTTGAATTGCGCTTCCGCCATCTTTCCAGCCTCAG
TCGGACGGGCGCGGAGGCGCTTCTGGAAGGAACGCCGCGATGGCTGCGCAGGGAGAGCCCCAGGTCCAGTTCAAA
CTTGATTTGGTTGGTGATGGTGGTACTGGAAAAACGACCTTCGTGAAACGTCATTTGACTGGTGAATTTGAGAAG
AAGTATGTAGCCACCTTGGGTGTTGAGGTTTCATCCCCCTAGTGTTCCACACCAACAGAGGACCTATTAAGTTCAAT
GTATGGGACACAGCCGGCCAGGAGAAAATTCGGTGGACTGAGAGATGGCTATTATATCCAAGCCCAGTGTGCCATC
ATAATGTTTGATGTAACATCGAGAGTTACTTACAAGAATGTGCCTAACTGGCATAGAGATCTGGTACGAGTGTGT
GAAAACATCCCCATTGTGTTGTGTGGCAACAAAGTGGATATTAAGGACAGGAAAGTGAAGGCGAAATCCATTGTC
TTCCACCGAAAGAAGAATCTTCAGTACTACGACATTTCTGCCAAAAGTAACTACAACCTTTGAAAAGCCCTTCCTC
TGGCTTGCTAGGAAGCTCATTGGAGACCCTAACTTGAATTTGTTGCCATGCCTGCTCTCGCCCCACCAGAAGTT
GTCATGGACCCAGCTTTGGCAGCACAGTATGAGCACGACTTAGAGGTTGCTCAGACAACCTGCTCTCCCGGATGAG
GATGATGACCTGTGAGAATGAAGCTGGAGCCCAGCGTCAGAAGTCTAGTTTTATAGGCAGCTGTCCTGTGATGTC
ACCGGTGCAGCGTGTGTGCCACCTCATTATTATCTAGCTAAGCGGAACATGTGCTTTATCTGTGGGATGCTGAAG
GAGATGAGTGGGCTTCGGAGTGAATGTGGCAGTTTAAAAAATAACTTCATTGTTTGGACCTGCATATTTAGCTGT
TTGGACGCAGTTGATTCCCTTGAGTTTCATATATAAGACTGCTGCAGTCACATCACAATATTCAGTGGTGAAATCT
TGTTTGTTACTGTCATTCCCATTCTTTCTTTAGAAATCAGAATAAAGTTGTATTTCAAATATCTAAGCAAGTGA
ACTCATCCCTTGTTTATAAATAGCATTTGGAAACCACTAAAGTAGGGAAGTTTTATGCCATGTTAATATTTGAAT
TGCCTTGCTTTTATCACTTAATTTGAAATCTATTGGGTAAATTTCTCCCTATGTTTATTTTTGTACATTTGAGCC
ATGTCACACAACTGATGATGACAGGTCAGCAGTATTCTATTTGGTTAGAAGGGTTACATGGTGTAAATATTAGT
GCAGTTAAGCTAAAGCAGTGTGTTGCTCCACCTTCATATTGGCTAGGTAGGGTCACCTAGGGAAGCACTTGCTCAA
AATCTGTGACCTGTCAGAATAAAAATGTGGTTTGTACATATCAAATAGATATTTTAAGGGTAATATTTTCTTTTA
TGGCAAAAGTAATCATGTTTTAATGTAGAACCTCAAACAGGATGGAACATCAGTGGATGGCAGGAGGTTGGGAAT
TCTTGCTGTTAAAAATAATTACAAATTTTGCACCTTTTGTGTTGAATGTTAGATGCTTAGTGGAAGTTGATACGC
AAGCCG

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FIGURE 32

MAAQGEPOVQFKLVLVGDGGTGKTTFVKRHLTGEFEKKYVATLGVEVHPLVFHTNRGPIKFNVWDTAGQEKFGGL
RDGYIQAQCAIIMFDVTSRVTYKNVPNWHRDLVRVCENIPIVLCGNKVDIKDRKVKAKSIVFHRKKNLQYYDIS
AKSNYNFEKPFLLWLARKLIGDPNLEFVAMPALAPPEVMDPALAAQYEHDLVAQTALPDEDDDL

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FIGURE 33

GGCACGAGGCGCCCGCCTGCTACGAGTAGAACGCTGTCCGCAGCTTGCGCATTTCGCAGCCGCTGCCGCTCGCC
GCTGCTCCTTCGTAAGGCCACTTCCGCACACCGACACCAACATGAACGGACAGCTCAACGGCTTCCACGAGGCGT
TCATCGAGGAGGGCACATTTCCTTTTACCTCAGAGTCGGTCGGGGAAGGCCACCCAGATAAGATTTGTGACCAAA
TCAGTGATGCTGTCTTGATGCCCACCTTCAGCAGGATCCTGATGCCAAAGTAGCTTGTGAAACTGTTGCTAAAA
CTGGAATGATCCTTCTTGCTGGGGAAATTACATCCAGAGCTGCTGTTGACTACCAGAAAGTGGTTCGTGAAGCTG
TTAAACACATTGGATATGATGATTCTTCCAAAGGTTTTGACTACAAGACTTGTAACGTGCTGGTAGCCTTGGAGC
AACAGTCACCAGATATTGCTCAAGGTGTTTCATCTTGACAGAAATGAAGAAGACATTGGTGTGAGAGACCAGGGCT
TAATGTTTGGCTATGCCACTGATGAAACTGAGGAGTGATGCCTTTAACCATTGTCTTGGCACACAAGCTAAATG
CCAAACTGGCAGAACTACGCCGTAATGGCACTTTGCCTTGGTTACGCCCTGATTCTAAAACTCAAGTTACTGTGC
AGTATATGCAGGATCGAGGTGCTGTGCTTCCCATCAGAGTCCACACAATTGTTATATCTGTTTCAGCATGATGAAG
AGGTTTGTCTTGATGAAATGAGGGATGCCCTAAAGGAGAAAGTCATCAAAGCAGTTGTGCCTGCGAAATACCTTG
ATGAGGATACAATCTACCACCTACAGCCAAGTGGCAGATTTGTTATTGGTGGGCCTCAGGGTGATGCTGGTTTGA
CTGGACGCAAAATCATTGTGGACACTTATGGCGGTTGGGGTGCTCATGGAGGAGGTGCCTTTTCAGGAAAGGATT
ATACCAAGGTCGACCGTTTCAGCTGCTTATGCTGCTCGTTGGGTGGCAAAATCCCTTGTTAAAGGAGGTCTGTGCC
GGAGGTTCTTGTTCAGGTCTCTTATGCTATTGGAGTTTCTCATCCATTATCTATCTCCATTTTCCATTATGGTA
CCTCTCAGAAGAGTGAGAGAGAGCTATTAGAGATTGTGAAGAAGAATTCGATCTCCGCCCTGGGGTCATTGTCA
GGGATCTGGATCTGAAGAAGCCAATTTATCAGAGGACTGCAGCCTATGGCCACTTTGGTAGGGACAGCTTCCCAT
GGGAAGTGCCCAAAAGCTTAAATATTCGAAAGTGTTAGCCTTTTTTCCCCAGACTTGTTGGCGTAGGCTACAGAG
AAGCCTTCAAGCTCTGAGGGAAGGGCCCTCCTTCCTAAATTTTCTGTCTCTTTCAGCTCCTGACCAGTTGCA
GTCACTCTAGTCAATGACATGAATTTTAGCTTTTGTGGGGGACTGTAAGTTGGGCTTGCTATTCTGTCCCTAGGT
GTTTTGTTACCATTATAATGAATTTAGTGAGCATAGGTGATCCATGTAAGTGCCTAGAAACAACACTGTAGTAA
ATAATGCTTTGAAATTGAACCTTTGTGCCCTATCACCCAACGCTCCAAAGTCATAATTGCATTGACTTTCCCCAC
CAGATGCTGAAAATGTCCTTGTGATGTGCACGTAAAGTACTTGTAGTTCCACTTATAGCCTCTGTCTGGCAATGC
CACAGCCCTGTCAGCATGAATTTGTAATGTCTTGAGCTCTATTATGAATGTGAAGCCTTCCCTTATCCTCCCTG
TAACTTGATCCATTTCTAATTATGTAGCTCTTTGTGAGGGAGTGTTCCCTATCCAATCAATCTTGATGTAACGC
AAGTTCCCAGTTGGAGCTCCAGCCTGACATCAAAAAAGGCAGTTACCATTAAACCATCTCCCTGGTGCTTATGCT
CTTAATTGCCACCTCTAACAGCACCAATCAAAATCTCTCCACTTTCAGCTGTCTTTTGGAGGACGTACGTAATA
AGGTTTTAATTTAGTAAACCAATCCTATGCATGGTTTCAGCACTAGCCAAACCTCACCAACTCCTAGTTCTAGAA
AAACAGGCACCTTGGCAGCCTTGTGATGTGCATACAGAGAAGTCACAGGGCAGTACCTGAGGGTCTGTAGGTTGCAC
ACTTTGGTACCAGATAACTTTTTTTTTTCTTTATAAGAAAGCCTGAGTACTCCACACTGCACAATAACTCCTCCC
AGGGTTTTAATTTGTTTTATTTTCAAACACAGGTCCAATGAGCTTTCTGAACAGCTGGTGTAGCTACAGAGAAA
CCAGCTTCCTTCAGAGAGCAGTGCTTTTGGCGGGGAGGAGGAAATCCCTTCATACTTGAACGTTTTCTAATTGCT
TATTTATTGTATTCTGGGGTATGGCGTAAGTACAGAGAAGCCATCACCTCAGATGGCAGCTTTTAAAAGATTTT
TTTTTTCTCTCAACACCATGATTCTTTAACAACATGTTTCCAGCATCCCAGGTAGGCCAAGGTGTCCTACAG
AAAAACCTTGGGTTAGACCTACAGGGGTCTGGCTGGTGTAAACAGAAGGGAGGGCAGAGCTGGTGGGCTGGCC
ATGGAGAAAGCTGACTTGGCTGGTGTGGTACAGAGAAGCCAGCTTGTTTACATGCTTATTCCATGACTGCTTGCC
CTAAGCAGAAAGTGCCTTTTCAGGATCTATTTTTGGAGGTTTATTACGTATGTCTGGTTCTCAATTCCAACAGTTT
AATGAAGATCTAAATAAAATGCTAGGTTCTACCTTAAAAAAAAAAAAAAAAAAAA

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FIGURE 34

MNGQLNGFHEAFIEEGTFLFTSESVGEGHPDKICDQISDAVLDAHLQQDPDAKVACETVAKTGMILLAGEITSRA
AVDYQKVVREAVKHIGYDDSSKGFYKTCNVLVALEQQSPDIAQGVHLDRNEEDIGAGDQGLMFGYATDETEECM
PLTIVLAHKLNALAE LRRNGTLPWLRPDSKTQVTVQYMQDRGAVLP IRVHTIVISVQHDEEVCLDEM RDALKEK
VIKAVVPAKYLD EDTIYHLQPSGRFVIGGPQGDAGLTGRKIIVD TYGGWGAHGGGAFSGKDYTKVDRSAAYAARW
VAKSLVKGGLCRRVLVQVSYAIGVSHPLSISIFHYGTSQKSERELLEIVKKNFDLRPGVIVRDLDLKKPIYQRTA
AYGHFGRDSFPWEVPKKLKY

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FIGURE 35

GGCACGAGGCGCCCGCTGCTACGAGTAGAACGCTGTCCGCAGCTTGCGCATTTCGCAGCCGCTGCCGCCCTCGCC
GCTGCTCCTTCGTAAGGCCACTTCCGCACACCGACACCAACATGAACGGACAGCTCAACGGCTTCCACGAGGCGT
TCATCGAGGAGGGCACATTCTTTTACCTCAGAGTCGGTCGGGGAAGGCCACCCAGATAAGATTTGTGACCAAA
TCAGTGATGCTGTCTTGATGCCCACCTTCAGCAGGATCCTGATGCCAAAGTAGCTTGTGAAACTGTTGCTAAAA
CTGGAATGATCCTTCTTGCTGGGGAAATTACATCCAGAGCTGCTGTTGACTACCAGAAAGTGGTTTCGTGAAGCTG
TTAAACACATTGGATATGATGATTCTTCCAAAGGTTTTGACTACAAGACTTGTAACGTGCTGGTAGCCTTGGAGC
AACAGTCACCAGATATTGCTCAAGGTGTTTCATCTTGACAGAAATGAAGAAGACATTGGTGCTGGAGACCAGGGCT
TAATGTTTGGCTATGCCACTGATGAAACTGAGGAGTGTATGCCTTTAACCATTGTCTTGGCACACAAGCTAAATG
CCAACTGGCAGAACTACGCCGTAATGGCACCTTGCCTTGGTTACGCCCTGATTCTAAAACTCAAGTTACTGTGC
AGTATATGCAGGATCGAGGTGCTGTGCTTCCCATCAGAGTCCACACAATTGTTATATCTGTTTCAGCATGATGAAG
AGGTTTGTCTTGATGAAATGAGGGATGCCCTAAAGGAGAAAGTCATCAAAGCAGTTGTGCCTGCGAAATACCTTG
ATGAGGATACAATCTACCACCTACAGCCAAGTGGCAGATTTGTTATTGGTGGGCCTCAGGGTGATGCTGGTTTGA
CTGGACGCAAAATCATTGTGGACACTTATGGCGGTTGGGGTGCTCATGGAGGAGGTGCCTTTTCAGGAAAGGATT
ATACCAAGGTGACCGTTTCAGCTGCTTATGCTGCTCGTTGGGTGGCAAAATCCCTTGTTAAAGGAGGTCTGTGCC
GGAGGGTTCTTGTTTCAGGTCTCTTATGCTATTGGAGTTTCTCATCCATTATCTATCTCCATTTTCCATTATGGTA
CCTCTCAGAAGAGTGAGAGAGAGCTATTAGAGATTGTGAAGAAGAATTCGATCTCCGCCCTGGGGTCATTGTCA
GGGATCTGGATCTGAAGAAGCCAATTTATCAGAGGACTGCAGCCTATGGCCACTTTGGTAGGGACAGCTTCCCAT
GGGAAGTGCCCAAAAAGCTTAAATATTCGAAAGTGTTAGCCTTTTTTCCCCAGACTTGTTGGCGTAGGCTACAGAG
AAGCCTTCAAGCTCTGAGGGAAAGGGCCCTCCTTCTAAATTTTCTGTCTCTTTTCAGCTCCTGACCAGTTGCA
GTCACCTCTAGTCAATGACATGAATTTTAGCTTTTGTGGGGGACTGTAAGTTGGGCTTGCTATTCTGTCCCTAGGT
GTTTTGTTTACCATTATAATGAATTTAGTGAGCATAGGTGATCCATGTAAGTGCCTAGAAACAACACTGTAGTAA
ATAATGCTTTGAAATTGAACCTTTGTGCCCTATCACCCAACGCTCCAAAGTCATAATTGCATTGACTTTCCCCAC
CAGATGCTGAAAATGTCCTTGTGATGTGCACGTAAAGTACTTGTAGTTCCACTTATAGCCTCTGTCTGGCAATGC
CACAGCCCTGTTCAGCATGAATTTGTAATGTCTTGAGCTCTATTATGAATGTGAAGCCTTCCCCTTATCCTCCCTG
TAACTTGATCCATTTCTAATTATGTAGCTCTTTGTTCAGGGAGTGTTCCCTATCCAATCAATCTTGCATGTAACGC
AAGTTCCCAGTTGGAGCTCCAGCCTGACATCAAAAAAGGCAGTTACCATTAAACCATCTCCCTGGTGCTTATGCT
CTTAATTGCCACCTCTAACAGCACCAAAATCAAAATCTCTCCACTTTCAGCTGTCTTTTGGAGGACGTACGTAATA
AGGTTTTAATTTAGTAAACCAATCCTATGCATGGTTTTAGCAGCTAGCCAAACCTCACCAACTCCTAGTTCTAGAA
AAACAGGCACCTTGGCAGCCTTGTGATGTGCATACAGAGAAGTCACAGGGCAGTACCTGAGGGTCTGTAGGTTGCAC
ACTTTGGTACCAGATAACTTTTTTTTTTCTTTATAAGAAAGCCTGAGTACTCCACACTGCACAATAACTCCTCCC
AGGGTTTTAACTTTGTTTTATTTTCAAAACCAGGTCCAATGAGCTTTCTGAACAGCTGGTGTAGCTACAGAGAAA
CCAGCTTCCTTCAGAGAGCAGTGCTTTTGGCGGGGAGGAGGAAATCCCTTCATACTTGAACGTTTTCTAATTGCT
TATTTATTGTATTCTGGGGTATGGCGTAAGTACAGAGAAGCCATCACCTCAGATGGCAGCTTTTAAAGATTTTT
TTTTTTTCTCTCAACACCATGATTCTTTTAAACAACATGTTTCCAGCATTCAGGTAGGCCAAGGTGTCTACAG
AAAAACCTTGGGTTAGACCTACAGGGGGTCTGGCTGGTGTAAACAGAAAGGGAGGGCAGAGCTGGTGCGGCTGGCC
ATGGAGAAAGCTGACTTGGCTGGTGTGGTACAGAGAAGCCAGCTTGTTTACATGCTTATTCCATGACTGCTTGCC
CTAAGCAGAAAGTGCCTTTCAGGATCTATTTTGGAGGTTTATTACGTATGTCTGGTTCTCAATTCCAACAGTTT
AATGAAGATCTAAATAAAATGCTAGGTTCTACCTTAAAAAAAAAAAAAAAAAAAA

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FIGURE 36

MNGQLNGFHEAFIEEGTFLFTSESVGEGHPDKICDQISDAVLDAHLQQDPDAKVACETVAKTGMILLAGEITSRA
AVDYQKVVRREAVKHIGYDDSSKGFYKTCNVLVALEQQSPDIAQGVHLDRNEEDIGAGDQGLMFGYATDETEECM
PLTIVLAHKLNALAEELRRNGTLPWLRPDSKTQVTVQYMQDRGAVLP IRVHTIVISVQHDEEVCLDEMARDALKEK
VIKAVVPAKYLDDEDTIYHLQPSGRFVIGGPQGDAGLTGRKIIVDITYGGWGAHGGGAFSGKDYTKVDRSAAYAARW
VAKSLVKGGLCRRVLVQVSYAIGVSHPLSISIFHYGTSQKSERELLEIVKKNFDLRPGVIVRDLDLKKPIYQRTA
AYGHFGRDSFPWEVPKKLKY

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FIGURE 37

GTCAGTCCCTCCTGTAGCCGCCGCCGCCGCCGCCGCCGCCCTCTGCCAGCAGCTCCGGCGCCACCTCGGGCCG
GCGTCTCCGGCGGGCGGGAGCCAGGCGCTGACGGGCGCGGGCGGGGGCGGCCGAGCGCTCCTGCGGCTGCGACTCA
GGTCCGGCGTCTGCGCTTCCCATGGGGCTGGCCTGCGGGCGCTGGGCGCTCTGAGATTGTCAGTGTGTTCCA
AGGGCACACGCAGAGGGATTTGGAATTCCTGGAGAGTTGCCTTTGTGAGAAGCTGGAAATATTTCTTTCAATTCC
ATCTCTTAGTTTTCCATAGGAACATCAAGAAATCATGAACAACCTTTGGTAATGAAGAGTTTGACTGCCACTTCCT
CGATGAAGGTTTTACTGCCAAGGACATTCTGGACCAGAAAATTAATGAAGTTTCTTCTTCTGATGATAAGGATGC
CTTCTATGTGGCAGACCTGGGAGACATTCTAAAGAAACATCTGAGGTGGTTAAAAGCTCTCCCTCGTGTCACCCC
CTTTATGCAGTCAAATGTAATGATAGCAAAGCCATCGTGAAGACCCTTGCTGCTACCGGGACAGGATTTGACTG
TGCTAGCAAGACTGAAATACAGTTGGTGCAGAGTCTGGGGGTGCCTCCAGAGAGGATTATCTATGCAAATCCTTG
TAAACAAGTATCTCAAATTAAGTATGCTGCTAATAATGGAGTCCAGATGATGACTTTTGATAGTGAAGTTGAGTT
GATGAAAGTTGCCAGAGCACATCCCAAAGCAAAGTTGGTTTTGCGGATTGCCACTGATGATTCCAAAGCAGTCTG
TCGTCTCAGTGTGAAATTCGGTGCCACGCTCAGAACCAGCAGGCTCCTTTTGGAACGGGCGAAAGAGCTAAATAT
CGATGTTGTTGGTGTGAGCTTCCATGTAGGAAGCGGCTGTACCGATCCTGAGACCTTCGTGCAGGCAATCTCTGA
TGCCCGCTGTGTTTTTGACATGGGGGCTGAGGTTGGTTTTCAGCATGTATCTGCTTGATATTGGCGGTGGCTTTCC
TGGATCTGAGGATGTGAAACTTAAATTTGAAGAGATCACCGGCGTAATCAACCCAGCGTTGGACAAATACTTTCC
GTCAGACTCTGGAGTGAGAATCATAGCTGAGCCCGGCAGATACTATGTTGCATCAGCTTTCACGCTTGCAGTTAA
TATCATTGCCAAGAAAATTGTATTAAAGGAACAGACGGGCTCTGATGACGAAGATGAGTCGAGTGAGCAGACCTT
TATGTATTATGTGAATGATGGCGTCTATGGATCATTTAATTGCATACTCTATGACCACGCACATGTAAAGCCCCCT
TCTGCAAAAAGAGACCTAAACCAGATGAGAAGTATTATTCATCCAGCATATGGGGACCAACATGTGATGGCCTCGA
TCGGATTGTTGAGCGCTGTGACCTGCCTGAAATGCATGTGGGTGATTGGATGCTCTTTGAAAACATGGGCGCTTA
CACTGTTGCTGCTGCCCTCTACGTTCAATGGCTTCCAGAGGCCGACGATCTACTATGTGATGTCAGGGCCTGCGTG
GCAACTCATGCAGCAATTCAGAACCCCGACTTCCACCCGAAGTAGAGGAACAGGATGCCAGCACCTTGCCTGT
GTCTTGTGCCTGGGAGAGTGGGATGAAACGCCACAGAGCAGCCTGTGCTTCGGCTAGTATTAATGTGTAGATAGC
ACTCTGGTAGCTGTTAACTGCAAGTTTAGCTTGAATTAAGGGATTTGGGGGGACCATGTAACCTAATTACTGCTA
GTTTTGAAATGTCTTTGTAAGAGTAGGGTCGCCATGATGCAGCCATATGGAAGACTAGGATATGGGTCACACTTA
TCTGTGTTCCATGGAACCTATTTGAATATTTGTTTTATATGGATTTTTATTCACTCTTCAGACACGCTACTCAA
GAGTGCCCTCAGCTGCTGAACAAGCATTGTAGCTTGTACAATGGCAGAATGGGCCAAAAGCTTAGTGTTGTGA
CCTGTTTTTAAATAAAGTATCTTGAAATAATTAGGC

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FIGURE 38

MNCFGNEEFDCFLDEGFTAKDILDQKINEVSSSDDKDAFYVADLGDILKKHLRWLKA
LPRVTPFYAVKCND
SKAIVKTLAATGTGFD
CASKTEIQLVQSLGVPPERIIYANPCKQVSQIKYAANNGVQMMTFDSEVELMKVARAHPKAK
LVLRIATDDSKAVCRLSVKFGATLRTSRLLLERAKELNIDVVGVSFHVGS
GCTDPETFVQAISDARCVFDMGAEV
GFSMYLLDIGGGFPGSE
DVKLFEEITGVINPALDKYFPSDSGVRIIAEPGRYYVASAFTLAVNIIAKKIVLKEQ
TGSDDEDESSEQTFMY
YVNDGVYGSFNCILYDHAHVKPLLQKRPKPDEKYYSSSIWGPTCDGLDRIVERCDLPEM
HVGDWMLFENMGAYTVAAASTFNGFQRPTIYYVMSGPAWQLMQQFQNPDPFPEVEEQDASTLPVSCAWESGMKRH
RAACASASINV

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FIGURE 39

CACGCTTGCCGCCGCCCGCAGAAATGCTTCGGTTACCCACAGTCTTTGCCAGATGAGACCGGTGTCCAGGGTA
CTGGCTCCTCATCTCACTCGGGCTTATGCCAAAGATGTAAAATTTGGTGCAGATGCCCCGAGCCTTAATGCTTCAA
GGTGTAGACCTTTTAGCCGATGCTGTGGCCGTTACAATGGGGCCAAAGGAAGAACAGTGATTATTGAGCAGGGT
TGGGGAAGTCCCAAAGTAACAAAAGATGGTGTGACTGTTGCAAAGTCAATTGACTTAAAAGATAAATACAAGAAC
ATTGGAGCTAAACTTGTTCAGATGTTGCCAATAACACAAATGAAGAAGCTGGGGATGGCACTACCACTGCTACT
GTACTGGCACGCTCTATAGCCAAGGAAGGCTTCGAGAAGATTAGCAAAGGTGCTAATCCAGTGGAATCAGGAGA
GGTGTGATGTTAGCTGTTGATGCTGTAATTGCTGAACCTAAAAAGCAGTCTAAACCTGTGACCACCCCTGAAGAA
ATTGCACAGGTTGCTACGATTTCTGCAAACGGAGACAAAGAAATTGGCAATATCATCTCTGATGCAATGAAAAA
GTTGGAAGAAAGGGTGTCTACAGTAAAGGATGGAAAAACACTGAATGATGAATTAGAAATTATTGAAGGCATG
AAGTTTGATCGAGGCTATATTTCTCCATACTTTATTAATACATCAAAAGGTCAGAAATGTGAATTCAGGATGCC
TATGTTCTGTTGAGTGAAAAAGAAAATTTCTAGTATCCAGTCCATTGTACCTGCTCTTGAAATTGCCAATGCTCAC
CGTAAGCCTTTGGTCATAATCGCTGAAGATGTTGATGGAGAAGCTCTAAGTACACTCGTCTTGAAATAGGCTAAAG
GTTGGTCTTCAGGTTGTGGCAGTCAAGGCTCCAGGGTTTGGTGACAATAGAAAGAACCAGCTTAAAGATATGGCT
ATTGCTACTGGTGGTGCAGTGTTTGGAGAAGAGGGATTGACCCTGAATCTTGAAGACGTTTACGCTCATGACTTA
GGAAAAGTTGGAGAGGTCATTGTGACCAAAGACGATGCCATGCTCTTAAAAGGAAAAGGTGACAAGGCTCAAATT
GAAAAACGTATTCAAGAAATCATTGAGCAGTTAGATGTCACAACCTAGTGAATATGAAAAGGAAAAACTGAATGAA
CGGCTTGCAAACCTTCAGATGGAGTGGCTGTGCTGAAGGTTGGTGGGACAAGTGATGTTGAAGTGAATGAAAAG
AAAGACAGAGTTACAGATGCCCTTAATGCTACAAGAGCTGCTGTTGAAGAAGGCATTGTTTTGGGAGGGGGTTGT
GCCCTCCTTCGATGCATTCCAGCCTTGGACTCATTGACTCCAGCTAATGAAGATCAAAAAATTGGTATAGAAATT
ATTAAAAGAACTCAAAATTCAGCAATGACCATTGCTAAGAATGCAGGTGTTGAAGGATCTTTGATAGTTGAG
AAAATTATGCAAAGTTCCTCAGAAGTTGGTTATGATGCTATGGCTGGAGATTTTGTGAATATGGTGGAAAAAGGA
ATCATTGACCCAACAAAGGTTGTGAGAACTGCTTTATTGGATGCTGCTGGTGTGGCCTCTCTGTTAACCTACAGCA
GAAGTTGTAGTCACAGAAATTCCTAAAGAAGAGAAGGACCCTGGAATGGGTGCAATGGGTGGAATGGGAGGTGGT
ATGGGAGGTGGCATGTTCTAACTCCTAGACTAGTGCTTTACCTTTATTAATGAACTGTGACAGGAAGCCCAAGGC
AGTGTTCTCACCATAAATTCAGAGAAGTCAGTTGGAGAAAATGAAGAAAAAGGCTGGCTGAAAATCACTATAA
CCATCAGTTACTGGTTTCAGTTGACAAAATATATAATGGTTTTACTGCTGTCATTGTCCATGCCTACAGATAATTT
ATTTTGTATTTTTGAATAAAAAACATTTGTACATTCCTGATACTGGGTACAAGAGCCATGTACCAGTGTACTGCT
TTCAACTTAAATCACTGAGGCATTTTTACTACTATTCTGTTAAAATCAGGATTTTAGTGCTTGCCACCACCAGAT
GAGAAGTTAAGCAGCCTTTCTGTGGAGAGTGAGAATAATTGTGTACAAAGTAGAGAAGTATCCAATTATGTGACA
ACCTTTGTGTAATAAAAAATTTGTTTAA

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FIGURE 40

MLRLPTVFRQMRPVSRVLAPHLTRAYAKDVKFGADARALMLQGVDLLADAVAVTMGPKGRTVIEQGWGSPKVTK
DGVTVAKSIDLKDKYKNIGAKLVQDVANNTNEEAGDGTTTATVLARSIKEGFEEKISKGANPVEIRRGVMLAVDA
VIAELKKQSKPVTTPPEEIAQVATISANGDKEIGNIISDAMKKVGRKGVITVKDGKTLNDELEIEGPKFDRGYIS
PYFINTSKGQKCEFQDAYVLLSEKKISSISIVPALEIANAHRKPLVIAEDVDGEALSTLVNRLKVGLQVVAV
KAPGFGDNRKNQLKDMAIATGGAVFGEEGLTLNLEDVQPHDLGKVGEVIVTKDDAMLLKGKGDKAQIEKRIQEII
EQLDVTTSEYEKEKLNRLAKLSGVAVLKVGGTSDVEVNEKKDRVTDALNATRAAVEEGIVLGGGCALLRCIPA
LDSLTPANEDQKIGIEIIKRTLKIPAMTIAKNAGVEGSLIVEKIMQSSSEVGYDAMAGDFVNMVEKGIIDPTKV
RTALLDAAGVASLLTTAEVVTEIPKEEKDPGMGAMGGMGGMGGMF

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FIGURE 41

CACGCTTGCCGCCGCCCGCAGAAATGCTTCGGTTACCCACAGTCTTTCGCCAGATGAGACCGGTGTCCAGGGTA
CTGGCTCCTCATCTCACTCGGGCTTATGCCAAAGATGTAAAATTTGGTGCAGATGCCCGAGCCTTAATGCTTCAA
GGTGTAGACCTTTTAGCCGATGCTGTGGCCGTTACAATGGGGCCAAAGGGAAGAACAGTGATTATTGAGCAGGGT
TGGGGAAGTCCCAAAGTAACAAAGATGGTGTGACTGTTGCAAAGTCAATTGACTTAAAAGATAAAATACAAGAAC
ATTGGAGCTAAACTTGTTCAGATGTTGCCAATAACACAAATGAAGAAGCTGGGGATGGCACTACCACTGCTACT
GTACTGGCAGCTCTATAGCCAAGGAAGGCTTCGAGAAGATTAGCAAAGGTGCTAATCCAGTGGAATCAGGAGA
GGTGTGATGTTAGCTGTTGATGCTGTAATTGCTGAACCTTAAAAGCAGTCTAAACCTGTGACCACCCCTGAAGAA
ATTGCACAGGTTGCTACGATTTCTGCAAACGGAGACAAAGAAATTGGCAATATCATCTCTGATGCAATGAAAAAA
GTTGGAAGAAAGGGTGTTCATCACAGTAAAGGATGGAAAAACACTGAATGATGAATTAGAAATTATTGAAGGCATG
AAGTTTGATCGAGGCTATATTTCTCCATACTTTTATTAATACATCAAAAGGTCAGAAATGTGAATTCCAGGATGCC
TATGTTCTGTTGAGTGAAAAGAAAATTTCTAGTATCCAGTCCATTGTACCTGCTCTTGAAATTGCCAATGCTCAC
CGTAAGCCTTTGGTCATAATCGCTGAAGATGTTGATGGAGAAGCTCTAAGTACACTCGTCTTGAATAGGCTAAAG
GTTGGTCTTCAGGTTGTGGCAGTCAAGGCTCCAGGGTTTGGTGACAATAGAAAGAACCAGCTTAAAGATATGGCT
ATTGCTACTGGTGGTGCAGTGTGGAGAAGAGGGATTGACCCTGAATCTTGAAGACGTTTACGCTCATGACTTA
GGAAAAGTTGGAGAGGTCATTGTGACCAAAGACGATGCCATGCTCTTAAAAGGAAAAGGTGACAAGGCTCAAATT
GAAAAACGTATTCAAGAAATCATTGAGCAGTTAGATGTCACAACCTAGTGAATATGAAAAGGAAAAACTGAATGAA
CGGCTTGCAAACTTTTCAGATGGAGTGGCTGTGCTGAAGGTTGGTGGGACAAGTGATGTTGAAGTGAATGAAAAG
AAAGACAGAGTTACAGATGCCCTTAATGCTACAAGAGCTGCTGTTGAAGAAGGCATTGTTTTGGGAGGGGGTTGT
GCCCTCCTTCGATGCATTCCAGCCTTGGACTCATTGACTCCAGCTAATGAAGATCAAAAAATTGGTATAGAAATT
ATTAAAAGAACACTCAAAATTCAGCAATGACCATTGCTAAGAATGCAGGTGTTGAAGGATCTTTGATAGTTGAG
AAAATTATGCAAAGTTCCTCAGAAGTTGGTTATGATGCTATGGCTGGAGATTTTGTGAATATGGTGGAAAAAGGA
ATCATTGACCCAACAAAGGTTGTGAGAACTGCTTTATTGGATGCTGCTGGTGTGGCCTCTCTGTAACTACAGCA
GAAGTTGTAGTCACAGAAATTCCTAAAGAAGAGAAGGACCCTGGAATGGGTGCAATGGGTGGAATGGGAGGTGGT
ATGGGAGGTGGCATGTTCTAACTCCTAGACTAGTGCTTTACCTTTATTAATGAAGTGTGACAGGAAGCCCAAGGC
AGTGTTCCTACCAATAACTTCAGAGAAGTCAGTTGGAGAAAATGAAGAAAAAGGCTGGCTGAAAATCACTATAA
CCATCAGTTACTGGTTTCAGTTGACAAAATATATAATGGTTTACTGCTGTCATTGTCCATGCCTACAGATAATTT
ATTTTGTATTTTGAATAAAAAACATTTGTACATTCCTGATACTGGGTACAAGAGCCATGTACCAGTGTACTGCT
TTCAACTTAAATCACTGAGGCATTTTTACTACTATTCTGTAAAATCAGGATTTTAGTGCTTGCCACCACCAGAT
GAGAAGTTAAGCAGCCTTTCTGTGGAGAGTGAGAATAATTGTGTACAAAGTAGAGAAGTATCCAATTATGTGACA
ACCTTTGTGTAATAAAAAATTTGTTTAA

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FIGURE 42

MLRLPTVFRQMRPVSRLAPHLTRAYAKDVKFGADARALMLQGVDLLADAVAVTMGPKGRTVIEQGWGSPKVTK
DGVTVAKSIDLKDKYKNIGAKLVQDVANNTNEEAGDGTTTATVLARSIKEGFEEKISKGANPVEIRRGVMLAVDA
VIAELKKQSKPVTTPEEIAQVATISANGDKEIGNIISDAMKKVGRKGVITVKDGKTLNDELEIEGMMKFDRGYIS
PYFINTSKGQKCEFQDAYVLLSEKKISSIQSIVPALEIANAHRKPLVIAEDVDGEALSTLVNLRLKVGLOVVAV
KAPGFGDNRKNQLKDMAIATGGAVFGEEGLTLNLEDVQPHDLGKVGEVIVTKDDAMLLKGKGDKAQIEKRIQEII
EQLDVTTSEYEKEKLNERLAKLSDGVAVLKVGGTSDVEVNEKKDRVTDALNATRAAVEEGIVLGGGCALLRCIPA
LDSLTPANEDQKIGIEIIKRTLKIPAMTIAKNAGVEGSLIVEKIMQSSEVGYDAMAGDFVNMVEKGIIDPTKVV
RTALLDAAGVASLLTTAEVVVTEIPKEEKDPGMGAMGGMGGMGGGMF

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FIGURE 43A

AGCGCCCGCCGCTCCGGGGCCGGCTGGTGCGCGAGACGCCGCCGAGAGTTGTGAAGGGCGCGGGTGGGGGGCGC
TGCCGGCCTCGTGGGTACGTTTCGTGCCGCTGTGTCCCAGAGCTGGGGCCGCAGGAGCGGAGGCAAGAGGGGCAC
TATGGCAGACAAAGTTAGGAGGCAGAGGCCGAGGAGGCGAGTCTGTTGGGCCTTGGTGGCTGTGCTCTTGGCAGA
CCTGTTGGCACTGAGTGATACACTGGCAGTGATGCTGTGGACCTGGGCAGTGAGTCCATGAAGGTGGCCATTGT
CAAACCTGGAGTGCCCATGGAAATTGTCTTGAATAAGGAATCTCGGAGGAAAACACCGGTGATCGTGACCTGAA
AGAAAATGAAAGATTCTTTGGAGACAGTGCAGCAAGCATGGCGATTAAGAATCCAAAGGCTACGCTACGTTACTT
CCAGCACCTCCTGGGGAAGCAGGCAGATAACCCCCATGTAGTCTTTTACCAGGCCCGCTTCCCGGAGCAGGAGCT
GACTTTCGACCCACAGAGGCAGACTGTGCACCTTCAGATCAGCTCGCAGCTGCAGTTCTCACCTGAGGAAGTGTT
GGGCATGGTTCTCAATTATTCTCGTTCTCTAGCTGAAGATTTTGAGAGCAGCCCATCAAGGATGCAGTGATCAC
CGTGCCAGTCTTCTTCAACCAGGCCGAGCGCCGAGCTGTGCTGCAGGCTGCTCGTATGGCTGGCCTCAAAGTGCT
GCAGTCTCATCAATGACAACACCGCCACTGCCCTCAGCTATGGTGTCTTCCGCCGAAAGATATTAACACCACTGC
CCAGAATATCATGTTCTATGACATGGGCTCAGGCAGCACCGTATGCACCATTGTGACCTACCAGATGGTGAAGAC
TAAGGAAGCTGGGATGCAGCCACAGCTGCAGATCCGGGGAGTAGGATTTGACCGTACCCTGGGGGGCCTGGAGAT
GGAGTCCGGCTTCGAGAACGCCTGGCTGGGCTTTTCAATGAGCAGCGCAAGGGTCAGAGAGCAAAGGATGTGCG
GGAGAACCCGCTGCCATGGCCAAGCTGCTGCGTGAGGCTAATCGGCTCAAACCGTCTCAGTGCCAACGCTGA
CCACATGGCACAGATTGAAGGCCTGATGGATGATGTGGACTTCAAGGCAAAAGTGACTCGTGTGGAATTTGAGGA
GTTGTGTGCAGACTTGTGTTGAGCGGTGCTGGGCTGTACAGCAGGCCCTCCAGAGTGCCGAAATGAGTCTGGA
TGAGATTGAGCAGGTGATCCTGGTGGTGGGGCCACTCGGGTCCCCAGAGTTCAGGAGGTGCTGCTGAAGGCCGT
GGGCAAGGAGGAGCTGGGGAAGAATCAATGCAGATGAAGCAGCCGCCATGGGGGCAGTGTAACAGGCAGCTGC
GCTCAGCAAAGCCTTTAAAGTGAAGCCATTTGTGCTCCGAGATGCAGTGGTCTACCCCATCCTGGTGGAGTTTAC
GAGGGAGGTGGAGGAGGAGCCTGGGATTACAGCCTGAAGCACAATAAACGGGTACTCTTCTCTCGGATGGGGCC
CTACCCTCAACGCAAAGTCATCACCTTTAACCGCTACAGCCATGATTTCAACTTCCACATCAACTACGGCGACCT
GGGCTTCTGGGGCCTGAAGATCTTCGGGTATTTGGCTCCAGAATCTGACCACAGTGAAGCTAAAAGGGGTGGG
TGACAGCTTCAAGAAGTATCCTGACTACGAGTCCAAGGGCATCAAGGCTCACTTCAACCTGGATGAGAGTGGCGT
GCTCAGTCTAGACAGGGTGGAGTCTGTATTTGAGACACTGGTAGAGGACAGCGCAGAAGAGGAATCTACTCTCAC
CAAACCTGGCAAACACCATTTCAGCCTGTTTGGAGGCGGTACCACACCAGATGCCAAGGAGAATGGTACTGATAC
TGTCAGGAGGAAGAGGAGAGCCCTGCAGAGGGGAGCAAGGACGAGCCTGGGGAGCAGGTGGAGCTCAAGGAGGA
AGCTGAGGCCCCAGTGAGGATGGCTCTCAGCCCCCACCCTGAACTAAGGGAGATGCAACCCCTGAGGGAGA
AAAGGCCACAGAAAAAGAAAATGGGGACAAGTCTGAGGCCAGAAACCAAGTGAGAAGGCAGAGGCAGGGCCTGA
GGGCGTGCCTCCAGCCCCAGAGGGAGAGAAGAAGCAGAACCCGCCAGGAAGCGGCGAATGGTAGAGGAGATCGG
GGTGGAGCTGGTTGTCTGGACCTGCCTGACTTGCCAGAGGATAAGCTGGCTCAGTCGGTGCAGAACTTCAGGA
CTTGACACTCCGAGACCTGGAGAAGCAGGAACGGGAAAAAGCTGCCAACAGCTTGGAAGCGTTTCAATTTGAGAC
CCAGGACAAGCTGTACCAGCCCGAGTACCAGGAAGTGTCCACAGAGGAGCAGCGTGAGGAGATCTCTGGGAAGCT
CAGCGCCGCATCCACCTGGCTGGAGGATGAGGGTGTGGAGCCACCACAGTGATGTTGAAGGAGAAGCTGGCTGA
GCTGAGGAAGCTGTGCCAAGGGCTGTTTTTTCGGGTAGAGGAGCGCAAGAAGTGGCCCCGAACGGCTGTCTGCCCT
CGATAATCTCCTCAACCATTCAGCATGTTCTCAAGGGGGCCCGGCTCATCCCAGAGATGGACCAGATCTTCAC
TGAGGTGGAGATGACAACGTTAGAGAAAGTCATCAATGAGACCTGGGCCTGGAAGAATGCAACTCTGGCCGAGCA
GGCTAAGCTGCCCGCCACAGAGAAGCCTGTGTTGCTCTCAAAGACATTGAAGCTAAGATGATGGCCCTGGACCG
AGAGGTGCAGTATCTGCTCAATAAGGCCAAGTTTACCAAGCCCCGGCCCCGGCTAAGGACAAGAATGGGACCCG
GGCAGAGCCACCCCTCAATGCCAGTGCCAGTGACCAGGGGGAGAAGGTCAATCCCTCCAGCAGGCCAGACTGAAGA
TGCAGAGCCCATTTTCAAGAACTGAGAAAGTAGAGACTGGATCCGAGCCAGGAGACACTGAGCCTTTGGAGTTAGG
AGGTCTCTGGAGCAGAACCTGAACAGAAAGAACATCGACAGGACAGAAGCGGCCCTTTGAAGAACGACGAACATA
ACCCCCACCTCTGTTTTTCCCCATTCTCCACCCCTTCCCCACCCTTCTATTTATTTAACATCGAGGGTTG
GGGGAGGGGTTGGTCTGCCCTCGGCTGGAGTTCCTTTCTACCCCTGTGATTTGGAGGTGTGGAGAAGGGGAAG
GGAGGGACAGCTCACTGGTTTCTTCTGCAGTACCTCTGTGGTTAAAAATGGAACTGTTCTCTCTCCCGAGCCCCA
CTCCCTGTTCCCTACCCATATAGGCCCTAAATTTGGGAAAAATCACTATTAATTTCTGAATCCTTTGCCTGTGGG
TAGGAAGAGAATGGCTGCCAGTGGCTGATGGGTCCCGGTGATGGGAAGGGTATCAGGTTGCTGGGGAGTTTCCAC
TCTTCTCTGGTGATTGTTTCTTCCCTCCCTTCTCTCCACCATGCGATGAGCATCCTTTTACAGGCCAGTGCTGCG

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FIGURE 43B

AGAGCCTCAGTTACCAGGTTTGGTTTCTGAGTGCCTATCTGTGCTCTTTCCCTCCCTCTGCGGGCTTCTCTTGCTC
TGAGCCTCCCTTCCCCATTCCCATGCAGCTCCTTTCCCCCTGGGTTTCCCTTGGCTTCCTGCAGCAAATTGGGCAG
TTCTCTGCCCCTTGCCTAAAAGCCTGTACCTCTGGATTGGCGGAAGTAAATCTGGAAGGATTCTCACTCGTATTT
CCCACCCCTAGTGGCCAGAGGAGGGAGGGGCACAGTGAAGAAGGGAGCCCCACCACCTCTCCGAAGAGGAAAGCCA
CGTAGAGTGGTTGGCATGGGGTGCCAGCATCGTGCAAGCTCTGTGCATAATCTGCATCTTCCCAGCAGCCTGGTAC
CCCAGGTTCCCTGTAACTCCCTGCCTCCTCCTCTCTTCTGCTGTTCTGCTCCTCCCAGACAGAGCCTTTCCCTCAC
CCCCTGACCCCTGGGCTGACCAAATGTGCTTTCTACTGTGAGTCCCTATCCCAAGATCCTGGGGAAAGGAGAG
ACCATGGTGTGAATGTAGAGATGCCACCTCCCTCTCTCTGAGGCAGGCCTGTGGATGAAGGAGGAGGGTCAGGGC
TGGCCTTCCTCTGTGCATCACTCTGCTAGGTTGGGGGCCCCGACCCACCATACTACGCCTAGGGAGCCCCGTCC
TCCAGTATTCCGTCTGTAGCAGGAGCTAGGGCTGCTGCCTCAGCTCCAAGACAAGAATGAACCTGGCTGTGTGTCAG
TCATTTTGTCTTTTCCTTTTTTTTTTTTTTGGCCACATTGGCAGAGATGGGACCTAAGGGTCCACCCCTCACCCCA
CCCCACCTCTTCTGTATGTTTGAATTCTTTCAGTAGCTGTTGATGCTGGTTGGACAGGTTTGAGTCAAATTGTA
CTTGCTCCATTGTTAATTGAGAACTGTTTCAATAAAATATTCTTTTCTAC

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FIGURE 44

MADKVRQRPRRRVCWALVAVLLADLLALSDTLAVMSVDLGSESMKVAIVKPGVPM EIVLNKESRRKTPVIVTLK
ENERFFGDSAASMAIKNPKATLRYFQHLLGKQADNPHVALYQARFPEHELT FDPQRQTVHFQISSQLQFSPEEVL
GMVLNYSRSLAEDFAEQPIKDAVITVPVFFNQAERRAVLQAARMAGLKVLQLINDNTATALS YGVFRRKDINTTA
QNIMFYDMGSGSTVCTIVTYQMVKTK EAGMQPQLQIRGVGFDR TLGGLEME LRRLRERLAGLFNEQRKGQRAKDVR
ENPRAMAKLLREANRLKTVLSANADHMAQIEGLMDDVDFKAKVTRVEFEELCADL FERVPGPVQQALQSAEMSLD
EIEQVILVGGATRVPRVQEVL LKAVGKEELGKNINADEAAAAMGAVYQAAALSKAFKV KPFVVRDAVVYPILVEFT
REVEEEPGIHSLKHNRVLF SRMGYPYQQRKVITFNRYSHDFNFHINYGDLGFLGPEDLRVFGSQNLTTVKLKGVG
DSFKKYPDYESKGIKAHFNLD ESGVLSLDRVESVFETLVEDSAEEESTLTKLGNTISSLFGGGTTPDAKENGTD T
VQEEEESPAEGSKDEPGEQVELKEEAEAPVEDGSQPPPEPKGDATPEGEKATEKENGDKSEAQK PSEKAEAGPE
GVAPAPEGEKKQKPARKRRMV EEEIGVELVVLDPDLPEDKLAQSVQKLQDLTLRDLEKQEREKAANSLEAFIFET
QDKLYQPEYQEVSTEEQREEI SGKLSAASTWLEDEGVGATTVMLKEKLAELRKLCQGLFFRVEERKKWPERLSAL
DNLLNHSSMFLKGARLIPEMDQIFTEVEMTTLEKVINETWAWKNATLAEQAKLPATEKPVLLSKDIEAKMMALDR
EVQYLLNKAKFTKPRPRPKDKNGTRAEPPLNASASDQGEKVIPPAGQTEDAEP ISEPEKVETGSEP GDTEPLELG
GPGAEPEQKEQSTGQKRPLKND EL

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FIGURE 45

ATACACGTGCCATGTGCAGCATGAGGGGCTACCCGAGCCCGTCACCCTGAGATGGAAGCCGGCTTCCCAGCCCAC
CATCCCCATCGTGGGCATCATTGCTGGCCTGGTTCTCCTTGGATCTGTGGTCTCTGGAGCTGTGGTTGCTGCTGT
GATATGGAGGAAGAAGAGCTCAGGTGAAAAGGAGGGAGCTACTCTAAGGCTGAGTGGAGCGACAGTGCCCAGGG
GTCTGAGTCTCACAGCTTGTAAGCCTGAGACAGCTGCCTTGTTGTGCGACTGAGATGCACAGCTGCCTTGTTGTGC
GACTGAGATGCAGGATTTCCCTCACGCCTCCCCTATGTGTCTTAGGGGACTCTGGCTTCTCTTTTTGCAAGGGCCT
CTGAATCTGTCTGTGTCCCTGTTAGCACAAATGTGAGGAGGTAGAGAAAACAGTCCACCTCTGTGTCTACCATGACC
CCCTTCCCTCACACTGACCTGTGTTCCCTTCCCTGTTCTCTTTTCTATTAAAAATAAGAACCTGGGCAGAGTGCGGC
AGCTCATGCCTGTAATCCCAGCACTTAGGGAGGCCGAGGAGGGCAGATCACGAGGTCAGGAGATCGAAACCATCC
TGGCTAACACGGTGAAACCCCGTCTCTACTAAAAAATACAAAAAATTAGCTGGGCGCAGAGGCACGGGCCTGTAG
TCCCAGCTACTCAGGAGGCGGAGGCAGGAGAATGGCGTCAACCCGGGAGGCGGAGGTTGCAGTGAGCCAGGATTG
TGCGACTGCACTCCAGCCTGGGTGACAGGGTGAAACGCCATCTCAAAAAATAAAAAATTAAAAAATAAAAAAAGAA
CCTGGATCTCAATTTAATTTTTTCATATTCTTGCAATGAAATGGACTTGAGGAAGCTAAGATCATAGCTAGAAATA
CAGATAATTCCACAGCACATCTCTAGCAAATTTAGCCTATTCTATTCTCTAGCCTATTCTTACCACCTGTAAT
CTTGACCATATACCTTGAGGTTGAATATTGTTTTCATACTGCTGTGGTTTGAATGTTCCCTCCAACACTCATGTT
GAGACTTAATCCCTAATGTGGCAATACTGAAAGGTGGGGCCTTTGAGATGTGATTGGATCGTAAGGCTGTGCCTT
CATTCTATGGGTTAATGGATTAATGGGTTATCACAGGAATGGGACTGGTGGCTTTATAAGAAGAGGAAAAGAGAAC
TGAGCTAGCATGCCCAACCCACAGAGAGCCTCCACTAGAGTGATGCTAAGTGGAATGTGAGGTGCAGCTGCCAC
AGAGGGCCCCCACCAGGGAATGTCTAGTGTCTAGTGGATCCAGGCCACAGGAGAGAGTGCCTTGTTGGAGCGCTG
GGAGCAGGACCTGACCACCACCAGGACCCAGAACTGTGGAGTCAGTGGCAGCATGCAGCGCCCCCTTGGGAAAG
CTTTAGGCACCAGCCTGCAACCCATTGAGCAGCCACGTAGGCTCGACCCAGCAAAGCCACAGGCACGGGGCTAC
CTGAGGCCTTGGGGGCCAATCCCTGCTCCAGTGTGTCCGTGAGGCAGCACACGAAGTCAAAGAGATTATCTCTT
CCCACAGATACCTTTTCTCTCCCATGACCCTTTAACAGCATCTGCTTCATTCCCCTCACCTTCCCAGGCTGATCT
GAGGTAACTTTGAAGTAAAATAAAAGCTGTGTTTGAGCATC

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FIGURE 46

CCTCTCGGAGCTGGAAATGCAGCTATTGAGATCTTCGAATGCTGCGGAGCTGGAGGCGGAGGCAGCTGGGGAGGT
CCGAGCGATGTGACCAGGCCGCCATCGCTCGTCTCTTCCTCTCTCCTGCCGCCTCCTGTGTGCGAAAATAACTTTT
TTAGTCTAAAGAAAGAAAGACAAAAGTAGTCGTCCGCCCCCTACGCCCTCTCTTCCTCTCAGCCTTCCGCCCCGGT
GAGGAAGCCCCGGGGTGGCTGCTCCGCCGTCGGGGCCGCGCCGCCGAGCCCCAGCGCCCCGGGGCCGCCCCGCACG
CCGCCCCCATGCATCCCTTCTACACCCGGGCCGCCACCATGATAGGCGAGATCGCCGCCGCCGTGTCTTCATCT
CCAAGTTTCTCCGCACCAAGGGGCTGACGAGCGAGCGACAGCTGCAGACCTTCAGCCAGAGCCTGCAGGAGCTGC
TGGCAGAACATTATAAACATCACTGGTTCCAGAAAAGCCATGCAAGGGATCGGGTTACCGTTGTATTTCGCATCA
ACCATAAAATGGATCCTCTGATTGGACAGGCAGCACAGCGGATTGGACTGAGCAGTCAGGAGCTGTTTCAGGCTTC
TCCCAAGTGAACCTCACACTCTGGGTTGACCCCTATGAAGTGTCTACAGAATTGGAGAGGATGGCTCCATCTGTG
TGCTGTATGAAGCCTCACACGAGGAGGTAGCACTCAAAACAGCACCAACGTGCAAAATGGTAGACAGCCGAATCA
GCTGTAAGGAGGAACCTTCTCTTGGGCAGAACGAGCCCTTCCAAAACTACAATATGATGACTGTATCAGGTTAAG
ATATAGTCTGTGGATGGATCATCTGATGATGATCCATAAATTTGATTTTTGCTTTGGGTGGGCTCCTCTTGGGGA
TGGATTATGGAATTTAAACCATGTCACAGCTGTGAAGATCTGGCACAAGATAGAATGGTAAAAAAAAAAAAAAAAAT
TTTAAGTGACAGTGCCATAGTTTGGACAGTACCTTTCAATGATTAATTTTAATAGCCTGTGAGTCCAAGTAAATG
ATCACTTTATTTGCTAGGGAGGGAAGTCCTAGGGTGGTTTTAGTTTTCTCCAGACATACCTAAATTTTTTACATCA
ATCCTTTTAAAGAAAATCTGTATTTCAAAGAATCTTTCTCTGCAGTAAATCTCGCAGGGGAATTTGCACTATTAC
ACTTGAAAGTTGTTATTGTTAACCTTTTCGGCAGCTTTTAATAGGAAAGTTAAACGTTTTAAACATGGTAGTACT
GGAAATTTTACAAGACTTTTACCTAGCACTTAAATATGTATAAATGTACATAAAGACAACTAGTAAGCATGACC
TGGGGAAATGGTCAGACCTTGATTGTGTTTTTGGCCTTGAAAGTAGCAAGTGACCAGAATCTGCCATGGCAACA
GGCTTTAAAAAAGACCCTTAAAAAGACACTGTCTCAACTGTGGTGTTAGCACCAGCCAGCTCTCTGTACATTTGC
TAGCTTGTAGTTTTCTAAGACTGAGTAACTTCTTATTTTTAGAAAGTGGAGGTCTGGTTTGTAACTTTCTTTGT
ACTTAATTGGGTAAAAGTCTTTTCCACAAACCACCATCTATTTTGTGAACCTTGTAGTCATCTTTTATTTGGTA
AATTATGAAGTGGTGAAATTTGTACAGTTCATGTATATTGATTGTGGCAAAGTTGTACAGATTTCTATATTTG
GATGAGAAATTTTTCTTCTCTCTATAATAAATCGTTTCTTATCTTGGCATTTTTAACC

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FIGURE 47

MHPFYTRAATMIGEIAAAVSFISKFLRTKGLTSE RQLQTFSQSLQELLAEHYKHHWFPEKPCKGSGYRCIRINHK
MDPLIGQAAQRIGLSSQELFRLLPSELTLWVDPYEVSYRIGEDGSICVLYEASPAGGSTQNSTNVQMVDSRISCK
EELLGRTSPSKNYNMMTVSG

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FIGURE 48

GGCACGAGGACCGACCGCATTGCGGCTTGGTTTTCTCACCCAGTGTCATGTGGCAGGAGCGGTGAGATCACTGCCT
CACGGCGATCCTGGACTGACGGTCACGACTGCCTACCCTCTAACCCTGTTCTGAGCTGCCCCTTGCCACACACC
CCAAACCTGTGTGCAGGATCCGCCTCCATGGAGCTACAGCCTCCTGAAGCCTCGATCGCCGTCGTGTCGATTCCG
CGCCAGTTGCCTGGCTCACATTTCGGAGGCTGGTGTCCAGGGTCTCAGCGCGGGGGACGACTCAGAGTTGGGGTCT
CACTGTGTTGCCAGACTGGTCTCGAACTCTTGGCCTCAGGTGATCCTCTTCCCTCAGCTTCCAGAAATGCCGAG
ATGATAGAGACGGGGTCTGACTGTGTTACCCAGGCTGGTCTTCAACTCTTGGCCTCAAGTGATCCTCCTGCCTTA
GCTTCCAAGAATGCTGAGGTTACAGGCACCATGAGCCAGGACACCGAGGTGGATATGAAGGAGGTGGAGCTGAAT
GAGTTAGAGCCCGAGAAGCAGCCGATGAACGCGGCGTCTGGGGCGGCCATGTCCCTGGCGGGAGCCGAGAAGAAT
GGTCTGGTGAAGATCAAGGTGGCGGAAGACGAGGCGGAGGCGGCAGCCGCGGCTAAGTTCACGGGCCTGTCCAAG
GAGGAGCTGCTGAAGGTGGCAGGCAGCCCCGGCTGGGTACGCACCCGCTGGGCACTGCTGCTGCTCTTCTGGCTC
GGCTGGCTCGGCATGCTTGTGCTGGTGGCTGCTGATAATCGTGCAGCGCCGCGTTGTGCGGAGCTACCGGCGCAG
AA3TGGTGGCACACGGGCGCCCTCTACCGCATCGGCGACCTTCAGGCCCTTCCAGGGCCACGGCGCGGGCAACCTG
GCGGGTCTGAAGGGGCGTCTCGATTACCTGAGCTCTCTGAAGGTGAAGGGCCTTGTGCTGGGTCCAATTCACAAG
AACCAGAAGGATGATGTCGCTCAGACTGACTTGCTGCAGATCGACCCCAATTTTGGCTCCAAGGAAGATTTTGAC
AGTCTCTTGCAATCGGCTAAAAAAGAGCATCCGTGTCTATTCTGGACCTTACTCCCACTACCGGGGTGAGAAC
TCGTGGTTCTCCACTCAGGTTGACACTGTGGCCACCAAGGTGAAGGATGCTCTGGAGTTTGGCTGCAAGCTGGC
GTGGATGGGTTCCAGGTTCCGGGACATAGAGAATCTGAAGGATGCATCCTCATTTCTTGGCTGAGTGGCAAATATC
ACCAAGGGCTTCAGTGAAGACAGGCTCTTGATTGCGGGGACTAACTCCTCCGACCTTCAGCAGATCCTGAGCCTA
CTCGAATCCAACAAAGACTTGCTGTTGACTAGCTCATACCTGTCTGATTCTGGTTCTACTGGGGAGCATAACAAA
TCCCTAGTCACACAGTATTTGAATGCCACTGGCAATCGCTGGTGCAGCTGGAGTTTGTCTCAGGCAAGGCTCCTG
ACTTCCTTCTTGCCGGCTCAACTTCTCCGACTCTACCAGCTGATGCTCTTACCCTGCCAGGGACCCCTGTTTTTC
AGCTACGGGGATGAGATTGGCCTGGATGCAGCTGCCCTTCTGGACAGCCTATGGAGGCTCCAGTCATGCTGTGG
GATGAGTCCAGCTTCCCTGACATCCCAGGGGCTGTAAGTGCCAACATGACTGTGAAGGGCCAGAGTGAAGACCCT
GGCTCCCTCCTTTCTTGTTCGGCGGCTGAGTGACCAGCGGAGTAAGGAGCGCTCCCTACTGCATGGGGACTTC
CACGCGTTCTCCGCTGGGCTGGACTCTTCTCCTATATCCGCCACTGGGACCAGAATGAGCGTTTTCTGGTAGTG
CTTAACCTTGGGGATGTGGGCCTCTCGGCTGGACTGCAGGCCTCCGACCTGCCTGCCAGCGCCAGCCTGCCAGCC
AAGGCTGACCTCCTGCTCAGCACCCAGCCAGGCCGTGAGGAGGGCTCCCCCTTTGAGCTGGAACGCCTGAAACTG
GAGCCTCACGAAGGGCTGCTGCTCCGCTTCCCCTACGCGGCCTGACTTCAGCCTGACATGGACCCACTACCCTTC
TCCTTTCTTCCCAGGCCCTTTGGCTTCTGATTTTTCTCTTTTTTAAAAACAAACAAACAACTGTTGCAAAAAA
AAAAAAAAAAAA

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FIGURE 49

MSQDTEVDMKEVELNELEPEKQPMNAASGAAMSLAGAEKNGLVKIKVAEDEAEAAAAAKFTGLSKEELLKVAGSP
GWRTRWALLLLFWLGWLGMLAGAVVIVRAPRCRELPQKWWHTGALYRIGDLQAFQGHGAGNLAGLKGRLDYL
SSLKVKGLVLGPIHKNQKDDVAQTDLLQIDPNFGSKEDFDSLLQSAKKKSIRVILDLTTPNYRGENSWFSTQVDTV
ATKVKDALEFWLQAGVDGFQVRDIENLKDASSFLAEWQNITKGFSEDRLLIAGTNSSDLQQILSLLESNKDLLLT
SSYLSDSGSTGEHTKSLVTQYLNATGNRWCSWSLSQARLLTSFLPAQLLRLYQLMLFTLPGTPVFSYGDEIGLDA
AALPGQPMEAPVMLWDESSFPDIPGAVSANMTVKGQSEDPGSLLSLFRRLSDQRSKERSLLHGDFHAFSAGPGLF
SYIRHWDQNERFLVVLNFGDVGLSAGLQASDLPASASLPKADLLLSTQPGREEGSPLELERLKLEPHEGLLLRF
PYAA

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FIGURE 50

GTCCGTA CTGCAGAGCCGCTGCCGGAGGGTCGTTTTAAAGGGCCGCGTTGCCGCCCCCTCGGCCCGCCATGCTGC
TATCCGTGCCGCTGCTGCTCGGCCCTCCTCGGCCCTGGCCGTCGCCGAGCCCCGCGTCTACTTCAAGGAGCAGTTTC
TGGACGGAGACGGGTGGACTTCCCGCTGGATCGAATCCAAACACAAGTCAGATTTTGGCAAATTCGTTCTCAGTT
CCGGCAAGTTCTACGGTGACGAGGAGAAAGATAAAGGTTTGCAGACAAGCCAGGATGCACGCTTTTATGCTCTGT
CGGCCAGTTTCGAGCCTTTCAGCAACAAAGGCCAGACGCTGGTGGTGCAGTTCACGGTGAAACATGAGCAGAACA
TCGACTGTGGGGGCGGCTATGTGAAGCTGTTTCCTAATAGTTTGGACCAGACAGACATGCACGGAGACTCAGAAT
ACAACATCATGTTTGGTCCCGACATCTGTGGCCCTGGCACCAGAAGGTTTCATGTCATCTTCAACTACAAGGGCA
AGAACGTGCTGATCAACAAGGACATCCGTTGCAAGGATGATGAGTTTACACACCTGTACACACTGATTGTGCGGC
CAGACAACACCTATGAGGTGAAGATTGACAACAGCCAGGTGGAGTCCGGCTCCTTGGGAAGACGATTGGGACTTCC
TGCCACCCAAGAAGATAAAGGATCCTGATGCTTCAAAACCAGGAAAGACTGGGATGAGCGGGCCAAGATCGATGATC
CCACAGACTCCAAGCCTGAGGACTGGGACAAGCCCCGAGCATATCCCTGACCCTGATGCTAAGAAGCCCCGAGGACT
GGGATGAAGAGATGGACGGAGAGTGGGAACCCCCAGTGATTTCAGAACCCTGAGTACAAGGGTGAGTGGAAGCCCC
GGCAGATCGACAACCCAGATTACAAGGGCACTTGGATCCACCAGAAATTGACAACCCCGAGTATTCTCCCGATC
CCAGTATCTATGCCTATGATAACTTTGGCGTGCTGGGCCTGGACCTCTGGCAGGTCAAGTCTGGCACCATCTTTG
ACAACTTCCTCATCACCACGATGAGGCATACGCTGAGGAGTTTGGCAACGAGACGTGGGGCGTAACAAAGGCAG
CAGAGAAACAAATGAAGGACAAACAGGACGAGGAGCAGAGGCTTAAGGAGGAGGAAGAAGACAAGAAACGCAAAG
AGGAGGAGGAGGCAGAGGACAAGGAGGATGATGAGGACAAAGATGAGGATGAGGAGGATGAGGAGGACAAGGAGG
AAGATGAGGAGGAAGATGTCCCCGGCCAGGCCAAGGACGAGCTGTAGAGAGGCCTGCCTCCAGGGCTGGACTGAG
GCCTGAGCGCTCCTGCCGAGAGCTTGCCGCGCCAAATAATGTCTCTGTGAGACTCGAGAACTTTCATTTTTTTC
CAGGCTGGTTCGGATTTGGGGTGGATTTTGGTTTTGTTCCCTCCTCCACTCTCCCCACCCCCTCCCCGCCCTT
TTTTTTTTTTTTTAACTGGTATTTTATCCTTTGATTCTCCTTCAGCCCTCACCCCTGGTTCTCATCTTTCTT
GATCAACATCTTTTCTTGCTCTGTGCCCCCTTCTCTCATCTCTTAGCTCCCCTCCAACCTGGGGGGCAGTGGTGT
GGAGAAGCCACAGGCCTGAGATTTTCATCTGCTCTCCTTCTGGAGCCCAGAGGAGGGCAGCAGAAGGGGGTGGTG
TCTCCAACCCCCCAGCACTGAGGAAGAACGGGGCTCTTCTCATTTTCAACCCCTCCCTTTCTCCCCTGCCCCCAGGA
CTGGGCCACTTCTGGGTGGGGCAGTGGGTCCAGATTGGCTCACACTGAGAATGTAAGAACTACAAACAAAATTT
CTATTAAATTAAATTTTGTGTCTC

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FIGURE 51

MLLSVPILLGLGLAVAEPVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDDEEKDKGLQTSQDARFY
ALSASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPSLDQTMHGDSEYNIMFGPDICGPGTKKVHVIFNY
KGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLEDDWDFLPPKKIKDPDASKPEDWDERAKI
DDPTDSKPEDWDKPEHIPDPDAKKPEDWDEEMDGEWEPPVIQNPEYKGEWKPRQIDNPDYKGTWIIHPEIDNPEYS
PDPSIYAYDNFGVLGLDLWQVKSgtIFDNFLITNDEAYAEFGNETWGVTKAAEKQMKDKQDEEQRLKEEEEDKK
RKEEEEAEDKEDDEDKDEDEEDEEDKEDEEEEDVPGQAKDEL

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FIGURE 52A

AGAGCGAGCAGGGGAGAGCGAGACCAGTTTTAAGGGGAGGACCGGTGCGAGTGAGGCAGCCCCGAGGCTCTGCTC
GCCCACCACCCAATCCTCGCCTCCCTTCTGCTCCACCTTCTCTCTCTGCCCCTCACCTCTCCCCGAAAACCCCTT
ATTTAGCCAAAGGAAGGAGGTGAGGGGAACGCTCTCCCTCCCTTCCAAAAACAAAAACAGAAAAACCCCTTTT
CCAGGCCGGGAAAGCAGGAGGGAGAGGGGCCCGGGCTGGCCATGAGCTGCTGTGCCACGAGGTGGACCCGG
TCCGCAGGGCCGTGCGGGACCGCAACCTGCTCCGAGACGACCGCTCCTGCAGAACCTGCTCACCATCGAGGAGC
GCTACCTTCCGCAGTGCTCCTACTTCAAGTGCGTGCGAAGGACATCCAACCCTACATGCGCAGAATGGTGGCCA
CCTGGATGCTGGAGGTCTGTGAGGAACAGAAGTGCGAAGAAGAGGTCTTCCCTCTGGCCATGAATTACCTGGACC
GTTTCTTGGCTGGGGTCCCGACTCCGAAGTCCCATCTGCAACTCCTGGGTGCTGTCTGCATGTTCTGGCCTCCA
AACTCAAAGAGACCAGCCCGCTGACCGCGGAGAAGCTGTGCATTTACACCGACAACCTCCATCAAGCCTCAGGAGC
TGCTGGAGTGGGAACTGGTGGTGTGAGGGAAGTTGAAGTGGAACCTGGCAGCTGTCACTCCTCATGACTTCATTG
AGCACATCTTGCGCAAGCTGCCCCAGCAGCGGGAGAAGCTGTCTCTGATCCGCAAGCATGCTCAGACCTTCATTG
CTCTGTGTGCCACCGACTTTAAGTTTGCCATGTACCCACCGTCGATGATCGCAACTGGAAGTGTGGGAGCAGCCA
TCTGTGGGCTCCAGCAGGATGAGGAAGTGAGCTCGCTCACTTGTGATGCCCTGACTGAGCTGCTGGCTAAGATCA
CCAACACAGACGTGGATTGTCTCAAAGCTTGCCAGGAGCAGATTGAGGCGGTGCTCCTCAATAGCCTGCAGCAGT
ACCGTCAGGACCAACGTGACGGATCCAAGTCGGAGGATGAACCTGGACCAAGCCAGCACCCCTACAGACGTGCGGG
ATATCGACCTGTGAGGATGCCAGTTGGGCCGAAAGAGAGACGCGTCCATAATCTGGTCTCTTCTTCTTTCTGG
TTGTTTTGTCTTTGTGTTTTAGGGTGAACTTAAAAAAAATCTGCCCCACCTAGATCATATTTAAAGAT
CTTTTGAAGTGAGAGAAAAAGGTCCTACGAAAACGGAATAATAAAAGCATTGGTGCTTATTGAAGTACAGC
ATAAGGGAATCCCTTGTATATGCGAACAGTTATTGTTTGATTATGTAAAGTAATAGTAAATGCTTACAGGAAA
ACCTGCAGAGTAGTTAGAGAATATGTATGCCTGCAATATGGGAACAAATTAGAGGAGACTTTTTTTTTTTCATGTT
ATGAGCTAGCACATACACCCCTTGTAGTATAATTTCAAGGAACCTGTGTACGCCATTTATGGCATGATTAGATTG
CAAAGCAATGAACTCAAGAAGGAATTGAAATAAGGAGGGACATGATGGGGAAGGAGTACAAAACAATCTCTCAAC
ATGATTGAACCATTTGGGATGGAGAAGCACCTTTGCTCTCAGCCACCTGTTACTAAGTCAGGAGTGTAGTTGGAT
CTCTACATTAATGTCTCTTGTCTGTCTACAGTAGCTGCTACCTAAAAAAGATGTTTTATTTTGCCAGTTGGACA
CAGGTGATTGGCTCCTGGGTTTCATGTTCTGTGACATCCTGCTTCTTCTTCCAAATGCAGTTTATTGCAGACACC
ACCATATTGCTATCTAATGGGGAATGTAGCTATGGGCCATAACCAAACTCACATGAAACGGAGGCAGATGGAG
ACCAAGGGTGGGATCCAGAATGGAGTCTTTTCTGTTATTGTATTTAAAGGGTAATGTGGCCTTGGCATTTCCTC
TTAGAAAAAACTAATTTTGGTGCTGATTGGCATGTCTGGTTTACAGTTTAGCATTTGTTATAAACATTCCATT
CGAAAAGCACTTTGAAAAATTGTTCCCGAGCGATAGATGGGATGGTTTATGCAAGTCATGCTGAATACTCCTCCC
CTCTTCTCTTTTGCCCCCTCCCTTCTGCCCCAGTCTGGGTTACTCTTCGCTTCTGGTATCTGGCGTTCTTTGG
TACACAGTTCTGGTGTTCTTACCAGGACTCAAGAGACACCCCTTCTGCTGACATTCCCATCACAACTTCTCA
GACAAGCCTGTAACTAAATCTGTTACCATTCTGATGGCACAGAAGGATCTTAATCCCATCTCTATACTTCTC
CTTTGGACATGGAAAGAAAAGTTATTGCTGGTGCAAAGATAGATGGCTGAACATCAGGGTGTGGCATTGTTTCC
CTTTTCCGTTTTTTTTTTTTTTTATTGTTGTTGTTAATTTTATTGCAAAGTTGTATTACGCGTACTTGAATTTTTC
TTCTCTCCACTTCTTAGAGGCATTGAGTTAGCAAAGAGGTTGGAGCAACAACCTTTTTTTTTTTTTTTTGCACAA
TTGTAATTGACAGGTAATGAAGCTATTTGTTAAAATATTTGCCTTTTAAAGTAAAAAGAAAAATCAGAACAGGG
CTATTTGAAGAATTATTTTATACACAGATTCTGCCTTGTTTCATAGTATGAGGGTTGAAGACGGAAAACAATCTA
AGGGTCTCTCATTTTTTTAATTTTGTGTTTGTTCAGTTTGGTTTTTTTTTTTTTTTGGCGCTGCTAAGAAGCTAAAG
TCATCCATCCTTATTCACGTTGACAGTACCTAGCTGTAATGTTTCACAGAGTGTGCTGCTATTTTATAAACATTT
TTATAATATATTATTTTACTGCTTAAATTCCAAGTCTGAAGTAGATGGTTGAGATATGAGTTCTTCGTACTGGA
AAAGCCCTTCCGTAGTTTGTGTTTCTTCTGGTAGCATATTTCATGGTTGTTTTTTTTTTTTTCTTTTTTGGTTTTTGG
TTTTTTTTTTTTTCTCTGATCACATTCTTCAAAGACGGAGTATTCTTTACCTCAGGTTTACTGGACAAAATCAAT
AACTACAAAAGGCAATGATTACGCTTTTGTGTTTATAATACCTCACAAACCGTACAGTTTCTGCTTGGGAGCCCA
TTCGATGAGGAATACAGAAGCAGTGTGAGCAGGGCTGACTCCCTCTCAGGTGGAAGGCAGGGCGGTCTCACTCC
CAGGGACCTTTTTGGTCATGGAGGCCATCGGGCTCCAGTTAGACCCTGGTATCCTCATCATGATGGAAAAATA
CATTGAACCAAGGGATCCTCCCTCCCTTCAAGGCAGACGTTTCAAGTACAAACATTTATGCGGTAGGCTCAGATGT
CGTAATTTGCACTTAGGTACCAGGTGTCAGGAAACAGACTAAAAAGAATTCCACCAGGCTGTTTGGAGATCCTCA
TCTTGGAGCTTTTTCAAAAGCGGGGCTTCATCTGCAAAGGGCCCTTTTCATCTGAAGTTTTTCCCTCCGTCTTT

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FIGURE 52B

CCCCCCCCCTGGCATGGACACCTTGTGTTTAGGATCATCTCTGCAGGTTTCCTAGGTCTGAATCTGCGAGTAGAT
GAACCTGCAGCAAGCAGCGTTTATGGTGTCTTCCCTCCTCTGTCTCAAACCTGCGCAGGCAAGCACTATGC
AAGCCCAGGCCCTCTGTCTGAGCGGTACTAAACGGTCGGGTTTTCAATCACACTGAATTGGCAGGATAAGAAAAAT
AGGTCAGATAAGTATGGGATGATAGTTGAAGGGAGGTGAAGAGGCTGCTTCTCTACAGAGGTGAAATTCCAGATG
AGTCAGTCTCTTGGGAAGTGTGTTTAGAAGGGTTTCAGGACTTTGTGAGTTAGCATGACCCTAAAATTCTAGGGGA
TTTCTGGTGGGACAATGGGTGGTGAATTTTGAAGTTTTTGGAGAGGGAAGTGGAGCAGCCAGCAAGTAAGCTAGCC
AGAGTTTTCTCAAGAGCCAGCTTTGCTCAGCACACTCTCTGGGCCCCCAAGGAGTCCCACGGAATGGGGAAAGTG
GGAACCTTGGAGTTCTTGGGAATCTTGGAGCCTAAAGAGAAACCGAGGTGCAAAATTCATTTTCATGGTGACTGACC
CTTGAGCTTAAACAGAAAGCAGCAAATGAAAGAACCGGACAAATAAGGAAGGGCACAAGCCTACCCGACTCTATTT
ACAGTCTGTAACTTTCCACTCTTCCCTGTAGTCCCAGGCCCCCTGGGTCTTCTAGCTTTTCTCTTTCCCATCCTT
GGGGCCTTGTGTGATGATGGGTGTGGGGCTGCCGATGGGAAAGTCGGGGGTGTAGGCTTTTCTGCCTGCTCCT
GCTTAAACACAAGAAGGAATCCTGGATTTTGCCTCTCCTTAGCTCTTAGTCTCTTTGGTAGGAGTTTTGTTC
GAGGAGCTCTCCCCCTTGGATTTGAACTTGCTCTTTTTGTGTGTGTGTTCTTTCTCTTTTCTTACCTCCC
ACTAAAGGGGTTCAAAATTATCCTGGTCTTTTTCTACCTTGTTGTGTTTCTATCTCGTCTTTACTTCCATCTGTT
TGTTTTTTTTCTCCATCAGTGGGGGCCGAGTTGTTCCCCAGCCTGCCAAATTTTGATCCTTCCCCTCTTTTGGCC
AAATCCTAGGGGGAAGAAATCCTAGTATGCCAAAAATATATGCTAAGCATAATTAACTCCATGCGGGTCCATAA
CAGCCAAGAAGCCTGCAGGAGAAAGCCAAGGGCAGTTCCCTCCGAGAACACCCCATGCGTGCTGAGAGGCGAGC
TCCTTGAAGAAGGGGCTGTTCTCCAGGAGGCCTTATTTTGAAGTGCCTCAGGACCCACTGGAGAGCACAGCAT
GCCTTACTACTGGGTCATCCTTGGTCTATGTGCTCTGTACTGGAGGCTCTGTTCTGCCTCTTATCAGCCAGGTCA
GGGGCACACATGGCTTAAGTGACAAAGCCAGAGGAGAAGACAACCTGACAGCATCACGCTGCATCCCATTTGCTA
GCAGGATTGGCAACTCTTCAGACGGAGCTGCGCTTCCCTGCAGTCTAGCACCTCTAGGGCCTCTCCAGACTGTGC
CCTGGGAGCTCTGGGACTGAAAGGTTAAGAACATAAGGCAGGATCAGATGACTCTCTCCAAGAGGGCAGGGGAAT
TTTCTCTCCATGGGCCACAGGGGACAGGGCTGGGAGAAGAAATAGACTTGACCTTATGTATGTAAATAATTGA
TTTTCTAGTTCAAGAAGATAATATTGGTAGTGTGGGAATTGGAGGTAGGAAGGGGAGGAAGTCTGAGTAAGCCAG
TTGGCTTCTAAGCCAAAAGGATTCCCTCTTTGTTTATCTCTGAGACAGTCCAACCTTGAGAATAGCTTTAAAAGGG
AAATTAATGCTGAGATGATAAAGTCCCCTTAAGCCAACAAACCTCTGTAGCTATAGAATGAGTGCAGGTTTCTA
TTGGTGTGGACTCAGAGCAATTTACAAGAGCTGTTTCATGCAGCCATCCATTTGTGCAAAATAGGGTAAGAAGATT
CAAGAGGATATTTATTACTTCCTCATACCACATGGCTTTTGATGATTCTGGATTCTAAACAACCCAGAATGGTCA
TTTCAGGCACAACGATACTACATTTCGTGTGTGTCTGCTTTTAAACTTGGCTGGGCTATCAGACCTATTCTCGGC
TCAGGTTTTGAGAAGCCATCAGCAAATGTGTACGTGCATGCTGTAGCTGCAGCCTGCATCCCTTCGCCTGCAGCC
TACTTTGGGGAAAATAAAGTGCCTTACTGACTGTAGCCATTACAGTATCCAATGTCTTTTGACAGGTGCCTGTCTC
TGAAAAACAAGTTTCTATTTTTTATTTTTTAATTGGTTTAGTTCTTAACTGCTGGCCAACCTTTACATCCCAGCA
AATCATCGGGCCATTGGATTTTTTCCATTATGTTTCATCACCTTATATCATGTACCTCAGATCTCTCTCTCTC
CTCTCTCTCAGTTATATAGTTTCTTGTCTTGGACTTTTTTTTTCTTTTCTTTTTTTTTTTTGCTTTAAAA
CAAGTGTGATGCCATATCAAGTCCATGTTATTCTCTCACAGTGTACTCTATAAGAGGTGTGGGTGTCTGTTTGGT
CAGGATGTTAGAAAGTGCTGATAAGTAGCATGATCAGTGTATGCGAAAAGGTTTTTAGGAAGTATGGCAAAAATG
TTGTATTGGCTATGATGGTGACATGATATAGTCAGCTGCCTTTTAAGAGGTCTTATCTGTTTCAGTGTTAAGTGAT
TTAAAAAATAATAACCTGTTTTCTGACTAGTTTAAAGATGGATTTGAAAATGGTTTTGAATGCAATTAGGTTAT
GCTATTTGGACAATAAACTCACCTTGACCT

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FIGURE 53

MELLCHEVDPVRRAVRDRNLLRDDRVLQNLLTIEERYLPQCSYFKCVQKDIQPYMRRMVATWMLEVCEEQKCEE
VFPLAMNYLDRFLAGVPTPKSHLQLLGAVCMFLASKLKETSPLTAEKLCIYTDNSIKPQELLEWELVVLGKLKWN
LAAVTPHDFIEHILRKLPQQREKLSLIRKHAQTFIALCATDFKFAMYPPSMIATGSVGAAICGLQQDEEVSSLTC
DALTELLAKITNTDVEDCLKACQEQIEAVLLNSLQQYRQDQRDGSKSEDELDQASTPTDVRDIDL

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FIGURE 54A

AGAGCGAGCAGGGGAGAGCGAGACCAGTTTTAAGGGGAGGACCGGTGCGAGTGAGGCAGCCCCGAGGCTCTGCTC
GCCCACCACCCAATCCTCGCCTCCCTTCTGCTCCACCTTCTCTCTGCCCTCACCTCTCCCCGAAAACCCCT
ATTTAGCCAAAGGAAGGAGGTCAGGGGAACGCTCTCCCTCCCTTCCAAAAACAAAAACAGAAAAACCCTTTT
CCAGGCCGGGGAAAGCAGGAGGGAGAGGGGCCCGGGCTGGCCATGGAGCTGCTGTGCCACGAGGTGGACCCGG
TCCGCAGGGCCGTGCGGGACCGCAACCTGCTCCGAGACGACCGCTCCTGCAGAACCTGCTCACCATCGAGGAGC
GCTACCTTCCGCAGTGCTCCTACTTCAAGTGCGTGCGAAGGACATCCAACCCTACATGCGCAGAATGGTGGCCA
CCTGGATGCTGGAGGTCTGTGAGGAACAGAAGTGCGAAGAAGAGGTCTTCCCTCTGGCCATGAATTACCTGGACC
GTTTCTTGGCTGGGGTCCCGACTCCGAAGTCCCATCTGCAACTCCTGGGTGCTGTCTGCATGTTCTGGCCTCCA
AACTCAAAGAGACCAGCCCGCTGACCGCGGAGAAGCTGTGCATTTACACCGACAACCTCCATCAAGCCTCAGGAGC
TGCTGGAGTGGAAGTGGTGGTGTGAGGAAGTTGAAGTGGAACCTGGCAGCTGTCACTCCTCATGACTTCATTG
AGCACATCTTGCGCAAGCTGCCCCAGCAGCGGGAGAAGCTGTCTCTGATCCGCAAGCATGCTCAGACCTTCATTG
CTCTGTGTGCCACCGACTTTAAGTTTGCCATGTACCCACCGTCGATGATCGCAACTGGAAGTGTGGGAGCAGCCA
TCTGTGGGCTCCAGCAGGATGAGGAAGTGAGCTCGCTCACTTGTGATGCCCTGACTGAGCTGCTGGCTAAGATCA
CCAACACAGACGTGGATTGTCTCAAAGCTTGCCAGGAGCAGATTGAGGCGGTGCTCCTCAATAGCCTGCAGCAGT
ACCGTCAGGACCAACGTGACGGATCCAAGTCGGAGGATGAACTGGACCAAGCCAGCACCCCTACAGACGTGCGGG
ATATCGACCTGTGAGGATGCCAGTTGGGCCGAAAGAGAGAGACGCGTCCATAATCTGGTCTCTTCTTTCTTG
TTGTTTTTGTCTTTGTGTTTTAGGGTGAACTTAAAAAAAAAATCTGCCCCACCTAGATCATATTTAAAGAT
CTTTTAGAAGTGAGAGAAAAAGGTCTACGAAAACGGAATAATAAAAAGCATTGTTGCTTATTTGAAGTACAGC
ATAAGGGAATCCCTTGTATATGCGAACAGTTATTGTTTGATTATGTAAAAGTAATAGTAAATGCTTACAGGAAA
ACCTGCAGAGTAGTTAGAGAATATGTATGCCTGCAATATGGGAACAAATTAGAGGAGACTTTTTTTTTTCATGTT
ATGAGCTAGCACATACACCCCTTGTAGTATAATTTCAAGGAACCTGTGTACGCCATTTATGGCATGATTAGATTG
CAAAGCAATGAACTCAAGAAGGAATTGAAATAAGGAGGGACATGATGGGGAAGGAGTACAAAACAATCTCTCAAC
ATGATTGAACCATTTGGGATGGAGAAGCACCTTTGCTCTCAGCCACCTGTTACTAAGTCAGGAGTGTAGTTGGAT
CTCTACATTAATGTCTCTTGTGTCTACAGTAGCTGCTACCTAAAAAAGATGTTTTATTTTGCCAGTTGGACA
CAGGTGATTGGCTCCTGGGTTTTCATGTTCTGTGACATCCTGCTTCTTCTTCCAAATGCAGTTTATTGCAGACACC
ACCATATTGCTATCTAATGGGGAATGTAGCTATGGGCCATAACCAAACTCACATGAAACGGAGGCAGATGGAG
ACCAAGGGTGGGATCCAGAATGGAGTCTTTTCTGTTATTGTATTTAAAAGGGTAATGTGGCCTTGGCATTCTTC
TTAGAAAAAACTAATTTTTGGTGTCTGATTGGCATGTCTGGTTCACAGTTTAGCATTGTTATAAACATTCCATT
CGAAAAGCACTTTGAAAAATTGTTCCCGAGCGATAGATGGGATGGTTTATGCAAGTCATGCTGAATACTCCTCCC
CTCTTCTCTTTTGCCCCCTCCCTTCTGCCCCAGTCTGGGTACTCTTCGCTTCTGGTATCTGGCGTTCTTTGG
TACACAGTTCTGGTGTTCCTACCAGGACTCAAGAGACACCCCTTCTGCTGACATTCCCATCACAACATTCTCTCA
GACAAGCCTGTAACTAAAATCTGTTACCATTCTGATGGCACAGAAGGATCTTAATTTCCCATCTCTATACTTCTC
CTTTGGACATGGAAAGAAAAGTTATTGCTGGTGCAAAGATAGATGGCTGAACATCAGGGTGTGGCATTGTTTCC
CTTTCCGTTTTTTTTTTTTTTTATTGTTGTTGTTAATTTTATTGCAAAGTTGTATTACAGCGTACTTGAATTTTTC
TTCTCTCCACTTCTTAGAGGCATTACAGTTAGCAAAGAGGTTGGAGCAACAACCTTTTTTTTTTTTTTGCACAA
TTGTAATTGACAGGTAATGAAGCTATTGTTAAAAATATTGTCCTTTTTAAGTAAAAAAGAAAAATCAGAACAGGG
CTATTTGAAGAATTATTTTATACACAGATTCTGCCTTGTTTCATAGTATGAGGGTTGAAGACGGAAAACAATCTA
AGGGTCTCTCATTTTTTTTAAATTTGTTTTGTTTCAGTTTGGTTTTTTTTTTTTTTTTTTCGCTGCTAAGAAGCTAAAG
TCATCCATCCTTATTCAGTTGACAGTACCTAGCTGTAATGTTTCACAGAGTGTGCTGCTATTTTATAAACATTT
TTATAATATATTATTTTACTGCTTAAATTCCAAGTCTGAAGTAGATGGTTGAGATATGAGTTCTTCGTACTGGA
AAAAGCCCTTCCGTAGTTTGTCTTCTCGGTAGCATATTTCATGGTTGTTTTTTTTTTTTTCTTTTTTGGTTTTTTGG
TTTTTTTTTTTTTCTCTGATCACATTCTTCAAAGACGGAGTATTCTTTACCTCAGGTTTACTGGACAAAATCAAT
AACTACAAAAGGCAATGATTACGCTTTTGTTTTCATAATACCTCACAACCGTACAGTTTCTGCTTGGGAGCCCA
TTCGCATGAGGAATACAGAAGCAGTGTGAGCAGGGCTGACTCCCTCTCAGGTGGAAGGCAGGGCGGTCTCACTCC
CAGGGACCTTTTTGGTCATGGAGGCCATCGGGCTCCAGTTAGACCCTGGTATCCTCATCATGATGGAAAAATA
CATTGAACCAAGGGATCCTCCCTCCCTTCAAAGCAGACGTTTCAGTACAAACATTTATGCGGTAGGCTCAGATGT
CGTAATTTGCACTTAGGTACCAGGTGTCAGGAAACAGACTAAAAAGAAATCCACCAGGCTGTTTGGAGATCCTCA
TCTTGAGCTTTTTCAAAGCGGGGCTTCATCTGCAAAGGGCCCTTTTCATCTTGAAAGTTTTTCCCTCCGTCTTT

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FIGURE 54B

CCCCCTCCCCTGGCATGGACACCTTGTGTTTAGGATCATCTCTGCAGGTTTCCTAGGTCTGAATCTGCGAGTAGAT
GAACCTGCAGCAAGCAGCGTTTATGGTGCTTCCTTCTCCCTCCTCTGTCTCAAACCTGCGCAGGCAAGCACTATGC
AAGCCCAGGCCCTCTGCTGAGCGGTACTAAACGGTCGGGTTTTCAATCACACTGAATTGGCAGGATAAGAAAAAT
AGGTCAGATAAGTATGGGATGATAGTTGAAGGGAGGTGAAGAGGCTGCTTCTCTACAGAGGTGAAATTCCAGATG
AGTCAGTCTCTTGGGAAGTGTGTTTAGAAGGGTTTCAGGACTTTGTGAGTTAGCATGACCCTAAATTCTAGGGGA
TTTCTGGTGGGACAATGGGIGGTGAATTTTGAAGTTTGGAGAGGGAAGTGGAGCAGCCAGCAAGTAAGCTAGCC
AGAGTTTTCTCAAGAGCCAGCTTTGCTCAGCACACTCTCCTGGGCCCAAGGAGTCCACGGAATGGGGAAAGTG
GGAACCCCTGGAGTTCTTGGGAATCTTGGAGCCTAAAGAGAAACCGAGGTGCAAATTCATTTTCATGGTGAAGTACC
CTTGAGCTTAAACAGAAGCAGCAAATGAAAGAACCGGACAAATAAGGAAGGGCACAAGCCTACCCGACTCTATTT
ACAGTCTGTAACCTTCCACTCTTCCTGTAGTCCCGAGGCCCCCTGGGTCCTTCTAGCTTTTCTCTTTCCCATCCTT
GGGCCTTGTGTGATGATGGGTGTGGGGCTGCCGATGGGAAAGTCGGGGGTGTAGGCTTTTCTGCCTGCTCCT
GCTTAAACACAAGAAGGAATCCTGGATTTTGCCTCTCCTTAGCTCTTAGTCTCTTTGGTAGGAGTTTGTTCGA
GAGGAGCTCTCCCCCTTGGATTTGAACCTTGCTCTTTTTGTGTTGTTGTTCTTTCTCTCTTTTCTTACCTCCC
ACTAAAGGGGTTCCAAATTATCCTGGTCTTTTTCTACCTTGTGTGTTTCTATCTCGTCTTTACTTCCATCTGTT
TGTTTTTTTCTCCATCAGTGGGGGCCGAGTTGTTCCCCCAGCCTGCCAAATTTTGATCCTTCCCTCTTTTGGCC
AAATCCTAGGGGGAAGAAATCCTAGTATGCCAAAAATATATGCTAAGCATAATTAACTCCATGCGGGTCCATAA
CAGCCAAGAAGCCTGCAGGAGAAAGCCAAGGGCAGTTCCCTCCGCAGAACACCCCATGCGTGCTGAGAGGCGAGC
TCCTTGAAGAAGGGGCTGTTCTTCCAGGAGGCCTATTTTGAAGTGCCTCAGGACCCCACTGGAGAGCACAGCAT
GCCTTACTACTGGGTCATCCTTGGTCTATGTGCTCTGTACTGGAGGCTCTGTTCTGCCTCTTATCAGCCAGGTCA
GGGGCACACATGGCTTAAGTGACAAAGCCAGAGGAGAAGACAACCTGACAGCATCACGCTGCATCCATTGCTA
GCAGGATTGGCAACTCTTCAGACGGAGCTGCGCTTCCCTGCAGTCTAGCACCTCTAGGGCCTCTCCAGACTGTGC
CCTGGGAGCTCTGGGACTGAAAGGTTAAGAACATAAGGCAGGATCAGATGACTCTCTCCAAGAGGGCAGGGGAAT
TTTCTCTCCATGGGCCACAGGGGACAGGGCTGGGAGAAGAAATAGACTTGACCTTATGTATGTAAATAATTGA
TTTTCTAGTTCAAGAAGATAATATTGGTAGTGTGGGAATTGGAGGTAGGAAGGGGAGGAAGTCTGAGTAAGCCAG
TTGGCTTCTAAGCCAAAAGGATTCTCTTTGTTTATCTCTGAGACAGTCCAACCTTGAGAATAGCTTTAAAAGGG
AAATTAATGCTGAGATGATAAAGTCCCTTAAAGCCAACAACCCCTCTGTAGCTATAGAATGAGTGCAGGTTTCTA
TTGGTGTGGACTCAGAGCAATTTACAAGAGCTGTTTCATGCAGCCATCCATTTGTGCAAAATAGGGTAAGAAGATT
CAAGAGGATATTTATTACTTCCTCATACCACATGGCTTTTGATGATTCTGGATTCTAAACAACCCAGAATGGTCA
TTTCAGGCACAACGATACTACATTCGTGTGTGTCTGCTTTTAAACTTGGCTGGGCTATCAGACCCTATTCTCGGC
TCAGGTTTTTGAGAAGCCATCAGCAAATGTGTACGTGCATGCTGTAGCTGCAGCCTGCATCCCTTCGCCTGCAGCC
TACTTTGGGGAAATAAAGTGCCCTTACTGACTGTAGCCATTACAGTATCCAATGTCTTTTGACAGGTGCCTGTCTC
TGAAAAACAAAGTTTCTATTTTATTTTAAATTGGTTTAGTTCTTAACTGCTGGCCAACTCTTACATCCCAGCA
AATCATCGGGCCATTGGATTTTTCATTATGTTTCATCACCTTATATCATGTACCTCAGATCTCTCTCTCTC
CTCTCTCTCAGTTATATAGTTTCTTGTCTTGGACTTTTTTTTTCTTTTCTTTTCTTTTTTTTTTGTCTTAAAA
CAAGTGTGATGCCATATCAAGTCCATGTTATTCTCTCACAGTGTACTCTATAAGAGGTGTGGGTGTCTGTTGGT
CAGGATGTTAGAAAGTGCTGATAAGTAGCATGATCAGTGTATGCGAAAAGGTTTTTAGGAAGTATGGCAAAATG
TTGTATTGGCTATGATGGTGACATGATATAGTCAGCTGCCTTTTAAAGAGGTCTTATCTGTTTCAGTGTAAAGTAT
TTAAAAAATAATAACCTGTTTTCTGACTAGTTTAAAGATGGATTTGAAAATGGTTTTGAAATGCAATTAGGTTAT
GCTATTTGGACAATAAACTCACCTTGACCT

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FIGURE 55

MELLCHEVDPVRRAVRDRNLLRDDRVLQNLLTIEERYLPQCSYFKCVQKDIQPYMRRMVATWMLEVCEEQKCEE
VFPLAMNYLDRFLAGVPTPKSHLQLLGAVCMFLASKLKETSPLTAEKLCIYTDNSIKPQELLEWELVVLGKLKWN
LAAVTPHDFIEHILRKLPQOREKLSLIRKHAQTFIALCATDFKFAMYPPSMIATGSVGAICGLQQDEEVSSLTC
DALTELLAKITNTDVDCLKACQEQIEAVLLNSLQQYRQDQRDGSKEDELDQASTPTDVRDIDL

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FIGURE 56A

AGAGCGAGCAGGGGAGAGCGAGACCAGTTTTAAAGGGGAGGACCGGTGCGAGTAAGGCAGCCCCGAGGCTCTGCTC
GCCACCACCCAATCCTCGCCTCCCTTCTGCTCCACCTTCTCTCTGCCCCTCACCTCTCCCCGAAAACCCCCT
ATTTAGCCAAAGGAAGGAGGTGAGGGGAACGCTCTCCCCCTCCCCTTCCAAAAACAAAAACAGAAAAACCCCTTT
CCAGGCCCGGGAAAGCAGGAGGGAGAGGGGCCCGGGGCTGGCCATGGAGCTGCTGTGCCACGAGGTGGACCCGG
TCCGCAGGGCCGTGCGGGACCGCAACCTGCTCCGAGACGACCGCTCCTGCAGAACCTGCTCACCATCGAGGAGC
GCTACCTTCCGCAGTGCTCCTACTTCAAGTGCGTGCGAGAAGGACATCCAACCCTACATGCGCAGAATGGTGGCCA
CCTGGATGCTGGAGGTCTGTGAGGAACAGAAGTGCGAAGAAGAGGTCTTCCCTCTGGCCATGAATTACCTGGACC
GTTTCTTGGCTGGGGTCCCGACTCCGAAGTCCCATCTGCAACTCCTGGGTGCTGTCTGCATGTTTCTGGCCTCCA
AACTCAAAGAGACCAGCCCGCTGACCGCGGAGAAGCTGTGCATTTACACCGACAACCTCCATCAAGCCTCAGGAGC
TGCTGGAGTGGGAACCTGGTGGTGTGAGGGAAGTTGAAGTGAACCTGGCAGCTGTCACTCCTCATGACTTCATTG
AGCACATCTTGCGCAAGCTGCCCCAGCAGCGGGAGAAGCTGTCTCTGATCCGCAAGCATGCTCAGACCTTCATTG
CTCTGTGTGCCACCGACTTTAAGTTTGCCATGTACCCACCGTCGATGATCGCAACTGGAAGTGTGGGAGCAGCCA
TCTGTGGGCTCCAGCAGGATGAGGAAGTGAGCTCGCTCACTTGTGATGCCCTGACTGAGCTGCTGGCTAAGATCA
CCAACACAGACGTGGATTGTCTCAAAGCTTGCCAGGAGCAGATTGAGGCGGTGCTCCTCAATAGCCTGCAGCAGT
ACCGTCAGGACCAACGTGACGGATCCAAGTCGGAGGATGAACTGGACCAAGCCAGCACCCCTACAGACGTGCGGG
ATATCGACCTGTGAGGATGCCAGTTGGGCCGAAAGAGAGAGACGCGTCCATAATCTGGTCTCTTCTTCTTTCTGG
TTGTTTTTGTCTTTGTGTTTTAGGGTGAACTTAAAAAATAATTCTGCCCCACCTAGATCATATTTAAAGAT
CTTTTAGAAGTGAGAGAAAAAGGTCTACGAAAACGGAATAATAAAAAGCATTGGGTGCCTATTTGAAGTACAGC
ATAAGGGAATCCCTTGATATGCGAACAGTTATTGTTTGATTATGTAAAAGTAATAGTAAATGCTTACAGGAAA
ACCTGCAGAGTAGTTAGAGAATATGTATGCCTGCAATATGGGAACAAATTAGAGGAGACTTTTTTTTTTCATGTTA
TGAGCTAGCACATACACCCCTTGATAGTATAATTTCAAGGAACCTGTGTACGCCATTTATGGCATGATTAGATTGC
AAAGCAATGAACTCAAGAAGGAATTGAAATAAGGAGGGACATGATGGGAAGGAGTACAAAACAATCTCTCAACA
TGATTGAACCATTTGGGATGGAGAAGCACCTTTGCTCTCAGCCACCTGTTACTAAGTCAGGAGTGTAGTTGGATC
TCTACATTAATGTCTCTTGCTGTCTACAGTAGCTGCTACCTAAAAAAGATGTTTTATTTTGCCAGTTGGACAC
AGGTGATTGGCTCCTGGGTTTTCAIGTTCTGTGACATCCTGCTTCTTCTTCCAAATGCAGTTTATTGCAGACACCA
CCATATTGCTATCTAATGGGGAAATGTAGCTATGGGCCATAACCAAACTCACATGAAACGGAGGCAGATGGAGA
CCAAGGGTGGGATCCAGAATGGAGTCTTTTCTGTTATTGTATTTAAAGGGTAATGTGGCCTTGGCATTCTTCT
TAGAAAAAACTAATTTTTGGTGCTGATTGGCATGTCTGGTTCACAGTTTAGCATTGTTATAAACCATTCCATTC
GAAAAAGCACTTTGAAAAATTGTTCCCGAGCGATAGATGGGATGGTTATGCAAGTCATGCTGAATACTCCTCCCC
TCTTCTCTTTTGCCCCCTCCCTTCCCTGCCCCAGTCTGGGTACTCTTCGCTTCTGGTATCTGGCGTTCTTTGGT
ACACAGTTCTGGTGTTCTTACCAGGACTCAAGAGACACCCCTTCCCTGCTGACATTTCCCATCACACATTCTCTCAG
ACAAGCCTGTAACTAAAATCTGTTACCATCTGATGGCACAGAAGGATCTTAATTTCCCATCTCTATACTTCTCCT
TTGGACATGGAAAGAAAAGTTATTGCTGGTGCAAAGATAGATGGCTGAACATCAGGGTGTGGCATTGTTGTTCCCT
TTTCCGTTTTTTTTTTTTTTTATTGTTGTTGTTAATTTTATTGCAAAGTTGTATTACAGCGTACTTGAATTTTTCTT
CCTCTCCACTTCTTAGAGGCATTACAGTTAGCAAAGAGGTTGGAGCAACAACCTTTTTTTTTTTTTTTTGCACAAT
TGTAATTGACAGGTAATGAAGCTATTTGTTAAATATTTGCCTTTTTAAGTAAAAAGAAAAATCAGAACAGGGC
TATTTGAAGAATTATTTTATACACAGATTCTGCCTTGTTTCATAGTATGAGGGTTGAAGACGGAAAACAATCTAA
GGGTCTCTCATTTTTTTAATTTGTTTGTTCAGTTTGGTTTTTTTTTTTTTTTGGCGCTGCTAAGAAGCTAAAGT
CATCCATCCTTATTCACGTTGACAGTACCTAGCTGTAATGTTTCACAGAGTGTGCTGCTATTTTATAAACATTTT
TATAATATATATTTTACTGCTTAAATTCGAAGTCTGAAAGTAGATGGTTGAGATATGAGTTCTTCGTAAGTGGAA
AAGCCCTTCCGTAGTTTGTGTTCTTCTGGTAGCATATTGATGTTGTTTTTTTTTTTTTTTTTGGTTTTTTGGT
TTTTTTTTTTTCTCTGATCACATTCTTCAAAGACGGAGTATTCTTACCTCAGGTTTACTGGACAAAATCAATAA
CTACAAAAGGCAATGATTACGCTTTTGTGTTTCATAATACCTCACAACCGTACAGTTTCTGCTTGGGAGCCATT
CGCATGAGGAATACAGAAGCAGTGTGAGCAGGGCTGACTCCCTCTCAGGTGGAAGGCAGGGCGGTCTCACTCCCA
GGGACCTTTTTTGGTCATGGAGGCCATCGGGCTCCAGTTAGACCCTGGTATCCTCATCATGATGGAAAAATACA
TTGAACCAAGGGATCCTCCCTCCCCTTCAAGGCAGACGTTCAGTACAAACATTTATGCGGTAGGCTCAGATGTG
TAATTTGCACTTAGGTACCAGGTGTCAGGAAACAGACTAAAAAGAATTCCACCAGGCTGTTTGGAGATCCTCATC
TTGGAGCTTTTTCAAAGCGGGGCTTCATCTGCAAAGGGCCCTTTCATCTTGAAGTTTTTCCCCTCCGTCTTTCC

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FIGURE 56B

CCTCCCCCTGGCATGGACACCTTGTGTTTAGGATCATCTCTGCAGGTTTCTAGGTCTGAATCTGCGAGTAGATGA
ACCTGCAGCAAGCAGCGTTTATGGTGCCTTCCTTCTCCCTCCTCTGTCTCAAACCTGCGCAGGCAAGCACTATGCAA
GCCCAGGCCCTCTGCTGAGCGGTACTAAACGGTCGGGTTTTCAATCACACTGAATTGGCAGGATAAGAAAAATAG
GTCAGATAAGTATGGGATGATAGTTGAAGGGAGGTGAAGAGGCTGCTTCTCTACAGAGGTGAAATTCCAGATGAG
TCAGTCTCTTGGGAAGTGTGTTTAGAAGGGTTCAGGACTTTGTGAGTTAGCATGACCCATAAATTCAGGGGATT
TCTGGTGGGACAATGGGTGGTGAATTTTGAAGTTTGGAGAGGGAAGTGGAGCAGCCAGCAAGTAAGCTAGCCAG
AGTTTTCTCAAGAGCCAGCTTTGCTCAGCACACTCTCTGGGCCCCAAGGAGTCCCACGGAATGGGGAAAGTGGG
AACCCTGGAGTTCTTGGGAATCTTGGAGCCTAAAGAGAAACCGAGGTGCAAATTCATTCATGGTGACTGACCCCT
TGAGCTTAAACAGAAGCAGCAAATGAAAGAACCGGACAAATAAGGAAGGGCACAAGCCTACCCGACTCTATTTAC
AGTCTGTAACTTTCCACTCTTCCCTGTAGTCCCAGGCCCTGGGTCTTCTAGCTTTTCTCTTTCCCATCCTTGG
GGCCTTGTGTGATGATGGGTGTGGGGCTGCCGATGGGAAAGTCGGGGGTTGTTAGGCTTTTCTGCCTGCTCCTGC
TTAAACACAAGAAGGAATCCTGGATTTTGCCCTCTCCTTAGCTCTTAGTCTCTTTGGTAGGAGTTTGTTCAGA
GGAGCTCTCCCCCTTGGATTTGAACTTGCTCTTTTTGTTGTTGTTGTTCTTTCTCTTCTTTTCTTACCTCCCAC
TAAAGGGGTTCCAAATATCCTGGTCTTTTTCTACCTTGTTGTGTTTCTATCTCGTCTTTACTTCCATCTGTTTG
TTTTTTTCTCCATCAGTGGGGGCCGAGTTGTTCCCCCAGCCTGCCAAATTTTGATCCTTCCCCTCTTTTGGCCAA
ATCCTAGGGGGAAGAAATCCTAGTATGCCAAAATATATGCTAAGCATAATTAACTCCATGCGGGTCCATAACA
GCCAAGAAGCCTGCAGGAGAAAGCCAGGGGCAGTTCCCTCCGCAGAACACCCCATGCGTGCTGAGAGGCGAGCTC
CTTGAAGAAGGGGCTGTTCTTCCAGGAGGCCTTATTTTGAAGTGCCTCAGGACCCCACTGGAGAGCACAGCATGC
CTTACTACTGGGTCATCCTTGGTCTATGTGCTCTGTACTGGAGGCTCTGTTCTGCCTCTTATCAGCCAGGTCAGG
GGCACACATGGCTTAAGTGACAAAGCCAGAGGAGAAGACAACCTGACAGCATCACGCTGCATCCCATTTGCTAGC
AGGATTGGCAACTCTTCAGACGGAGCTGCGCTTCCCTGCAGTCTAGCACCTCTAGGGCCTCTCCAGACTGTGCCC
TGGGAGCTCTGGGACTGAAAGGTTAAGAACATAAGGCAGGATCAGATGACTCTCTCAAGAGGGCAGGGGAATTT
TCTCTCCATGGGCCACAGGGGACAGGGCTGGGAGAAGAAATAGACTTGCACCTTATGTCATGTAAATAATTGATT
TTCTAGTTCAAGAAGATAATATTGGTAGTGTGGGAATTGGAGGTAGGAAGGGGAGGAAGTCTGAGTAAGCCAGTT
GGCTTCTAAGCCAAAAGGATTCTCTTTGTTTATCTCTGAGACAGTCCAACCTTGAGAATAGCTTTAAAAGGGAA
ATTAATGCTGAGATGATAAAGTCCCCTTAAGCCAACAAACCTCTGTAGCTATAGAATGAGTGCAGGTTTCTATT
GGTGTGGACTCAGAGCAATTTACAAGAGCTGTTTATGCAGCCATCCATTTGTGCAAAATAGGGTAAGAAGATTCA
AGAGGATATTTATTACTTCCTCATAACCACATGGCTTTTGTATGATTCTGGATTCTAAACAACCCAGAATGGTCATT
TCAGGCACAACGATACTACATTTCGTGTGTGTCTGCTTTTAAACTTGGCTGGGCTATCAGACCCTATTCTCGGCTC
AGGTTTTGAGAAGCCATCAGCAAATGTGTACGTGCATGCTGTAGCTGCAGCCTGCATCCCTTCGCCTGCAGCCTA
CTTTGGGGAAATAAAGTGCCTTACTGACTGTAGCCATTACAGTATCCAATGTCTTTTGACAGGTGCCTGTCTTG
AAAAACAAAGTTTCTATTTTTTATTTTTAATTGGTTTTAGTTCTTAACTGCTGGCCAACTCTTACATCCCAGCAAA
TCATCGGGCCATTGGATTTTTTCCATTATGTTTCATCACCCCTATATCATGTACCTCAGATCTCTCTCTCTCCT
CTCTCTCAGTTATATAGTTTCTTGTCTTGGACTTTTTTTTTCTTTTCTTTTTCTTTTTTTTTTTTGCTTTAAACA
AGTGTGATGCCATATCAAGTCCATGTTATTCTCTCACAGTGTACTCTATAAGAGGTGTGGGTGTCTGTTTGGTCA
GGATGTTAGAAAGTGCTGATAAGTAGCATGATCAGTGTATGCGAAAAGGTTTTTAGGAAGTATGGCAAAATGTT
GTATTGGCTATGATGGTGACATGATATAGTCAGCTGCCTTTTAAAGAGGTCTTATCTGTTTCAAGTGAAGTGAATTT
AAAAAAATAATAACCTGTTTTCTGACTAGTTTAAAGATGGATTTGAAAATGTTTTGAATGCAATTAGGTTATGC
TATTTGGACAATAAACTCACCTTGACCT

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FIGURE 57

MELLCHEVDPVRRAVRDRNLLRDDRVLQNLLTIEERYLPQCSYFKCVQKDIQPYMRRMVATWMLEVCEEQKCEEE
VFPLAMNYLDRFLAGVPTPKSHLQLLGAVCMFLASKLKETSPLTAEKLCIYTDNSIKPQELLEWELVVLGKLKWN
LAAVTPHDFIEHILRKLPQOREKLSLIRKHAQTFIALCATDFKFMYPSPMIATGSVGAICGLQQDEEVSSLTC
DALTELLAKITNTDVEDCLKACQEQIEAVLLNSLQQYRQDQRDGSKEDELDQASTPTDVRDIDL

FIGURE 58A

[illegible]

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FIGURE 58B

ATGTTTAGCAAATGGCTCTGACAGGGTGGCCATGAGCAGATGAGACCAGCTCTTGCTTGGTTGGAAGCCACACTG
CAGTTTGCAGTTTAGCCTTTGGTGTCTCAGTGGCCTCTTGCTTATTCCATGCTTTTTCTATCCCATCCTCTCTCT
GTGCCCTCCTGCAATGGCAGCCTTGGCACAATGCCTGGGTGTCTCATCCTTGCTTTACTCTGGAAAGTGTGGGG
ATGGAGAGGATGGTGCATTTCAGTGCTTCCTTACCTGTCAATAACAATGGTGGCCACCTGGGTCCCAGCACTTG
GCTGGTGGAGAGATTTTTTTCATTATGGAGCTAATAAAGGGTCCCTACGTTTTACATTGATTAATGAATTATCAC
CCAGACATGTGCAGATGAAATGTCAATATAAGAAAAATCAAGGTATTTGGGAAACATGGGCATAATCAGGTAGTT
TTGCTAAAATTCTCTTCTTGGTCTACATAAAGAAGACATGGGTCTGTCAAGAAATGGGGACATTAGACTGAAA
ACTGGGACAACCCCTTCTCTTATTTTATAGAGACTAGGAGTTAAGGGGCTGCCTAAGATTGCAGTGATAAAGAA
CTGAACCCTAAATCAGCTCCCACTAATGAAACCCTGCTTTCCTTGTATCTTTTAAACTCAGTTCTGCATCCAAC
TGAGAAGAAAAAAGCTTCTTCCATATCAAGTACCATATGAGTTTCAATTTAAACTGCACCTTGAGAAATGCATT
GCCAGAAAGCACCAGTAGCCTCCTATCTGCAAGCAGAGTAGTGCTCTGCTCTGGGGAGGGGTGATTGGAAACCAT
AATGCAGAGTGGGCCCCCTACTCCATTTCCAGCAAAAGGCTCCAGCTGGAGGGATGGGTTGTGGGGCAACCTGG
TTCCTGCTAACTGCCAGATTGAATGTGTGGGCTAGAATGCCTGCGCATTTAGTTAAACTGGGCTCAGCATGCTTG
TCCTCAAAATGTCCATCCTGGTACAGCACACAAGATGGCTATTGGTCTGCTTTTACCCTACCCTGTACTATACA
TGAAAATTCCAGTTATTAACACACTCAAACCTGGTGGAGCTTGTTACCCCTAGGAAGGGGATTGTATATATGGCAG
GCTTCCCTGGTGCCGATGTAAAGGGCTACATTTGGGAACATTTGACTTCTTGGGACTCTTAAGTGCATACTGAT
GGCATGAAGTAAAAGGGGCTCAATGATGATAGGAAATCAGTTCTTTTAAAATTTCTTCAAGAAAATCCAGGCT
ATCACATAGTCTTTCTGTGTGACTTATTAGGAGATAGGAAGAGCATTGGGAACTTGACAGCTAGCTATGCATC
TACATTTTGGTTTGGGGTAGTTATGAAATGTTCTTAATATGACGTGTTCAATAACTTCACATAAACTTCTGT
CTCCAAAACCTCAAAGAGATAGAGTTAATGAGTTGTTGTTTTTTTTTAAATGGGGGTAGTTTCTATCTGTCTATG
GGCTCTAGCATCTACTCCGCTACCCAATTCTGTCTATCTCCAAGCTGAGTTTCTCTCTGAGGCAGAGGCTGGAG
CAGTTCTTTTTCAGTTCTCATCTCTCCATCCCAATCCAGTATATCAATCAACTCTAACTCGGAGACGTCTAGCT
GGCAATGTTTCTAAAACCTTCACTGGATTCTTTTAGACATTGAAGCAAAACATTTTTTCTAAGAATTGCTTCTCA
GATGATGATATCAAATGTATATGCTTTTGCAAGTTTGAAAAGTTCAAATTAACCACTTTTGACTAGGTAAGTCTT
TCTAAAACCATTTAAAGCTAACTGGGTCTTAGCATCTCTCTGTGTATGGAAGAGACAGGTGACCGCTCCAGGTT
GGGTGCTCACAGAACCTTTTCTGACTCTCATGGAAGATGGTGGAAAGGAAAATAGACTGTCTCATCAACCCTCC
TGTGTCTCTGAAGCAATCTCAGTTTTTATTAACCACCTCTTCTGTGTTTCTGGTAGCTATTTAACCTGTATTTA
ATCTGTACTTCTATGCCAGCCTCAATTTTATTTGATTTTTTAAATTAATCTCTTCTAACCAATGAAGTGTGTTGT
CAGTATGCCCCAAAGCTTGCTCTTTTGTGCTCCCTTTTGAATAACTTTCTATCCAGAAAAAGAGATTATTTGGGA
CTTGAGATTTGCAGTGATACCACTTATAGCAATGATGTACTTTAAGGGAACTACCCAACCTATGTTGTGATAGAA
GAAAGAGAAACCTTCACTTTGGCATTTTTTTTTAACTACTGTTTATTTTTCTGTTTGGCGCCAGGAAGCAGTGGG
AGGTGGTGGCAGATATGCTTTGCATATGGATTGTTATGTTTTTATTTGGGCAAGTTTAACTATGGAAGAACTCAA
AAGAAGGGGGGAAATGGTCAGTTTAAAGCCAAAAGAACTTTCTAAACAATGTATAGGTACACAGCAAAATTAAC
AAATCCAACAATTTCTGAAGCTTAGTGTAATTGAGTGGTGGTTGTTATTCAATAAAATTATTTCCAAAAGTGT
CTCCTAAGAGTGCAGTTCCCATGAGTCACCTTCTGAACCCATTGACCAAGGTGGACAGAGACAATCCTGTAGAC
CTTGACATTTCAGAAAGATGTGAGCTGCTTACTGATCATATATGCATACGTTTCTTTACAGCAGAGGAAACCAT
TCCACAAAACCTGATGTTCTTTTGGGGTTTTATGTACAGACTTGTCCAATCATGTGTGTGGTTTCTGCGAGTTGCT
GATGACTCCGCATTGAAGCTCTCTGAGTTCTTTGATTTTAAAGTTGGGTTTATGGAATTTTTTCAAATGTTGGAAG
GCGTGTGTTTCTTCTGCCCTCCCTCCCTTTTGGAAATATGAAAGCAAATGTTTAGAAGAATTCCTTTGAAAA
GCTGTGTCGTGTTCCCTGTGAACTGAGCAGGTGTGTGTTGGCGCGCTAAGTGCCACATGCTTGTGTGTAGAGGA
GGAGGTGGCCCTGCCGGCTCCGCGCTGCTGTGCTGTGATCCCTACCTGCTCCCCGCTCCTGTTGCCAGCAGCAC
TCACTGCACTCCTTTGTATATACTCTGCATCACTGTCTACTCACAACCTTCGTGAATAAAGTTGTGTGCTTTAT
TCGTC

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FIGURE 59

MFTEGEE MYLQGSTVWHPDCKQSTKTEEKLRPTRTSSESIYSRPGSSIPGSPGHTIYAKVDNEILDYKDLAAIPK
VKAIYDIERPDLITYEPFYTSGYDDKQERQSLGESPRTLSPTPSAEGYQDVRDRMIHRSTSQGSINSPVYSRHSY
TPTTSRSPQHFRPGNEPSSGRNSPLPYRPDSRPLTPTYAQAPKHFHVPDQGINIYRKPP IYKQHAALAAQSKSS
EDI IKFSKFPAAPADPSETPEIETDHWP GPPSFAVIGPDMKRRSSGREEDDEELLRRRQLQEEQLMKLNSGLGQ
LILKEEMEKESRERSLLASRYDSPINSASHIPSSKTASLPGYGRNGLHRPVSTDFAQYNSYGDVSGGVVDYQTL
PDGHMPAMRMDRGVSMPNMLEPKIFPYEMLMVTNRGRNKILREVDRTLRERHLAPEVFREIFGMSIQEFDRPLW
RRNDMKKKAKLF

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FIGURE 60

GAAAGCTGTATTTGCTGCACGTGGAAATCTCCGTTATTTTCCAGCACCCAACAGTAGCGTAATGGGAGTAACGGA
CTTAACCTCATTCTCTTTTCCAGAGCATTTAGCCCTCATATGCCCTTCCCTGCATGCTTCCCCCAGGCCGTCAAGA
CTTGAGTTCTGCCTCGCTTCCCGGCGCGGTGCGCAGCCCTCAGCCCACTTAGGATAATGGCGACAGCTGAGGTACT
GAACATTGGTAAAAAATTATATGAGGGTAAAAACAAAAGAAGTCTACGAATTGTTAGACAGTCCAGGAAAAAGTCTCT
CCTGCAGTCCAAGGACCAGATTACAGCAGGAAAATGCAGCTAGAAAAAACACCTGGAAGGAAAAAGCTGCAATCTC
AAATAAAATCACCAGTTGTATTTTTCAGTTATTACAGGAAGCAGGTATTAAAACTGCCTTCCACCAGAAAAATGTGG
GGAGACAGCTTTTCATTGCACCGCAGTGTGAAATGATTCCAATTGAATGGGTTTGCAGAAGAATAGCAACTGGTTC
TTTTCTCAAAGAAATCCTGGTGTCAAGGAAGGATATAAGTTTTACCCACCTAAAGTGGAGTTGTTTTTCAAGGA
TGATGCCAATAATGACCCACAGTGGTCTGAGGAACAGCTGATTGCTGCAAAATTTTGCTTTGCTGGACTTCTTAT
AGGCCAGACTGAAGTGGATATCATGAGTCATGCTACACAGGCTATATTTGAAATACTGGAGAAATCCTGGTTGCC
CCAGAATTGTACACTGGTTGATATGAAGATTGAATTTGGTGTGATGTAACCACCAAAGAAATTGTTCTTGCTGA
TGTTATTGACAATGATTCTGGAGACTCTGGCCATCAGGAGATCGAAGCCAACAGAAAGACAAACAGTCTTATCG
GGACCTCAAAGAAGTAACCTCTGAAGGGCTCCAAATGGTAAAGAAAACTTTGAGTGGGTTGCAGAGAGAGTAGA
GTTGCTTTTGAATCAGAAAGTCAGTGCAGGGTTGTAGTGTGATGGGCTCTACTTCTGATCTTGGTCACTGTGA
AAAAATCAAGAAGGCCTGTGGAAATTTGGCATTCCATGTGAACCTTCAGTAACATCTGCGCATAAAGGACCAGA
TGAAACTCTGAGGATTAAAGCTGAGTATGAAGGGGATGGCATTCTACTGTATTTGTGGCAGTGGCAGGCAGAAG
TAATGGTTTTGGGACCAGTGATGTCTGGGAACACTGCATATCCAGTTATCAGCTGTCTCTCCCTCACACCAGACTG
GGGAGTTCAGGATGTGTGGTCTTCTCTCGACTACCCAGTGGTCTTGGCTGTTCAACCGTACTTTCTCCAGAAGG
ATCAGCTCAATTTGCTGCTCAGATATTTGGGTTAAGCAACCATTGTTGATGGAGCAAACCTGCGAGCAAGCATT
GAACACATGGATTTTCTTGAAGCAGGCTGACAAGAAAATCAGAGAATGTAATTTATAAGAAAAGAAATGCCATTGAA
TTTTTTAGGGGAAAAACTACAAATTTCTAATTTAGCTGAAGGAAAATCAAGCAAGATGAAAAAGTAATTTTAAAT
TAGAGAACACAAATAAAATGTATTAGTGAATAAATGCTTCTCTAGATCCATATTAATAAACATGAGCATCTAACC
CCTCCTTTCTTAGGCTAGACACCAAGATATTTCCAGCCAGCCTTTATCATTCTCTTACTTTATCCTTTTTCTCTTA
AGTATTGGTGGTCACTACTATTGAGTTTCTTCTTAACTGATTAAATGATCTTAACTCCCTCAGCTAAAACCTG
GCATTACTGACTCCCAGCTATATTTCTCCAGACTTGCAATTTTTTTTTTTTTTTTTTGGAGACAGGGTCTCACTGTCTG
CCCAGGCTGGAGTGCAGTGGCGTGATCTCAGTTCAGTGTCTTCCCTCCTGGGCTCAAGCAGTTCTCCACCT
CAGCCTCTCGACTAACAGGGACTATAATCTTGACAGCACCATGCCAGCTAATTTTATTTTGTAGAGATGAGCT
CTCACTATGTACCCAGGTTTCGTCTCAAACCTCCTGAACCCTAGTAATCTCCTATCTCAGCCTCCCAAAGTGCTA
GGGTTACAGACATGAGCCACTGTGCCTGTCTAGACTTGTACTTTCAACTGTCCATTTCTCCCTGTCTGTCCCATG
GGCACTCATGAAAAAACAGAATGCTCCCAACTTTATTTCATCTTCCAAGCCTGTAGCTCTTGGTATACTCACTGTT
GCAAGTCAGAAGCTTGATTTTCATCATTTGATGTTTTTCTCAGTTCACATCTCACTCATACCAAGTCATGTTGG
TGTTAATTTCTGATTAACCCCTGAATTTACCGTCTTCTCATCCTCTGTACAAAAGCCTCAAGTGAGGGTCAAATT
CAACATTATCCTGATCTAGACAGCCCCATTCTCAATCCACCCTTTTCCAAGTTGATTGCCCAAGGACTTCTAAC
AATAAACTCTCTTTTGCACCACAGACTTCTTTGAAAATATACATGCTGTTGACCCTCTCTGTAGAAAACCGCACA
CATAAACTTACCAACAGATTTTCATTGGTTCTTGGGTTCTCCGAAGCCTATCCATGGTTTATAGATTAAGAATT
GATGAGGTAGCTGGGCACAGTGGCTCACACCTACGATCACAGCACTTCGGGAGGCTGAAGCAAGCAGATCACTTG
AGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGTGAAACCCTGTCTCTACTAAAAATACAAAAAGTAGCCAGC
CGTGATGACAGGCACCTGTAATCCCAGCTACTCGGGAGGCTGAGGCATGAGAATTGCTTGAACCCGGGAGGCGGA
GGTTGCAGTGAGCCTGGATCATGCCACTGCACTCCAACCTGGGCAGCAGAGCAAGACTCTGTCTCAAAAGGGGAA
AAAAAAATTTGCTGATGTGACCCATGAAGGGAACCTATTTTCTCGTAATTTTGGACTGCCACACATTGGTACCT
TTAGTTCTCTGAAGGCCCACGTTTTTATCATTAAAGACCTATTTGTTAGCTAGTAGAGCTTTAIGTTCCGTGTCCA
TGAAACCTTCTGTAACCACAGTGACTACAAGTAGTTCTTCTCTATTGAATTATTAGGTCCAGAATAGAAGATGT
CATTGTACACTTTATTTCCCTCACACTGTGTTATGCTCTGATGTGCTATGCTTAGCTATCTGTCAGAGATTAGTA
AATTATAAACTCATGTGTACTACTTAAGTTTATATCTTATGCTAGTTTATAAGAACAATTAAAAGGACTTAGAA
GATTAAAAA

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FIGURE 61

MATAEVLNIGKKLYEGKTKEVYELLDSPGKVLLQSKDQITAGNAARKNHLEGKAAISNKITSCIFQLLQEAGIKT
AFTRKCGETAFAIAPQCEMIPIEWVCRRIATGSFLKRNPVGKEGYKFYPPKVELFFKDDANNDPQWSEEQLIAAKF
CFAGLLIGQTEVDIMSHATQAIFEILEKSWLPQNCTLVDMKIEFGVDVTTKEIVLADVIDNDSWRLWPSGDRSQQ
KDKQSYRDLKEVTPEGLQMVKKNFVVAERVELLLKSESQCRVVVLMGSTSDIGHCEKIKKACGNFGIPCELRVT
SAHKGPDETLRIKAHEYEGDGIPTVFVAVAGRSNGLGPVMSGNTAYPVISCPPLTPDWGVQDVWSSLRLPSGLGCS
TVLSPEGSAQFAAQIFGLSNHLVWSKLRASILNTWISLKQADKKIRECNL

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FIGURE 62

GAAAGCTGTATTTGCTGCACGTGGAAATCTCCGTTATTTTCCAGCACCCAACAGTAGCGTAATGGGAGTAACGGA
CTTAACCTCATTCTCTTTTTCAGAGCATTAGCCTTCATATGCCCTTCCCTGCATGCTTCCCCCAGGCCGTCAAGA
CTTGAGTTCTGCCTCGCTTCCCGGCGCGGTGCGAGCCCTCAGCCCACTTAGGATAATGGCGACAGCTGAGGTA
GAACATTGGTAAAAAATTATATGAGGGTAAAAACAAAAGAGTCTACGAATTGTTAGACAGTCCAGGAAAAGTCCT
CCTGCAGTCCAAGGACCAGATTACAGCAGGAAATGCAGCTAGAAAAACCACCTGGAAGGAAAAGCTGCAATCTC
AAATAAAATCACCAGTTGTATTTTTCAGTTATTACAGGAAGCAGGTATTAAACTGCCTTACCAGAAAATGTGG
GGAGACAGCTTTCATTGCACCGCAGTGTGAAATGATTCCAATTGAATGGGTTTGCAGAAGAATAGCAACTGGTTC
TTTCTCAAAAAGAAATCCTGGTGTCAAGGAAGGATATAAGTTTACCCACCTAAAGTGGAGTTGTTTTTCAAGGA
TGATGCCAATAATGACCCACAGTGGTCTGAGGAACAGCTGATTGCTGCAAAATTTTGCTTTGCTGGACTTCTTAT
AGGCCAGACTGAAGTGGATATCATGAGTCATGCTACACAGGCTATATTTGAAATACTGGAGAAATCCTGGTTGCC
CCAGAATTGTACACTGGTTGATATGAAGATTGAATTTGGTGTGATGTAACCACCAAAGAAATTGTTCTTGCTGA
TCTTATTGACAATGATTCTGGAGACTCTGGCCATCAGGAGATCGAAGCCAACAGAAAGACAAACAGTCTTATCG
GGACCTCAAAGAAGTAACTCCTGAAGGGCTCCAAATGGTAAAGAAAACTTTGAGTGGGTTGCAGAGAGAGTAGA
GTTGCTTTTGAATCAGAAAGTCAGTGCAGGGTTGTAGTGTGATGGGCTCTACTTCTGATCTTGGTCACTGTGA
AAAAATCAAGAAGGCCTGTGGAATTTTGGCATTCCATGTGAACCTCGAGTAACATCTGCGCATAAAGGACCAGA
TGAACTCTGAGGATTAAAGCTGAGTATGAAGGGGATGGCATTCTACTGTATTTGTGGCAGTGGCAGGCAGAAG
TAATGGTTTGGGACCAGTGATGTCTGGGAACACTGCATATCCAGTTATCAGCTGTCTCCCTCACACCAGACTG
GGGAGTTCAGGATGTGTGGTCTTCTCTTCGACTACCCAGTGGTCTTGGCTGTTCAACCGTACTTTCTCCAGAAGG
ATCAGCTCAATTTGCTGCTCAGATATTTGGGTTAAGCAACCATTGGTATGGAGCAAACCTGCGAGCAAGCATTTT
GAACACATGGATTTCCTTGAAGCAGGCTGACAAGAAAAATCAGAGAATGTAATTTATAAGAAAGAATGCCATTGAA
TTTTTTAGGGGAAAAACTACAAATTTCTAATTTAGCTGAAGGAAAAATCAAGCAAGATGAAAAGGTAATTTTAAAT
TAGAGAACACAAATAAAATGTATTAGTGAATAAATGCTTCTCTAGATCCATATTAATAAACATGAGCATCTAAC
CCTCCTTTCTTAGGCTAGACACCAAGATATTTAGCCAGCCTTTATCATTCTCTTACTTTATCCTTTTTCTTCTTA
AGTATTGGTGGTCACTACTATTGAGTTTCTTCTTAACTGATTAAATGATCTTAACTCCCTCAGCTAAAAGTGC
GCATTACTGACTCCCAGCTATATTTCTCCAGACTTGCATTTTTTTTTTTTTTTTGGAGACAGGGTCTCACTGTG
CCCAGGCTGGAGTGCAGTGGCGTGATCTCAGTTCACTGCTGCTTCCCTCCTGGGCTCAAGCAGTTCTCCACCT
CAGCCTCTCGACTAACAGGGACTATAATCTTGAGCACCATGCCGAGCTAATTTTATTTTTTGTAGAGATGAGCT
CTCACTATGTCACCCAGGTTCTGCTCAAACCTCCTGAACCTAGTAATCTCTATCTCAGCCTCCCAAAGTGCTA
GGGTTACAGACATGAGCCACTGTGCGTGTCTAGACTTGTACTTTCAACTGTCCATTTCTCCCTGTCTGTCCCATG
GGCACTCATGAAAAAACAGAATGCTCCCAACCTTTATTCATCTTCCAAGCCTGTAGCTCTTGGTATACTCACTGTT
GCAAGTCAGAAGCTTGATTTTCATCATTGATGTTTTTCTCACGTTTCACATCTCACTCATCACCAGTCATGTTGG
TGTTAATTTCTGATTAAACCTTGAATTTACCGTCTTCTCATCTCTGTACAAAAGCCTCAAGTGAGGGTCAAATT
CAACATTATCCTGATCTAGACAGCCCCATTCTCAATCCACCCTTTTCCAAGTTGATTGCCCCAAGGACTTCTAAC
AATAAACTCTCTTTTGCACCACAGACTTCTTTGAAAATATACATGCTGTTGACCCTCTCTGTAGAAAACCGCACA
CATAAACTTACCAACAGATTTTATTGGTTCTTGGGTTCTCCCGAAGCCTATCCATGGTTTATAGATTAAGAATT
GATGAGGTAGCTGGGCACAGTGGCTCACACCTACGATCACAGCACTTCGGGAGGCTGAAGCAAGCAGATCACTTG
AGGTCAGGAGTTTGAAGACCAGCTGGCCAACATGGTGAAACCTGTCTCTACTAAAAATACAAAAGTAGCCAGC
CGTGATGACAGGCACCTGTAATCCAGCTACTCGGGAGGCTGAGGCATGAGAATTGCTTGAACCCGGGAGGCGGA
GGTTGCAGTGAGCCTGGATCATGCCACTGCACTCCAACCTGGGCAGCAGAGCAAGACTCTGTCTCAAAAGGGGAA
AAAAAAATTTGCTGATGTGACCCATGAAGGGAACCTATTTTCTCGTAATTTTGGACTGCCACACATTGGTACCT
TTAGTTCTCTGAAGGCCACGTTTTTATCATTAAAGACCTATTTGTTAGCTAGTAGAGCTTTATGTTTCGCTGTCCA
TGAAACCTTCTGTAAACACAGTGACTACAAGTAGTTCTTTCTCTATTGAATTATTAGGTCCAGAATAGAAGATGT
CATTGTACACTTTATTTCCCTCACACTGTGTTATGCTCTGATGTGCTATGCTTAGCTATCTGTCAGAGATTAGTA
AATTATAAACTCATGTGTACTACTTAAGTTTATATCTTATGCTAGTTTATAAGAACAATTAAGGACTTAGAA
GATTAAAAA

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FIGURE 63

MATAEVLNIGKKLYEGKTKEVYELLDSPGKVLLQSKDQITAGNAARKNHLEGKAAISNKITSCIFQLLQEAGIKT
AFTRKCGETAFIAPQCEMPIEWVCRRITGSFLKRNPVKEGYKFYPPKVELFFKDDANNDPQWSEEQLIAAKF
CFAGLLIGQTEVDIMSHATQAIFEILEKSWLPQNCTLVDMKIEFGVDVTTKEIVLADVIDNDSWRLWPSGDRSQQ
KDKQSYRDLKEVTPEGLQMVKKNF EWVAERVELLKSESQCRVVVLMGSTSDLGHCEKIKKACGNFGIPCELRVT
SAHKGPDETLRIKAEYEGDGIPTVFFVAVAGRSNGLGPVMSGNTAYPVISCPPLTPDWGVQDVWSSLRLPSGLGCS
TVLSPEGSAQFAAQIFGLSNHLVWSKLRASILNTWISLKQADKKIRECNL

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FIGURE 64

TCGCTGCGAAGGACATTTGGGCTGTGTGTGCGACGCGGGTCGGAGGGGCAGTCGGGGGAACCGCGAAGAAGCCGA
GGAGCCCGGAGCCCCGCGTGACGCTCCTCTCTCAGTCCAAAAGCGGCTTTTGGTTTCGGCGCAGAGAGACCCGGGG
GTCTAGCTTTTTCCTCGAAAAGCGCCGCCCTGCCCTTGGCCCCGAGAACAGACAAAGAGCACCGCAGGGCCGATCA
CGCTGGGGGGCGCTGAGGCCGGCCATGGTCATGGAAGTGGGACACCCTGGACGCTGGAGGCCTGCGGGCGCTGCTGG
GGGAGCGAGCGGGCGCAATGCCTGCTGCTGGACTGCCGCTCCTTCTTCGCTTTCAACGCCGGCCACATCGCCGGCT
CTGTCAACGTGCGCTTCAGCACCATCGTGCGGGCGCCGGGCCAAGGGCGCCATGGGCCTGGAGCACATCGTGCCCA
ACGCCGAGCTCCGCGGGCCGCTGCTGGCCGGCGCCTACCACGCCGTGGTGTGCTGGACGAGCGCAGCGCCGCC
TGGACGGCGCCAAGCGCGACGGCACCCCTGGCCCTGGCGGCCGGCGCGCTCTGCCGCGAGGCGCGCGCCGCGCAAG
TCTTCTTCCTCAAAGGAGGATACGAAGCGTTTTTCGGCTTCCTGCCCGGAGCTGTGCAGCAAACAGTCGACCCCCA
TGGGGCTCAGCCTTCCCCTGAGTACTAGCGTCCCTGACAGCGCGGAATCTGGGTGCAGTTCTTGCAGTACCCAC
TCTACGATCAGGGTGGCCCGGTGGAATCCTGCCCTTCTGTACCTGGGCAGTGCATACAGCTTCCCAGCAAGG
ACATGCTGGATGCCTTGGGCATAACTGCCTTGATCAACGTCTCAGCCAATTGTCCCAACCATTTTGAGGGTCACT
ACCAGTACAAGAGCATCCCTGTGGAGGACAACCACAAGGCAGACATCAGCTCCTGGTTCAACGAGGCCATTGACT
TCATAGACTCCATCAAGAATGCTGGAGGAAGGGTGTGTGCCACTGCCAGGCAGGCATTTCCCGGTCAGCCACCA
TCTGCCTTGCTTACCTTATGAGGACTAATCGAGTCAAGCTGGACGAGGCCTTTGAGTTTGTGAAGCAGAGGCGAA
GCATCATCTCTCCCAACTTCAGCTTCATGGGCCAGCTGCTGCAGTTTGAGTCCAGGTGCTGGCTCCGCACTGTT
CGGCAGAGGCTGGGAGCCCCGCCATGGCTGTGCTCGACCGAGGCACCTCCACCACCACCGTGTTCAACTTCCCCG
TCTCCATCCCTGTCCACTCCACGAACAGTGCCTGAGCTACCTTCAGAGCCCCATTACGACCTCTCCAGCTGCT
GAAAGGCCCAGGGAGGTGAGGCTCTTCACATCCCATTGGGACTCCATGCTCCTTGAGAGGAGAAATGCAATAACT
CTGGGAGGGGCTCGAGAGGGCTGGTCCTTATTTATTTAACTTCACCCGAGTTCCTCTGGGTTTCTAAGCAGTTAT
GGTGATGACTTAGCGTCAAGACATTTGCTGAACTCAGCACATTCGGGACCAATATATAGTGGGTACATCAAGTCC
ATCTGACAAAATGGGGCAGAAGAGAAAGGACTCAGTGTGTGATCCGGTTTCTTTTTGCTCGCCCTGTTTTTGT
AGAATCTCTTCATGCTTGACATACCTACCAGTATTATTCCCGACGACACATATACATATGAGAATATACCTTATT
TATTTTTGTGTAGGTGCTGCTTTCACAAATGTCTATTGCTACTCCTAGAAGAACCAATACCTCAATTTTTGTT
TTTGAGTACTGTACTATCCTGTAAATATATCTTAAGCAGGTTTGTTCAGCACTGATGGAAAATACCAGTGTTG
GGTTTTTTTTTAGTTGCCAACAGTTGTATGTTTGCTGATTATTTATGACCTGAAATAATATATTTCTTCTTCTAA
GAAGACATTTTGTTACATAAGGATGACTTTTTTATACAATGGAATAAATTATGGCATTTCATTG

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FIGURE 65

MVMEVGTLDAGGLRALLGERAAQCLLLD CRSFFAFNAGHIAGSVNVRFSTIVRRRAKGAMGLEHIVPNAELRGRL
LAGAYHAVVLLDERSAALDGAKRDGTLALAAGALCREARAAQVFFLKGGYEAFSASCPELCSKQSTPMGLSLPLS
TSVPDSAESGCSSCSTPLYDQGGPVEILPFLYLGSAYHASRKDMLDALGITALINVSANCPNHFEGHYQYKSIPV
EDNHKADISSWFNEAIDFIDSIKNAGGRVVFVHCQAGISRSATICLAYLMRTNRVKLDEAFEFVKQRRSIISP NFS
FMGQLLQFESQVLAPHCSAEAGSPAMAVLDRGTSTTTVFNFVPSIPVHSTNSALSYLQSPITTSPSC

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FIGURE 66

TGTCGGGGACGGTAACCGGGACCCGTGCTCTGCTCCTGTCGCCTTCGCCTCCTGAATCCCTAGCCATATGCGTGA
GTGCATCTCCATCCACGTTGGCCAGGCTGGTGTCCAGATTGGCAATGCCTGCTGGGAGCTCTACTGCCTGGAACA
CGGCATCCAGCCCGATGGCCAGATGCCAAGTGACAAGACCATTGGGGGAGGAGATGACTCCTTCAACACCTTCTT
CAGTGAGACGGGCGCTGGCAAGCACGTGCCCCGGGCTGTGTTTGTAGACTTGGAACCCACAGTCATTGATGAAGT
TCGCACTGGCACCTACCGCCAGCTCTTCCACCCTGAGCAGCTCATCACAGGCAAGGAAGATGCTGCCAATAACTA
TGCCCGAGGGCACTACACCATTGGCAAGGAGATCATTGACCTTGTGTTGGACCGAATTGCAAGCTGGCTGACCA
GTGCACCCGTCTTCAGGGCTTCTTGGTTTTCCACAGCTTTGGTGGGGGAAGTGGTTCTGGGTTACCTCCCTGCT
CATGGAACGCCTGTCAGTTGATTATGGCAAGAAATCCAAGCTGGAGTTCTCCATTTACCCGGCACCCAGGTTTC
CACAGCTGTAGTTGAGCCCTACAACCTCCATCCTCACCACCCACACCACCCTGGAGCACTCTGATTGTGCCTTCAT
GGTAGACAATGAGGCCATCTATGACATCTGTGCTAGAAAACCTCGATATCGAGCGCCCAACCTACACTAACCTTAA
CCGCCCTATTAGCCAGATTGTGTCCTCCATCACTGCTTCCCTGAGATTTGATGGAGCCCTGAATGTTGACCTGAC
AGAATTCCAGACCAACCTGGTCCCCTACCCCGCATCCACTTCCCTCTGGCCACATATGCCCCTGTCACTCTCTGC
TGAGAAAAGCCTACCATGAACAGCTTTCTGTAGCAGACATCACCAATGCTTGCTTTGAGCCAGCCAACCAGATGGT
GAAATGTGACCCTGGCCATGGTAAATACATGGCTTGCTGCCTGTTGTACCGTGGTGACGTGGTTCCCAAAGATGT
CAATGCTGCCATTGCCACCATCAAAACCAAGCGCACGATCCAGTTTGTGGATTGGTGCCCCACTGGCTTCAAGGT
TGGCATCAACTACCAGCCTCCCCTGTGGTGCCTGGTGGAGACCTGGCCAAGGTACAGAGAGCTGTGTGCATGCT
GAGCAACACCACAGCCATTGCTGAGGCCTGGGCTCGCCTGGACCACAAGTTTGACCTGATGTATGCCAAGCGTGC
CTTTGTTCACTGGTACGTGGGTGAGGGGATGGAGGAAGGCGAGTTTTCAGAGGCCCGTGAAGATATGGCTGCCCT
TGAGAAGGATTATGAGGAGGTTGGTGTGGATTCTGTTGAAGGAGAGGGTGAGGAAGAAGGAGAGGAATACTAATT
ATCCATTCCTTTTGGCCCTGCAGCATGTGCTGCTCCAGAATTCAGCTTCACTTAAGTACAGATGTTAAAGC
TTTCTGGTTAGATTGTTTTCACTTGGTGATCATGCTTTTCCATGTGTACCTGTAATATTTTTCCATCATATCTC
AAAGTAAAGTCATTAACATCA

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FIGURE 67

MRECISIHVGQAGVQIGNACWELYCLEHGIQPDGQMPSDKTIGGGDDSFNTFFSETGAGKHVPRAVFVDLEPTVI
DEVRTGTYRQLFHPEQLITGKEDAANNYARGHYTIGKEIIDLVLDRIKRLADQCTRLQGFLVFHSFGGGTGSGET
SLLMERLSVDYGKKSKLEFSIYPAPQVSTAVVEPYNSILTTHTTLEHSDCAFMVDNEAIYDICRRNLDIERPTYT
NLNRLISQIVSSITASLRFDGALNVDLTEFQTNLVPPRIHFPLATYAPVISAEKAYHEQLSVADITNACFEFAN
QMVKCDPGHGKYMCCLLYRGDVVPKDVNAAIATIKTKRTIQFVDWCPTGFKVGINYQPPTVVPGGDLAKVQRAV
CMLSNTTAIAEAWARLDHKFDLAMYAKRAFVHWYVGEEMEEGEFSEAREDMAALEKDYEYEVGVDSVEGEGEEEGEE
Y

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FIGURE 68

ATCTCTCTCGGGTGGAGTCCTTCTGACAGCTGGTGCGCCTGCCCGGGAACATCCTCCTGGACTCAATCATGGCTT
GTGGTCTGGTCGCCAGCAACCTGAATCTCAAACCTGGAGAGTGCCCTTCGAGTGCGAGGCGAGGTGGCTCCTGACG
CTAAGAGCTTCGTGCTGAACCTGGGCAAAGACAGCAACAACCTGTGCCTGCACTTCAACCCTCGCTTCAACGCCC
ACGGCGACGCCAACACCATCGTGTGCAACAGCAAGGACGGCGGGGCCCTGGGGGACCGAGCAGCGGGAGGCTGTCT
TTCCCTTCCAGCCTGGAAGTGTTGCAGAGGTGTGCATCACCTTCGACCAGGCCAACCTGACCGTCAAGCTGCCAG
ATGGATACGAATTCAAGTTCCCCAACCGCCTCAACCTGGAGGCCATCAACTACATGGCAGCTGACGGTGACTTCA
AGATCAAATGTGTGGCCTTTGACTTGAAATCAGCCAGCCCATGGCCCCAATAAAGGCAGCTGCCTCTGCTCCCCT
G

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FIGURE 69

MACGLVASNLNLKPGECLRVGEVAPDAKSFVLNLGKDSNNLCLHFNPRFNAHGDANTIVCNSKDGGAWGTEQRE
AVFPFQPGSVAEVCITFDQANLTVKLPDGYEFKFPNRLNLEAINYMAADGDFKIKCVAFD

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FIGURE 70

TCAGAAGCTGATTGCATCCAAAGCAAATGACCACCAAGGTTTTTATCTTCTAAACAGTATAATAGAGCACATGCC
TCCTGAATCAGTTGACCAATATAGGAAACAAATCTTCATTCTGCTATTCCAGAGACTTCAGAATTCAAAAACAAC
CAAGTTTATCAAGAGTTTTTTAGTCTTTATTAATTTGTATTGCATAAAATATGGGGCACTAGCACTACAAGAAAT
ATTTGATGGTATACAACCAAAAATGTTTGGAAATGGTTTTGGAAAAAATTATTATTCCTGAAATTCAGAAGGTATC
TGGAATGTAGAGAAAAAGATCTGTGCGGTTGGCATAACCAAATTACTAACAGAATGTCCCCCAATGATGGACAC
TGAGTATACCAAACCTGTGGACTCCATTATTACAGTCTTTGATTGGTCTTTTTGAGTTACCCGAAGATGATACCAT
TCCTGATGAGGAACATTTTATTGACATAGAAGATACACCAGGATATCAGACTGCCTTCTCACAGTTGGCATTTCG
TGGGAAAAAAGAGCATGATCCTGTAGGTCAAATGGTGAATAACCCCAAATTCACCTGGCACAGTCACTTCACAA
GTTGTCTACCGCCTGTCCAGGAAGGACCTATTTTTGAAGGCATAAAAGCAGTTGAGTTTCTGGAGAATTTTTGGA
TGGTGATTAATGACTTGACTGGCTGCTCTTCCAGAGCTGTGGCAGCTCTCCCGTAGAAGATGGGGTTTGTATTG
GCGCACCAAGATCTCCAACAGCCAGTGTGTGTTTCCCATCTCTTGTAGGTTCCATCAATGGTGAGCACCAGCCTG
AATGCAGAAGCGCTCCAGTATCTCCAAGGGTACCTTCAGGCAGCCAGTGTGACACTGCTTTAAACTGCATTTTTTC
TAATGGGCTAAACCCAGATGGTTTCTTAGGAAATCACAGGCTTCTGAGCACAGCTGCATTAAAACAAAGGAAGTT
CTCCTTTTGAACCTGTGCACGAATTCATCTTGTAAGGATATTAAATGTTGCTTTAACCTGAACCTTGAGCAAAAT
TAGTTGGTTTGTGTGATCATAAGTTATGTGGGTGGCTTCTAGTTTGCACTTCAAGGGACAAGTATTAATAGTT
CAGTGTATGGCGTTGGTTTGTGTTGAGCGTTTGCACGGTTTGGATAATCTTAAATTTTGACGGACACTGTGGAGA
CTTXCTGTTACTAAATCCTTTTGTGTTTGAAGCTGTTGCTATTTGTATTTCTCTTGCTTTTATATTTTTTGTCT
GTTTATTTACGCTTTTATTGGAATGTGAATAAGTAAAGAATTACTTGTGTTACTTGCCAAGCAGTGCACATTTTC
ATAGTTTCAAATCTGTAATCAGCAATAAAAATCCTAAAATATGTACCTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 71

CGGGATGCGGCGCGCCGCGCGTTGAACCTCCTTGGCCTGGGCGAAGCTGTGTGGACCAAGCAAGTCAGGAGTGTG
GCCATGTTTTCTGAGCAGGCTGCCCAGAGGGCCCACACTCTACTGTCCCCACCATCAGCCAACAATGCCACCTTT
GCCCCGGTGCCAGTGGCAACCTACACCAACTCCTCACAACCCTTCCGGCTAGGAGAGCGCAGCTTTAGCCGGCAG
TATGCCACATTTATGCCACCCGCCTCATCCAAATGAGACCCTTCTTGGAGAACCAGGGGCCAGCAGCACTGGGGC
AGTGGAGTGGGAGTGAAGAAGCTGTGTGAACTGCAGCCTGAGGAGAAGTGCTGTGTGGTGGGCACTCTGTTCAAG
GCCATGCCGCTGCAGCCCTCCATCCTGCGGGAGGTGAGCGAGGAGCACAACTGCTCCCCAGCCTCCTCGGAGT
AAATACATACACCCAGATGACGAGCTGGTCTTGAAGATGAACTGCAGCGTATCAAATAAAAGGCACCATTGAC
GTGTCAAAGCTGGTTACGGGGACTGTCCTGGCTGTGTTTGGCTCCGTGAGAGACGACGGGAAGTTTCTGGTGGAG
GACTATTGCTTTGCTGACCTTGCTCCCCAGAAGCCCGCACCCCCACTTGACACAGATAGGTTTGTGCTACTGGTG
TCCGGCCTGGGCTGGGTGGCGGTGGAGGCGAGAGCCTGCTGGGCACCCAGCTGCTGGTGGATGTGGTGACGGGG
CAGCTTGGGGACGAAGGGGAGCAGTGCAGCGCCGCCCACGTCTCCCGGTTATCCTCGCTGGCAACCTCCTCAGC
CACAGCACCCAGAGCAGGGATTCTATCAATAAGGCCAAATACCTCACCAAGAAAACCCAGGCAGCCAGCGTGGAG
GCTGTAAAGATGCTGGATGAGATCCTCCTGCAGCTGAGCGCCTCAGTGCCCGTGGACGTGATGCCAGGCGAGTTT
GATCCCAACAATTACACGCTCCCCAGCAGCCCTCCACCCCTGCATGTTCCCGCTGGCCACTGCCTACTCCACG
CTCCAGCTGGTCAACCAACCCCTACCAGGCCACCATTGATGGAGTCAGATTTTGGGGACATCAGGACAGAACGTG
AGTGACATTTTCCGATACAGCAGCATGGAGGATCACTTGGAGATCCTGGAGTGGACCCTGCGGGTCCGTACATC
AGCCCCACAGCCCCGACACTCTAGGTTGTTACCCCTTCTACAAAATGACCCGTTTCTCTCCAGAGTGCCCG
CATGTCTACTTTTGTGGCAACACCCCCAGCTTTGGCTCCAAAATCATCCGAGGTCCTGAGGACCAGACAGTGCTG
TTGGTGAAGTGTCCCTGACTTCAGTGCCACGCAGACCGCCTGCCTTGTGAACCTGCGCAGCCTGGCCTGCCAGCCC
ATCAGCTTCTCGGGCTTCGGGGCAGAGGACGATGACCTGGGAGGCCTGGGGCTGGGGCCCCTGACTCAAAAAGTG
GTTTTGACCAGAGAGGCCCAGATGGAGGCTGTTTATTCCCTGCAGTGTGCGCATTGTAAATAAAGCCTGGCACTT
GCTGATGCG

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FIGURE 72

MFSEQAAQRAHTLLSPPSANNATFARVPVATYTNSSQPFRLGERSFSRQYAHYATR LIQMRPFLENRAQQHWGS
GVGVKKLCELQPEEKCCVVGTLFKAMPLQPSILREVSEEHNLLPQPPRSKYIHPDDELVLEDELQRIKLKGTIDV
SKLVTGTVLAVFGSVRDDGKFLVEDYCFADLAPQKPAPPLDTRFVLLVSGGLGLGGGGGESLLGTQLLDVVVTGQ
LGDEGEQCSAAHVSRVILAGNLLSHSTQSRDSINKAKYLTKKTQAASVEAVKMLDEILLQLSASVPVDVMPGEFD
PTNYTLFQQPLHPCMFPLATAYSTLQLVTNPYQATIDGVRF LGTSGQNVSDIFRYSSMEDHLEILEWTLRVRHIS
PTAPDTLGCYFFYKTDPFIFPECPHVYFCGNTPSFGSKIIRGPEDQTVLLVTVPDFSATQTACLVNLRSLACQPI
SFSGF GAEDDDLGGGLGP

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FIGURE 74

MADDLDFETGDAGASATFPMQCSALRKNGFVVLKGRPCKIVEMSTSKTGKHGHAKVHLVGIDIFTGKKYEDICPS
THNMDVPNIKRNDQFLIGIQDGYLSLLQDSGEVREDLRLPEGDLGKEIEQKYDCGEEILITVLSAMTEEAATAIK
AMAK

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FIGURE 75

AGCGAGTCCTTCTTTTCCTGACTGCAGCTCTTTTCATTTTGCCATCCTTCTCCAGCTCCATGATGGTTCTGCAGG
TTTCTGCGGCCCCCGGACAGTGGCTCTGACGGCGTTACTGATGGTGCTGCTCACATCTGTGGTCCAGGGCAGGG
CCACTCCAGAGAATTACGTGTACCAGGGACGGCAGGAATGCTACGCGTTTAATGGGACACAGCGCTTCCTGGAGA
GATACATCTACAACCGGGAGGAGTACGCGCGCTTCGACAGCGACGTGGGGGAGTTCCGGGCGGTGACGGAGCTGG
GGCGGCCTGCTGCGGAGTACTGGAACAGCCAGAAGGACATCCTGGAGGAGAAGCGGGCAGTGCCGGACAGGGTAT
GCAGACACAACCTACGAGCTGGACGAGGCCGTGACCCCTGCAGCGCCGAGTCCAGCCTAAGGTGAACGTTTCCCCCT
CCAAGAAGGGGCCCCCTGCAGCACCACAACCTGCTTGTCTGCCACGTGACAGATTCTACCCAGGCAGCATTCAAG
TCCGATGGTTCTTGAATGGACAGGAGGAAACAGCTGGGGTTCGTGTCCACCAACCTGATCCGTAATGGAGACTGGA
CCTTCCAGATCCTGGTGATGCTGGAAATGACCCCCAGCAGGGAGACGTCTACATCTGCCAAGTGGAGCACACCA
GCCTGGACAGTCTGTACCGTGGAGTGGAAAGGCACAGTCTGATTCTGCCAGAGTAAGACATTGACGGGAGCTG
GGGGCTTCGTGCTGGGGCTCATCATCTGTGGAGTGGGCATCTTCATGCACAGGAGGAGCAAGAAAGTTCAACGAG
GATCTGCATTAAACAGGGTTCCTGACCTCACCGAAAAGACTAATGTGCCTTAGAACAAGCATTTGCTGTGTTTTGT
TAACACCTGGTTCCAGGACAGACCCTCAGCTTCCCAAGAGGATACTGCTGCCAAGAAGTTGCTCTGAAGTCAGTT
TCTATCGTTCTGCTCTTTGATTCAAAGCACTGTTTCTCTCACTGGGCCTCCAACCATGTTCCCTTCTTCTTAGCA
CCACAAATAATCAAAACCCAACATAAGTGTGTTGCTTTCCTTTAAAAATATGCATCAAATCGTCTCTCATTACTTT
TCTCTGAGGGTTTTAGTAAACAGTAGGAGTTAATAAAGAAGTTCATTTTGGTTTACACGTAGGAAAGAAGAGAAG
CATCAAAGTGGAGATATGTTAACTATTGTATAATGTGGCCTGTTATACATGACACTCTTCTGAATTGACTGTATT
TCAGTGAGCTGCCCCCAAATCAAGTTTAGTGCCCTCATCCATTTATGTCTCAGACCGCTATTCTTAACTATTCAA
TGGTGAGCAGACTGCAAATCTGCCTGATAGGACCCATATTCACACAGCACTAATTCAACATATATCTTACTGAGA
GCAIGTTTTATCATTACCATTAAAGAAGTTAAATGAACATCAGAATTTAAATCATAAATATAATCTAATACACTT
T

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FIGURE 76

MMVLQVSAAPRTVALTALLMVLLTSVVQGRATPENYVYQGRQECYAFNGTQRFLERYIYNREEYAREFSDVGEFR
AVTELGRPAAEYWNSQKDILEEKRAVPDRVCRHNYELDEAVTLQRRVQPKVNVSPSKKGPLQHHNLLVCHVTDFY
PGSIQVRWFLNGQEETAGVVSTNLIRNGDWFQILVMLEMPQQGDVYICQVEHTSLDSPVTVEWKAQSDSAQSK
TLTGAGGFVLGLIICGVGIFMHRRSKKVQRGSA

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FIGURE 77

GGCACGAGGGGGCGGCCGGTGAGGGGGAAGCAAGTCTGGTCTCTGTGATTGAAGAAGTCGGCTCTGGGCTCCAGTG
CGGGAATCACACACATACCTCAGAAATGCCGGGTCTAAGTTGTAGATTTTATCAACACAAATTTCTGAGGTGGAA
GATGTAGTGATGGTGAATGTCAGATCCATTGCTGAAATGGGGGCTTATGTCAGCTTGCTGGAATACAACAACATT
GAAGGCATGATTCTTCTTAGTGAATTATCCAGAAGGCGTATCCGTTCTATCAACAACTCATCCGAATTGGCAGG
AATGAGTGTGTGGTTGTCTATTAGGGTGGACAAAGAAAAAGGATATATTGATTTGTCAAAAAGAAGAGTTTCTCCA
GAGGAAGCAATCAAATGTGAAGACAAATTCACAAAATCCAAAAGTGTATATAGCATTCTTCGTATGTTGCTGAG
GTGTTAGAATACACCAAGGATGAGCAGCTGGAAAGCCTATTCCAGAGGACTGCCTGGGTCTTTGATGACAAGTAC
AAGAGACCTGGATATGGTGCCTATGATGCATTTAAGCATGCAGTCTCAGACCCATCTATTTTGGATAGTTTAGAT
TTGAATGAAGATGAACGGGAAGTACTCATTAAATAATATTAATAGGCGCTTGACCCACAGGCTGTCAAAAATTCGA
GCAGATATTGAAGTGGCTTGTTATGGTTATGAAGGCATTGATGCTGTAAAAGAAGCCCTAAGAGCAGGTTTGAAT
TGTTCTACAGAAAACATGCCCATTAAGATTAATCTAATAGCTCCTCCTCGGTATGTAATGACTACGACAACCCTG
GAGAGAACAGAAGGCCTTTCTGTCTCAGTCAAGCTATGGCTGTTATCAAAGAGAAGATTGAGGAAAAGAGGGGT
GTGTTCAATGTTCAAATGGAGCCCAAAGTGGTCACAGATACAGATGAGACTGAACCTGCGAGGCAGATGGAGAGG
CTTGAAAGAGAAAATGCCGAAGTGGATGGAGATGATGATGCAGAAGAAATGGAAGCCAAAGCTGAAGATTAACTT
TGTGGGAAACAGAGTCCAATTTAAGGAACACAGAGCAGCGCTTCCTGGCTGTAAATCCTAGACTTGAAAGTTTTT
CAGTATTGAAAACCTTCAAAGCTGAATATTTTTTATTTCTAAGTATTTAAATGTTCTAACAGATCAGAACATGAAA
TGCCCTCCTAAATGTCAGCTGTTGTACACAGTAGCTCCAACACTTTGAGCATTTTTTAAGGGAGTGGCCTCATT
CACTAGAGACAAATCTTTAAGAATAGTTCTAAAATTTGGGCTTGTTGATTTCCATTTCTGATGCTCTCCAGATTGGCA
CCCCTTTCTAGTTCAATGCCTCACGAGATTTGCCAGGGGCATCCAAGGCAACAATCCCAATCTTTCTATATAAA
ATGTATTCAAGCAAACATCAAATAAATTTCTGGGATATTTAACTATAGGCTTCTTCCTTCTGTACCAGTTAAA
AGCATTTTAACTAAGACCCTAATTCTTTTATCTTTATTTTAGTCTTGATGTGGAAGTGTAGGAGCAGGTGAAT
AAAGGATCTCTATAACAGATCCTTTCAAAGAAGAGTTTTAGAGAAAATAAATTTAACTTTAACCACAGTGAAAG
TTGACCTTAGCGGGACAAAGCCTTAAATGCATTGAAAGAATTAGATCGGTTCTGTGCCTTTTATCTATTTGAG
ATTGATGACAACCTGTGTGAGAGAATTTATCACACCACGTCCTTATTGGAATAATAAGCTACTTGCCTTGAGTTT
ATAATTCAGGGTGGTAAAGTATGTTTTTAAATTTTAAAAAGCAGCTGCATTTTTTATTTAGTTGGAATATCACC
AATTTTTTATTTTTTATTGCTATTAAATATCCACTAGATGCCACCTAGAGCTCCAGTTCTTTATAACAAAACAGG
GATCTGTTTGAACACTTACTGTTGTTTTTTTTTTTTTACATGTTTCCATCATTCTGTCTTTAAGAACTAATTCG
TACATAATAAGTTTCATAGGTAACACATTATATCTCTTATGATACTTGAGGTACCAGTTGTATTTAATTTTATT
CATTATCCCTAGATAGCTATTAAGATACTTAGATTAGACCTAACCACCATAGTCAATCCAAGACTAGACTACTC
AATATTAAAGGGTCTGGAAAATAGAAGAGTGTGTTGGGCAGGTAGTTTGTACCATTTATGAAGGTTTGTTCCTT
GTTAAATTTAGCAGCCTGTACTAGCTTTTGAAATCCAGAAGTTTTAACTTCCAGTGGCTGGTTTTCTGAGAGAGTG
CCATGATTGCTAGCCAGCATTCCATATTGGGAATATGTAGAGGAGAACCCTGGATGTACTTAAGAGTGGCATATAA
TTTTCACTTCTGTCTGTTGAGGCAAAAAAAAAACAAGTTTAGAAAGCTGGCAACATGAAGAATGCATTCAAAATA
TAACAGGTGCTTCTTTGTTGTACGCAGAGGAATTTTTTCTTTTGATTTTGTACTGAAATTTGTTATACTTCAA
AAGCCATAACTTGAAAAATACTGGTGGCGTCGATGGTGAGTGATTTTTATCCACGTGGGCCTTTTGCTCAGTTC
CATGGCAATTTTGTAATTGACCCTAGCCAGAGAATAGATCAGTATTTCACTGATACCACGAGGAAAAGAACAAA
CAAACTTAAAAGTATTCATACACCTTGCTAACCTAAAAGACAGCAGGGACAAGATACATATGAGGACAAGGTAT
ACACCCAGTTCTGAATAACTTGAAGAACAGGCTTGCCAAAGAAGTAAGTTTATCCAATCTTGAATTTCTGCCAG
GCATGGTAGCTCATGCCTGTAACCCTGGCACTTAAGGGGCCAAGGCAGGAGGATCACTTGAGGCCAGTGAGCTGT
GATCACTCCAGTGCCTCGAGCCTGGGTGACAGGGCAAGACCCTGTCTCAAAAAAAAAAAAAAAAAA

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FIGURE 78

MPGLSCRFYQHKFPEVEDVVMVNVRSIAEMGAYVSLLEYNNIEGMILLSELSRRRIRSINKLIRIGRNECVVIR
VDKEKGYIDLSKRRVSPEEAIKCEDKFTKSKTVYSILRHVAEVLEYTKDEQLESLEFQRTAWVFDDKYKRPYGYAY
DAFKHAVSDPSILDSLDLNEDEREVLINNINRRRLTPQAVKIRADIEVACYGYEGIDAVKEALRAGLNCSTENMPI
KINLIAPPRYVMTTTLERTEGLSVLSQAMAVIKEKIEEKRGVFNVQMEPKVVTDTDETALARQMERLERENAEV
DGDDDAEEMEAKAED

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FIGURE 79

[illegible]

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FIGURE 80

MERIPSAQPPFACLPKAPGLEHGDLPGMYPAHMYQVYKSRRGIKRSEDSKETYKLPHRLIEKKRRDRINECIAQL
KDLLPEHLKLTTLGHLEKAVVLELTTLKHVKALTNLIDQQQKI IALQSGLQAGELSGRNVETGQEMFCSGFQTCA
REVLQYLAKHENTRDLKSSQLVTHLHRVVSELLQGGTSRKPSDPAPKVMDFKEKPSSPAKGSEGPKNCPVPIQR
TFAHSSGEQSGSDTDTDSGYGGESEKGDLRSEQPCFKSDHGRRFTMGERIGAIKQEEEPPTKKNRMQLSDDDEGH
FTSSDLISSPFLGPHPHQPPFCLPFYLIPPSATAYLPMLEKCWYPTSVFVLYPGLNASAAALSSFMNPDKISAPL
LMPQRLPSPLPAHPSVDSSVLLQALKPIPLNLETKD

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FIGURE 81

[illegible]

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FIGURE 82

MERIPSAQPPFACLPKAPGLEHGDLPGMYP AHMYQVYKSRRGIKRSEDSKETYKLPHRLIEKKRRDRINECIAQL
KDLLPEHLKLTTLGHLEKAVVLELTTLKHVKALTNLIDQQQKI IALQSGLQAGELSGRNVETGOEMFCSGFQTCA
REVLQYLAKHENTRDLKSSQLVTHLHRVVSELLQGGTSRKPSDPAPKVMDFKEKPSSPAKGSEGP GKNCVPVQIR
TFAHSSGEQSGSDTDTDSGYGGESEKGD LRSEQPCFKSDHGRRFTMGERIGA IKQESEEPPTKKNRMQLS DDEGH
FTSSDLISSPFLGPHPHQPPFCLPFYLIPPSATAYLPMLEKCWYPTSVPVLYPGLNASAAALSSFMNPDKISAPL
LMPQRLPSPLPAHPSVDSSVLLQALKPI PPLNLETKD

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FIGURE 83A

GTCTTTTACGCGTGTCTTCGTGTTGGTGCGCTTTTCACTGGTCATAAAGTGCTGCTCACGGCCGTGAACTGCTA
CAGCGTGAAGGCCGCCACCCGGGTCCAGGATGCTTTTGCCGCCGCCAAGCTCCTGGCCCTGGCCCTGATCATCCT
GCTGGGCTTCGTCCAGATCGGGAAGGGTGATGTGTCCAATCTAGATCCCAAGTTCTCATTTGAAGGCACCAAAC
GGATGTGGGGAACATTGTGCTGGCATTATACAGCGGCCTCTTTGCCTATGGAGGATGGAATTACTTGAATTTCGT
CACAGAGGAAATGATCAACCCCTACAGAAACCTGCCCTGGCCATCATCATCTCCCTGCCCATCGTGACGCTGGT
GTACGTGCTGACCAACCTGGCCTACTTCACCACCCTGTCCACCAGCAGATGCTGTCTGCTCCGAGGCCGTGGCCGT
GGACTTCGGGAACATATCACCTGGGCGTCATGTCTGGATCATCCCGTCTTCGTGGGCTGTCTGCTTTGGCTC
CGTCAATGGGTCCCTGTTACATCCTCCAGGCTCTTCTTCGTGGGGTCCCGGAAGGCCACCTGCCCTCCATCCT
CTCCATGATCCACCCACAGCTCCTCACCCCGTGCCGTCCCTCGTGTTCACGTGTGTGATGACGCTGCTCTACGC
CTTCTCCAAGGACATCTTCTCCGTATCAACTTCTTCAGCTTCTTCAACTGGCTCTGCGTGGCCCTGGCCATCAT
CGGCATGATCTGGCTGCGCCACAGAAAGCCTGAGCTTGAGCGGCCCATCAAGGTGAACCTGGCCCTGCTGTGTT
CTTCATCCTGGCCTGCCTCTTCTGATCGCCGTCTCCTTCTGGAAGACACCCGTGGAGTGTGGCATCGGCTTCAC
CATCATCCTCAGCGGGCTGCCCGTCTACTTCTTCGGGGTCTGGTGGAAAAACAAGCCCAAGTGGCTCCTCCAGGG
CATCTTCTCCACGACCGTCTGTGTGAGAAGCTCATGCAGGTGGTCCCCAGGAGACAAGCCAGGAGGCCGAGT
GGCTGCCGGAGGAGCATGCGCAGAGGCCAGTTAAAGTAGATCACCTCCTCGAACCCTCCGGTTCCCCGCAACC
CACAGCTCAGCTGCCATCCAGTCTCGCCGTCCCTCCCAGGTGGGCGAGTGGAGGCTGCTGTGAAAACCTCTGG
TACGAATCTCATCCCTCAACTGAGGGCCAGGGACCCAGGTGTGCTGTGCTCCTGCCAGGAGCAGCTTTTGGTC
TCCTTGGGCCCCTTTTCCCTTCCCTCCTTTGTTTACTTATATATATATTTTTTTTTAACTTAAATTTGGGTCAA
CTTGACACCCTAAGATGATTTTTTAAGGAGCTGGGGGAAGGCAGGAGCCTTCCTTTCTCCTGCCCAAGGGCCC
AGACCTTGGGCAAACAGAGCTACTGAGACTTGGAACCTCATTGCTACCACAGACTTGCACTGAAGCCAGACAGCT
GCCCAGACACATGGGCTTGTGACATTCTGTGAAAACCAACCCTGTGGGCTTATGTCTCTGCCTTAGGGTTTGAGA
GTGGAACTCAGCCGTAGGGTGGCACTGGGAGGGGGTGGGGGATCTGGGCAAGGTGGGTGATTCTCTCCAGGAGG
TGCTTGAGGCCCCGATGGACTCCTGACCATAATCCTAGCCCCGAGACACCATCCTGAGCCAGGGAACAGCCCCAG
GGTTGGGGGGTGGCGGCATCTCCCTAGCTCACCAGGCTTGGCTCTGGGCGAGTGTGGCCTCTTGGCTATTTCTG
TTCCAGTTTGGAGGCTGAGTTCTGGTTTATGACAGACAAAGCCCTGTCTTCAGTCTTCTAGAAACAGAGACAAG
AAAGGCAGACACACCGCGGCCAGGCACCCATGTGGGCGCCACCCTGGGCTCCACACAGCAGTGTCCCTGCCCT
AGAGGTCGAGCTACCTCAGCCTCCAATGCATTGGCCTCTGTACCGCCCGGACAGCCCTTCTGGCCGGTGTGG
GTTCCCACTCCCGGCCTAGGCACCTCCCGCTCTCCCTGTACGCTCATGTCTGTCTGGTCTGATGCCCGTT
GTCTAGGAGACAGAGCCAAGCACTGCTCACGTCTCTGCCGCTGCGTTTGGAGGCCCTGGGCTCTCACCCAGTC
CCCACCCGCTGCAGAGAGGGAACTAGGGCACCCCTTGTCTGTGTTTCCCGTGAATTTTTTCTGCTATGGGAG
GCAGCCGAGGCTGGCCAATGCGGCCCACTTCTCTGAGCTGTGCTGCTCCATGGCAGCAGCCAAGGACCCCCA
GAACAAGAAGACCCCCCGCAGGATCCCTCCTGAGCTCGGGGGGCTCTGCCTTCTCAGGCCCGGGCTTCCCTTC
TCCCAGCCAGAGGTGGAGCCAAGTGGTCCAGCGTCACTCCAGTGCTCAGCTGTGGCTGGAGGAGCTGGCCTGTG
GCACAGCCCTGAGTGTCCCAAGCCGGGAGCCAACGAAGCCGGACACGGCTTCACTGACCAGCGGCTGCTCAAGCC
GCAAGCTCTCAGCAAGTGGCCAGTGGAGCCTGCCGCCCCACCTGGGCACCGGGACCCCTCACCATCCAGTGGG
CCCGGAGAAACCTGATGAACAGTTTGGGGACTCAGGACCAGATGTCCGTCTCTTGTGCTTGGGAATGAAGACCT
TTATTCACCCCTGCCCGTTGCTTCCCGCTGCACATGGACAGACTTCACAGCGTCTGCTCATAGGACCTGCATCC
TTCTTGGGACGAATTCACCTCGTCCAAGGGACAGCCACGGTCTGGAGGCCGAGGACCACCAGCAGGCAGGTGG
ACTGACTGTGTTGGGCAAGACCTCTTCCCTCTGGGCTGTCTCTTGGCTGCAAATAAGGACAGCAGCTGGTGCC
CCACCTGCCTGGTGCATTGCTGTGTGAATCCAGGAGGCAGTGGACATCGTAGGCAGCCACGGCCCCAGGTCCAGG
AGAAGTGCTCCCTGGAGGCACGGACCACTGCTTCCCACTGGGGCCGGCGGGGCCACGCACGACGTACAGCTCTT
ACCTTCCCGCTCGGCTAGGGGTCTCGGGATGCCGTTCTGTTCCAACCTCCTGTTCTGGGAGGTGGACATGCCT
CAAGGATACAGGGAGCCGGCGGCCTCTCGACGGCACGCACTTCTGTTGGCTGCTGCGGCTGTGGGCGAGCATGG
GGGCTGCCAGCGTCTGTTGTGAAAGTAGCTGCTAGTGAAATGGCTGGGGCCGCTGGGGTCCGTCTTCACTGTC
GCAGGTCTCTTCTGGGCGTCTGAGCTGGGGTGGGAGCTCCTCCGAGAAGGTTGGTGGGGGGTCCAGTCTGTGAT
CCTTGGTGCTGTGTGCCCCACTCCAGCCTGGGGACCCCACTTCAAGAGGTAGGGGCCGTGTCCCGCGGTGTGAC
TGAGGCGCTGCTTCCCCCTCCCCCTCCTGCTGTGCTGGAATTCACAGGGACAGGGGCCACCGCAGGGGACTGTCT
CAGAAGACTTGATTTTTCCGTCCCTTTTTCTCCACACTCCACTGACAAACGTCCCCAGCGGTTTCCACTTGTGGG

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FIGURE 83B

CTTCAGGTGTTTTCAAGCACAACCCACCACAACAAGCAAGTGCATTTTCAGTCGTTGTGCTTTTTTGTTTTGTGC
TAACGTCTTACTAATTTAAAGATGCTGTCCGCACCATGTTTATTTATTTCCAGTGGTCATGCTCAGCCTTGCTGC
TCTGCGTGGCGCAGGTGCCATGCCTGCTCCCTGTCTGTGTCCCAGCCACGCAGGGCCATCCACTGTGACGTCGGC
CGACCAGGCTGGACACCCTCTGCCGAGTAATGACGTGTGTGGCTGGGACCTTCTTTATTCTGTGTTAATGGCTAA
CCTGTTACACTGGGCTGGGTTGGGTAGGGTGTTCGGCTTTTTTGTGGGGTTTTTATTTTTAAAGAAACACTCAA
TCATCCTAG

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FIGURE 84

MINPYRNLPLAIIISLPIVTLVYVLTNLAYFTTLSTEQMLSSEAVAVDFGNYHLGVMSWIIIPVFVGLSCFGSVNG
SLFTSSRLFFVGSREGHLPSILSMIHPQLLTPVPSLVFTCVMTLLYAFSKDIFSVINFFSFFNWLCVALAIIGMI
WLRHRKPELERPIKVNALPVFFILACLFLIAVSFWKTPVECGIGFTIILSGLPVYFFGVWKNKPKWLLQGIFS
TTVLCQKLMQVVPQET

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FIGURE 85

AGGTCTCAGCCGGTCGTCGCGACGTTGCCCCGCTCGCTCTGAGGCTCCTGAAGCCGAACTAGCTAGACTTTCCCT
CCTTCCCGCCTGCCTGTAGCGGCGTTGTTGCCACTCCGCCACCATGTTTCGAGGCGCGCCTGGTCCAGGGCTCCAT
CCTCAAGAAGGTGTTGGAGGCACTCAAGGACCTCATCAACGAGGCCTGCTGGGATATTAGCTCCAGCGGTGTAAA
CCTGCAGAGCATGGACTCGTCCACGTCTCTTTGGTGCAGCTCACCCCTGCGGTCTGAGGGCTTCGACACCTACCG
CTGCGACCGCAACCTGGCCATGGGCGTGAACTCACCAGTATGTCCAAAATACTAAAATGCGCCGGCAATGAAGA
TATCATTACACTAAGGGCCGAAGATAACGCGGATACCTTGGCGCTAGTATTTGAAGCACCAAACCAGGAGAAAGT
TTCAGACTATGAAATGAAGTTGATGGATTTAGATGTTGAACAACCTTGAATTCCAGAACAGGAGTACAGCTGTGT
AGTAAAGATGCCTTCTGGTGAATTTGCACGTATATGCCGAGATCTCAGCCATATTGGAGATGCTGTTGTAATTC
CTGTGCAAAAGACGGAGTGAAATTTTCTGCAAGTGGAGAACTTGGAAATGGAAACATTAAATTGTCACAGACAAG
TAATGTCGATAAAGAGGAGGAAGCTGTTACCATAGAGATGAATGAACCAGTTCAACTAACTTTGCACTGAGGTA
CCTGAACTTCTTTACAAAAGCCACTCCACTCTCTTCAACGGTGACACTCAGTATGTCTGCAGATGTACCCCTTGT
TCTAGAGTATAAAATTGCGGATATGGGACACTTAAAATACTACTTGGCTCCCAAGATCGAGGATGAAGAAGGATC
TTAGGCATTCTTAAATTTCAAGAAAATAAACTAAGCTCTTTGAGAACTGCTTCTAAGATGCCAGCATATACTGA
AGTCTTTTCTGTACCAAATTTGTACCTCTAAGTACATATGTAGATATTGTTTTCTGTAAATAACCTATTTTTTT
TCTCTATTCTCTCCAATTTGTTTAAAGAATAAAGTCCAAAGTCTGATCTGGTCTAGTTAACCTAGAAGTATTTTT
GTCTCTTAGAAATACTTGTGATTTTTATAATACAAAAGGGTCTTGACTCTAAATGCAGTTTTAAGAAGTGTTTTT
GAATTTAAATAAAGTTACTTGAATTTCAAAC

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FIGURE 86

MFEARLVQGSILKKVLEALKDLNEACWDISSSGVNLQSMDSHVSLVQLTLRSEGFDTYRCDRNLAMGVNLISM
SKILKCAGNEDIITLRAEDNADTLALVFEAPNQEKVSDYEMKMDLDVEQLGIPEQEYSCVVKMPSGEFARICRD
LSHIGDAVVISCAKDGVKFSASGELGNGNIKLSQTSNVDKEEEAVTIEMNEPVQLTFALRYLNFFTKATPLSSTV
TLSMSADVPLVVEYKIADMGHLKYYLAPKIEDEEGS

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FIGURE 87

TAGCTAGGCAGGAAGTCGGCGCGGGCGGGCGGGACAGTATCTGTGGGTACCCGGAGCACGGAGATCTCGCCGGCT
TTACGTTACCTCGGTGTCTGCAGCACCTCCGCTTCTCTCCTAGGCGACGAGACCCAGTGGCTAGAAAGTTCAC
CATGTCTATTCTCAAGATCCATGCCAGGGAGATCTTTGACTCTCGCGGGAATCCCACTGTTGAGGTTGATCTCTT
CACCTCAAAAGGTCTCTTCAGAGCTGCTGTGCCCAGTGGTGCTTCAACTGGTATCTATGAGGCCCTAGAGCTCCG
GGACAATGATAAGACTCGCTATATGGGGAAGGGTGTCTCAAAGGCTGTTGAGCACATCAATAAACTATTGCGCC
TGCCCTGGTTAGCAAGAACTGAACGTCACAGAACAAGAGAAGATTGACAACTGATGATCGAGATGGATGGAAC
AGAAAATAAATCTAAGTTTGGTGCGAACGCCATTCTGGGGGTGTCCCTTGCCGTCTGCAAAGCTGGTGCCGTTGA
GAAGGGGTCCCCCTGTACCGCCACATCGCTGACTTGGCTGGCAACTCTGAAGTCATCTGCCAGTCCCGGCGTT
CAATGTCATCAATGGCGGTTCTCATGCTGGCAACAAGCTGGCCATGCAGGAGTTCATGATCCTCCAGTCGGTG
AGCAAACCTCAGGGAAGCCATGCGCATTGGAGCAGAGGTTTACCACAACCTGAAGAATGTCATCAAGGAGAAATA
TGGGAAAGATGCCACCAATGTGGGGGATGAAGGCGGGTTTGCTCCCAACATCCTGGAGAATAAAGAAGGCCTGGA
GCTGCTGAAGACTGCTATTGGGAAAGCTGGCTACACTGATAAGGTGGTCATCGGCATGGACGTAGCGGCCTCCGA
GTTCTTCAGGTCTGGGAAGTATGACCTGGACTTCAAGTCTCCCGATGACCCAGCAGGTACATCTCGCCTGACCA
GCTGGCTGACCTGTACAAGTCCTTCATCAAGGACTACCCAGTGGTGTCTATCGAAGATCCCTTTGACCAGGATGA
CTGGGGAGCTTGGCAGAAGTTCACAGCCAGTGCAGGAATCCAGGTAGTGGGGGATGATCTCACAGTGACCAACCC
AAAGAGGATCGCCAAGGCCGTGAACGAGAAGTCTTGCAACTGCCTCCTGCTCAAAGTCAACCAGATTGGCTCCGT
GACCGAGTCTCTTCAGGCGTGCAAGCTGGCCCAGGCCAATGGTTGGGGCGTCATGGTGTCTCATCGTTTCGGGGGA
GACTGAAGATACCTTCATCGCTGACCTGGTTGTGGGGCTGTGCACTGGGCAGATCAAGACTGGTGCCCCCTTGCCG
ATCTGAGCGCTTGGCCAAGTACAACCAGCTCCTCAGAATTGAAGAGGAGCTGGGCAGCAAGGCTAAGTTTGCCGG
CAGGAACTTCAGAAACCCCTTGGCCAAGTAAGCTGTGGGCAGGCAAGCCCTTCGGTCACCTGTTGGCTACACAGA
CCCCCTCCCCTCGTGTGCTAGCTCAGGCAGCTCGAGGCCCCCGACCAACACTTGACGGGTCCCTGCTAGTTAGCGCC
CCACCGCCGTGGAGTTCGTACCGCTTCCTTAGAACTTCTACAGAAGCCAAGCTCCCTGGAGCCCTGTTGGCAGCT
CTAGCTTTGCAGTCGTGTAATTGGCCCAAGTCATTGTTTTTCTCGCCTCACTTTCCACCAAGTGTCTAGAGTCAT
GTGAGCCTCGTGTCTCTCCGGGGTGGCCACAGGCTAGATCCCCGGTGGTTTTGTGCTCAAATAAAAAGCCTCA
GTGACCCATGAG

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FIGURE 88

MSILKIHAREIFDSRGNPTVEVDLFTSKGLFRAAVPSGASTGIYELELRDNDKTRYMGKGVSKAVEHINKTIAP
ALVSKKLVTEQEKIDKLMIEDGTENKSKFGANAILGVSLAVCKAGAVEKGVPLYRHIADLAGNSEVILPVPAP
NVIINGGSHAGNKLAMQEFMILPVGAANFREAMRIGAEVYHNLKNVIKEKYGKDATNVGDEGGFAPNILENKEGLE
LLKTAIGKAGYTDKVVIGMDVAASEFFRSGKYDLDFKSPDDPSRYISPDQLADLYKSFIDYPVVSIEDPFDQDD
WGAWQKFTASAGIQVVGDDLTVTNPKRIAKAVNEKSCNCLLLKVNQIGSVTESLQACKLAQANGWGMVSHRSGE
TEDTFIADLVVGLCTGQIKTGAPCRSERLAKYNQLLRIEEEELGSKAKFAGRNFRNPLAK

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FIGURE 89

GGCTGAGGCAGTGGCTCCTTGACAGCAGCTGCACGCGCCGTGGCTCCGGATCTTCTTCGTCTTTGCAGCGTAGC
CCGAGTCGGTCAGCGCCAGAGGACCTCAGCAGCCATGTCGAAGCCCCATAGTGAAGCCGGGACTGCCTTCATTCA
GACCCAGCAGCTGCACGCAGCCATGGCTGACACATTCTGGAGCACATGTGCCGCTGGACATTGATTCACCACC
CATCACAGCCCCGGAACACTGGCATCATCTGTACCATTGGCCCAGCTTCCCGATCAGTGGAGACGTTGAAGGAGAT
GATTAAGTCTGGAATGAATGTGGCTCGTCTGAACCTTCTCTCATGGAACCTCATGAGTACCATGCGGAGACCATCAA
GAATGTGCGCACAGCCACGGAAGCTTTGCTTCTGACCCCATCCTCTACCGCCCCGTTGCTGTGGCTCTAGACAC
TAAAGGACCTGAGATCCGAACCTGGGCTCATCAAGGGCAGCGGCACTGCAGAGGTGGAGCTGAAGAAGGGAGCCAC
TCTCAAAATCACGCTGGATAACGCCTACATGGAAGGTGTGACGAGAATCCTGTGGCTGGACTACAAGAACAT
CTGCAAGGTGGTGGAGGTGGGCAGCAAGATCTACGTGGATGATGGGCTTATTTCTCTCCAGGTGAAGCAGAAAGG
TGCCGACTTCCTGGTGACGGAGGTGGAAGGTGGTGGCTCCTTGGGCAGCAAGAAGGGTGTGAACCTTCCTGGGGC
TGCTGTGGACTTGCTGTGTGTCGGAGAAGGACATCCAGGATCTGAAGTTTGGGGTTCGAGCAGGATGTTGATAT
GGTGTTCGCTCATTATCCGCAAGGCATCTGATGTCCATGAAGTTAGGAAGGTCTGGGAGAGAAGGGAAAGAA
CATCAAGATTATCAGCAAAATCGAGAATCATGAGGGGGTTCGGAGGTTTGATGAAATCCTGGAGGCCAGTGATGG
GATCATGGTGGCTCGTGGTGATCTAGGCATTGAGATTCTGCAGAGAAGGTCTTCCTTGCTCAGAAGATGATGAT
TGGACGGTGCAACCGAGCTGGGAAGCCTGTCTGTGCTACTCAGATGCTGGAGAGCATGATCAAGAAGCCCCG
CCCCACTCGGGCTGAAGGCAGTGATGTGGCCAATGCAGTCCTGGATGGAGCCGACTGCATCATGCTGTCTGGAGA
AACAGCCAAAGGGGACTATCCTCTGGAGGCTGTGCGCATGCAGAACCTGATTGCCCGTGAGGCAGAGGCTGCCAT
CTACCACTTGCAATTATTTGAGGAATCCGCCGCTGGCGCCCATTACCAGCGACCCACAGAAGCCACCGCCGT
GGGTGCCGTGGAGGCCTCCTTCAAGTGCTGCAGTGGGGCCATAATCGTCCTACCAAGTCTGGCAGGTCTGCTCA
CCAGGTGGCCAGATACCGCCACGTGCCCCCATCATTTGCTGTGACCCGGAATCCCAGACAGCTCGTCAGGCCCA
CCTGTACCCTGGCATCTTCCCTGTGCTGTGCAAGGACCCAGTCCAGGAGGCTGGGCTGAGGACGTGGACCTCCG
GGTGAACCTTTGCCATGAATGTTGGCAAGGCCCCAGGCTTCTTCAAGAAGGGAGATGTGGTCATTGTGCTGACCGG
ATGGCGCCCTGGCTCCGGCTTACCAACACCATGCGTGTGTTCTGTCCTGTGCCGTGATGGACCCAGAGCCCCCTCT
CCAGCCCCCTGTCCACCCCCTTCCCCAGCCCATCCATTAGGCCAGCAACGCTTGTAGAACTCACTCTGGGCTGT
AACGTGGCACTGGTAGGTTGGGACACCAGGGAAGAAGATCAACGCCTCACTGAAACATGGCTGTGTTTGCAGCCT
GCTCTAGTGGGACAGCCAGAGCCTGGCTGCCCCATCATGTGGCCCCACCAATCAAGGGAAGAAGGAGGAATGC
TGGACTGGAGGCCCTGGAGCCAGATGGCAAGAGGGTGACAGCTTCCTTTCTGTGTGTAATCTGTCCAGTTCT
TTAGAAAAATGGATGCCAGAGGACTCCCAACCTGGCTTGGGGTCAAGAAACAGCCAGCAAGAGTTAGGGGCC
TTAGGGCACTGGGCTGTTGTTCCATTGAAGCCGACTCTGGCCCTGGCCCTTACTTGCTTCTCTAGCTCTCTAGGC
CTCTCCAGTTTGACCTGTCCCCACCTTCCACTCAGCTGTCTGCAGCAAACACTCCACCCTCCACCTTCCATTT
TCCCCACTACTGCAGCACCTCCAGGCCTGTTGCCGC

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FIGURE 90

MSKPHSEAGTAFIQTOQLHAAMADTFLEHMCRLDIDSPITARNTGIICTIGPASRSVETLKEMIKSGMNVARLN
FSHGTHEYHAETIKNVRTATESFASDPILYRPVAVALDTKGPEIRTGLIKSGTAEVELKKGATLKITLDNAYME
KCDENILWLDYKNICKVVEVGSKIYVDDGLISLQVKQKGADFLVTEVENGGSLGSKKGVNLPGAAVDLPVASEKD
IQDLKFGVEQDQDMVFAFIRKASDVHEVRKVLGEKGKNIKIISKIENHEGVRRFDEILEASDGIMVARGDLGIE
IPAELVFLAQMMIGRCNRAGKPVICATQMLESMIKKPRPTRAEGSDVANAVLDGADCIMLSGETAKGDYPLEAV
RMQNLIAREAEAAIYHLQLFEELRRLAPITSDPTEATAVGAVEASFCCSGAIIIVLTKSGRSAHQVARYRPRAPI
IAVTRNPQTARQAHLYRGIFPVLCKDPVQEAWAEDVDLRVNFAMNVGKARGFFKKGDVVIVLTGWRPGSGFTNTM
RVVPVP

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FIGURE 91

CCGAGGCCAAGTCCCGGGCGCTAGCCACCTCCCACCCGCCTCTTGGCTCCTCTCCTCTAGGCCGTCGCTTTCGG
GTTCTCTCATCGCTTCGTCGTTCCCAATGTTTGAGGAGAAGGCCAGCAGTCCTTCAGGGAAGATGGGAGGCGAG
GAGAAGCCGATTGGTGTGGTGAAGAGAAGCAAAAGGAAGGAGGCAAAAAGAAGAACAAAGAAGGATCTGGAGAT
GGAGGTCGAGCTGAGTTGAATCCTTGGCCTGAATATATTTACACACGTCTTGAGATGTATAATATACTAAAAGCA
GAACATGATTCCATTCTGGCAGAAAAGGCAGAAAAAGATAGCAAGCCAATTAAAGTCACTTTGCCTGATGGTAAA
CAGGTTGATGCGGAATCTTGGAAAACACACCATATCAAATTGCCTGTGGAATTAGTCAAGGCCTGGCCGACAAC
ACCGTTATTGCTAAAGTAAATAATGTTGTGTGGGACCTGGACCGCCCTCTGGAAGAAGATTGTACCTTGAGCTT
CTCAAGTTTGAGGATGAGGAAGCTCAGGCAGTGTATTGGCACTCTAGTGCTCACATAATGGGTGAAGGCATGGAA
AGAGTCTATGGTGGATGTTTATGCTACGGTCCGCCAATAGAAAAATGGATTCTATTATGACATGTACCTCGAAGAA
GGGGGTGTGTCTAGCAATGATTTCTTCTCTGGAGGCTTTGTGTAAGAAAATCATTAAAGAAAAACAAGCTTTT
GAAAGACTGGAAGTTAAGAAAGAACTTTACTGGCAATGTTTAAGTACAACAAGTTCAAATGCCGGATATTGAAT
GAAAGGTGAATACTCCAACACAGTCTATAGATGTGGCCCTTTGATAGATCTCTGCCGGGGTCTCATGTT
AGACACACGGGCAAAATTAAGGCTTTAAAAATACACAAAAATTCCTCCACGTACTGGGAAGGCAAGCAGATATG
GAGACTCTCCAGAGAATTTATGGCATTTCATTCCAGATCCTAAAATGTTGAAAGAGTGGGAGAAGTTCCAAGAG
GAAGCTAAAAACCGAGATCATAGGAAAATTGGCAGGGACCAAGAACTATATTTCTTTCATGAACCTCAGCCCTGGA
AGTTGCTTTTTTCTGCCAAAAGGAGTCTATATTTATAATGCACCTATTGAATTCATTAGGAGCGAATATAGGAAA
AGAGGATTCCAGGAGGTAGTCACCCCAAACATCTTCAACAGCCGACTCTGGATGACCTCGGGCCACTGGCAGCAC
TACAGCGAGAACATGTTCTCCTTTGAGGTGGAGAAGGAGCTGTTGCCCTGAAACCCATGAACCTGCCCAGGACAC
TCCCTTATGTTTGATCATCGGCCAAGGTCTTGGCGAGAAGTGCCTCTGCGGCTAGCTGATTTTGGGGGTCTTCAT
AGGAACGAGCTGTCTGGAGCACTCACAGGACTCACCCGGGTACGAAGATTCCAACAGGATGATGCTCACATATTC
TGTGCCATGGAGCAGATTGAAGATGAAATAAAAGGTTGTTTGGATTTTCTACGTACGGTATATAGCGTATTTGGA
TTTTCTTTTAACTAAACCTTTCTACTCGCCCCGAAAAATTCCTTGGAGATATCGAAGTATGGGATCAAGCTGAG
AAACAACCTGAAAACAGTCTGAATGAATTTGGTGAAAAGTGGGAGTTAACTCTGGAGATGGAGCTTTCTATGGC
CCAAAGATTGACATACAGATTAAAGATGCGATTGGGCGGTACCACCAGTGTGCAACCATCCAGCTGGATTTCCAG
TTGCCCATCAGATTTAATCTTACTTATGTAAGCCATGATGGTGGAGATAAGAAAAGGCCAGTGATTGTTTCATCGA
GCCATCTTGGGATCAGTGGAAGAATGATTGCTATCCTCACAGAAAACATATGGGGGCAAATTGGCCCCCTTTTGG
CTGTCCCTCGCCAGGTAATGGTAGTTCCAGTGGGACCAACCTGTGATGAATATGCCCAAACGTACGACAACAA
TTCCACGATGCCAAATTCATGGCAGACATTGATCTGGATCCAGGCTGTACATTGAATAAAAAGATTTCGAAATGCA
CAGTTAGCACAGTATAACTTCATTTTAGTTGTTGGTGAAAAAGAGAAAATCACTGGCACTGTTAATATCCGCACA
AGAGACAATAAGGTCCACGGGAACGCACCATTTCTGAAACTATCGAGCGGCTACAGCAGCTCAAAGAGTTCCGC
AGCAAACAGGCAGAAGAAGATTTTAAATGAAAAAATTACCCAGATTGGCTCCATGGAAAAGGAGGAACAGCGTTT
CCGTAAAATTGACTTTGTACTCGAAAACGTCAATTTATATTGAACTTGGAGGAGGAGTTTGGCAAAGTCTGAAAT
AGGTC AACCTGCAGGCGTAACATTTTTTGACCTAGTCAGTTTTTAAACAATGTGCATTTGAAGGAGTTAATTTAA
AGAGAGCCAATAAAATGATTTTACTCATTCACTATCTGAGTACTGGAAGTGAAACATGAGGAATGCTTTAGTGTA
ATGTGGGAGAACTTTTTTGTAATTTAATGCAATTGAAAAAGTTTTCAAATTCAATTAAGATACTAGAATTGGT
TATGGTGTAAACCGAATTC

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FIGURE 92

MGGEKPIGAGEEKQKEGGKKKNKEGSGDGGRAELNPWEYIYTRLEMYNILKAEHDSILA EKA EKDSKPIKVTL
PDGKQVDAESWKTPYQIACGISQGLADNTVIAKVNNVVWDLDRPLEEDCTLELLKFEDEEAQAVYWHSSAHIMG
EGMERVYGGCLCYGPPiENGfFYDmYLEEGGVSSNDFSSLEALCKKIIEKQAFERLEVKKETLLAMFKYNKFKC
RILNEKVNTPTTTVYRCGPLIDLGRGPHVRHTGKIKALKIHKNSSTYWEKGADMETLQRIYGISFPDPKMLKEWE
KFQEEAKNRDHRKIGRDQELYFFHELSPGSCFFLPKGVYIYNALIEFIRSEYRKRGFQEVVTPNIFNSRLWMTSG
HWQHYSNMFSFEVEKELFALKPMNCPGHSLMFDHRPRSWRELPLRLADFGGLHRNELSGALTGLTRVRRFQDD
AHIFCAMEQIEDEIKGCLDFLRTVYSVFGFSFKLNLSTRPEKFLGDI EVWDQAEKQLENSLNEFGEKWE LNSGDG
AFYGPKIDIQIKDAIGRYHQCATIQ LDFQLPIRFNLTYVSHDGEDKKRPVIVHRAILGSVERMIAILTENYGGKL
APFWLSPRQVMVVPVGPTCDEYAQNVRQQFHDAKFMAIDLDPGCTLNKKIRNAQLAQYNFILVVGEKEKITGTV
NIRTRDNKVHGERTISETIERLQQLKEFRSKQAEEEF

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FIGURE 93

GGCACCGCGCGGGACGGAGCTTGGCTGTTGGTCGGTGGGTTCCTGTCGGCGGGCGGCCAAGGAGGAGGAGACACA
GTTGGAGCAGCTCCGTGGGCTGACTGGGGCGAGGCCTCAGCAGCGCGAGCTTGAGTGCGGGCCGAGCCTGCGGCGC
CTTCCCCTGCGGGTGGGGACGAGCGGGCCCCGCGGCGTCATCGGCGGGCAGGAGCCGCCGCGCCTCGGCCTAGCA
TGTCGGAAGCGGGCGAGGAGCAGCCCATGGAGACGACGGGCGCCACCGAGAACGGACATGAGGCCGTCCCCGAAG
CGAGTCGCGGGCCGGGGCTGGACGGGCGCCGCGGGCGGGGCTGGAGGCGCGACCGCCGCGCCCCGAGCGGGAATCA
GAACGGCGCCGAGGGACCAGATCAACGCCAGCAAGAACGAGGAGGACGCGGGAAAAATGTTCTGTTGGTGGCCTGA
GCTGGGATACTAGCAAAAAAGATTTAAAAGACTATTTTACTAAATTTGGAGAGGTCGTTGACTGTACAATAAAAA
TGGATCCCAACACTGGACGGTCAAGAGGGTTTGGGTTTATCCTGTTCAAAGATGCAGCCAGTGTGGAGAAGGTCC
TAGACCAGAAGGAGCACAGGCTGGATGGCCGTGTCAATTGACCCTAAAAAGGCCATGGCTATGAAGAAGGACCCGG
TCAAGAAAATCTTCGTTGGGGGTCTGAATCCTGAAAGTCCCACTGAGGAAAAGATCAGGGAGTACTTTGGCGAGT
TTGGGGAGATTGAGGCCATTGAATTGCCAATGGATCCAAAGTTGAACAAAAGACGAGGTTTTGTGTTTATCACCT
TTAAAGAAGAAGAACCCGTGAAGAAGTTCTGGAGAAAAAGTTCCATACTGTCAGTGGAAGCAAGTGTGAGATCA
AGGTGGCCCAGCCCAAAGAAGTCTATCAGCAGCAGCAGTATGGCTCTGGGGGCCGTGGAAACCGCAACCGAGGGA
ACCGAGGCAGCGGAGGTGGTGGTGGAGGTGGAGGTGAGAGTCAGAGTCAGAGTTGGAATCAGGGCTACGGCAACTACTGGA
ACCAGGGCTACGGCTACCAGCAGGGCTACGGGCCTGGCTATGGCGGCTACGACTACTCGCCCTATGGCTATTACG
GCTACGGCCCCGGCTACGACTACAGTCAGGGTAGTACAAACTACGGCAAGAGCCAGCGACGTGGTGGCCATCAGA
ATAACTACAAGCCATACTTGAGGCGGCCAAGGGAGCGACCAACTGATCGCACACATGCTTTGTTTGATATGGAGT
GAACACAATTATGTACCAAATTTAACTTGGCAAACCTTTCTATTGCCTGTCCCATGTGCATCTTATTTAAATTTTC
CCCCATGGAAATCACTCTCCTGTTGACTATTTCCAGAGCTCTAGGTGTTTAGGCAGCGTGTGGTGTCTGAGAGGC
CATAGCGCCATCATGGGCTGATTTTTATTACCAGGTCCCCCAGAAGCAGGTGAGAGGCTCTGCTTCCTGCTGCCG
CTCTGCAGCCTGGACCTGTGGACCCTGGTTGTAAAGAGTAAATTGTATCTTAGGAAACAGTGTACCTTTTTTTT
CACCTTTTAATTTTATATTATTTGCGTCATACATTTCTGTAAACGGAAAGTGTTAATTTTACTGTACTTTTTGGTA
CCCCTTTTGGGAATCTAATGTATTGTAAGGTATTTTACACGTGTCCTGATTTTGCCACAACCTGGATATTGAAGC
TATCCAAGCTTTTGAAATAAAATTTAAAAACCCCAAGCCTGGGTGAGTGTGGGAAAAAAAAAAAAAAAAA

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FIGURE 94

MSEAGEEQPMETT GATENGHEAVPEASRGRGWTGAAAGLEARPPRPRAGIRTAPRDQINASKNEEDAGKMFVGGL
SWDTSKKDLKDYFTKFGEVVDCTIKMDPNTGRSRGFGFILFKDAASVEKVLDQKEHRLDGRVIDPKKAMAMKKDP
VKKIFVGGLNPESPTEEKIREYFGEFGEIEAIELPMDPKLNKRRGFVFITFKEEEPVKKVLEKKFHTVSGSKCEI
KVAQPKEVYQQQYGS GGRGNRNRGNRSGGGGGGGGQSQSWNQGYGNYWNQGYGYQQGYGPGYGGYDYSPLYGY
GYGPGYDYSQGSTNYGKSQRRGGHQNNYKPY

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FIGURE 95

GCCGGGGAAGTCATGCTCGCTTCACGGAGGCAATAGCTAGCCGGTGTCTGTGGGAGGTTATGTTTATTTGAGACT
TCTCCATCGGGATCGCCTGGTGTACCAAGTGTCCACTGGTACTGAGGTTTGCTGCCTGCCTTCTTGCCATGTCT
AACGAAGTAGAAACAAGTGCAACCAATGGTCAGCCCCGACCAACAGGCCCGCACCAAAAGCACCTCAAAGAAGGAA
AAAAAGAAAGGCCCTGAAAAGACAGATGAATATCTCCTAGCAAGGTTCAAAGGCGATGGCGTAAAATATAAGGCC
AAGCTGATTGGCATTGATGATGTGCCAGATGCAAGAGGGGATAAAATGAGCCAAGACTCTATGATGAACTAAAG
GGAATGGCGGCACGTGGTCGGTCTCAGGGACAACACAAACAAAGGATCTGGGTCAACATTTCCCTTTCTGGGATA
AAAATAATTGATGAGAAAACCTGGGGTAATAGAGCATGAACATCCAGTAAATAAGATTTCTTTTATTGCCCCGTGAT
GTGACAGACAACCGGGCATTGTTGTTACGTGTGTGGAGGAGAAGGCCAGCATCAGTTTTTTTACCATAAAAACCGGG
CAACAGGCTGAACCATTAGTTGTTGATCTTAAAGACCTTTTTCAAGTTATCTATAATGTAAAGAAAAAGGAAGAA
GAAAAGAAAAAGATAGAGGAAGCCAGCAAAGCAGTTGAGAATGGGAGTGAGGCCCTAAGGATTCTAGATGACCAA
ACTAACAACTGAAATCGGGTGTGACCAGATGGATTTGTTTGGGGACATGTCTACACCTCCTGACCTAAATAGT
CCAACAGAAAGCAAAGATATCCTGTTAGTGGATCTAAACTCTGAAATCGACACCAATCAGAATTCTTTAAGAGAA
AATCCATTCTTAAACAAACGGGCATCACCTCCTGTTCTCTTCTCGACCAACGCCTCAGGCATCCTTCTTGCTGAA
AATGCCTTTTCTGCCAATCTCAACTTCTTTCCACCCCTAATCCTGATCCTTTCCGTGACGATCCTTTACACAG
CCAGACCAATCGACACCTTCTTCGTTTGATTCTCTCAAATCTCCAGATCAGAAGAAAGAGAATTTCAGTAGCTCG
TCTACTCCGCTGAGTAATGGGCCCCCTGAATGGTGTGATGTTGACTACTTTGGTCAAGCAATTTGACCAGATCTCTAAC
CGGACTGGCAAAACAGGAAGCTCAGGCAGGCCCATGGCCCTTTTCAAGTTTCGCAAACCCAGCCAGCAGTGAGAACT
CAAAATGGGGTATCTGAAAGAGAACAGAACGGCTTCTCTGTCAAATCCTCCCCGAACCCCTTTTGTGGGAAGCCCT
CCCAAAGGACTGTCCATACAGAATGGCGTAAAGCAGGACTTGGAAGCTCTGTCCAGTCCCTACCACATGACTCC
ATAGCCATTATCCACCTCCACAAAGTACCAAAACAGGAAGAGGCAGAAGGACTGCTAAGTCTTCAGCCAATGAC
TTGCTTGATCAGACATCTTTGCTCCTCCCGTCTCAGAACCTTCAGGCCAGGCGTCACCCACAGGACAACCTACA
GCCCTGCAGCCCAACCCCTCTGGATCTCTTCAAACAAGTGCTCCTGCCCCAGTGGGGCCCCCTGGTGGGTCTAGGT
GGTGTAACTGTACACTCCCTCAGGCAGGACCATGGAACACAGCATCTTTGGTCTTCAATCAGTCCCCTTCAATG
GCTCCGGGAGCCATGATGGGTGGTCAACCTTCAGGTTTTAGTCAGCCCGTCATTTTTGGTACAAGTCCAGCTGTT
TCAGGTTGGAACAGCCTTCACCTTTGCAGCCTCAACTCCCCCTCCAGTGCCCTGTTGTCTGGGGCCCTTCTGCA
TCTGTGGCACCAATGCTTGGTCAACAACAAGCCCTTTGGGGAATCCTTTTCAGAGCAATATTTTTCCAGCTCCT
GCTGTGTCCACTCAGCCCCCATCCATGCACTCCTCTCTCTGGTCACTCCTCCTCAGCCACCTCCCAGAGCTGGC
CCTCCCAAGGACATCTCCAGTGATGCCTTCACTGCCTTAGACCCACTTGGGGATAAAGAGATCAAGGATGTGAAA
GAAATGTTTAAAGATTTCAACTGCGGCAGCCACCTGCTGTGCCCCGCGGGAAGGGAGAGCAGACTTCTTCTGGG
ACTTTGAGTGCCCTTGCCAGTTATTTCAACAGCAAGGTTGGCATTCTCAGGAGAATGCAGACCATGATGACTTT
GATGCTAATCAACTATTGAACAAGATCAATGAACCACCAAGCCAGCTCCAGACAAGTTTCCCTGCCAGTTACC
AAATCTACTGACAATGCATTTGAGAACCCTTTCTTTAAAGATTCTTTTGGTTTCATCACAAGCCTCTGTGGCTTCT
TCTCAACCTGTATCTTCTGAGATGTATAGGGATCCATTTGGAAATCCTTTTGCCATAAATTCTGAACTTGGTCTGC
AGACCATCCAGAGGAATAAAAAGGTTGGCCTTAGTAGTCAAAAACAAAGCTGATAGCCAGACACGTTCTGATTTT
TGCCCTTGTTCCAGCTTTGACGTATTATCTGTTGCCTTATTTCTCATTTGCCTCTTCTACTTGTAATAATGCTTTT
ACTTTCTGTCTAGGTTAAAGCTAAACTGAATCTATGGCTTTAAATAAATAAGATCCTAAACTCTCTAGCTTAAG
TGTAATGAAGTACAGTAGTTTCCCTACTGAACCCCTACCTCTTGTGTCCCTGGAACCTTCTAGAACACCTGCCTT
CTACCTCTGGTTGGGAGATGCAGCCACCACATCCCTTCATATCATACTGTTTTGAATAAATTTTCAAATCCTTA
TTGTTTCAGAGTTGTTTGGGGTTCTGTTTCAGAGCATAAAACCTAAAGGTTATAGTAGAACAAGGCACCTTCTTA
AAAGAAATCTTGCTTCAGACCATCAGTTACAGAGAATTTCTAAAGTAAATTTGAAGCAACTACAACCTTCTCCTT
AGACACTTTGGAATCTAACCACTTAAGGACCTTTTTAAAGAGATAGCTTCTCTTCTTTCTGAAGATCAATTTCTC
CCAAGGCCAAGATTGTCCTTTTCTCCATTTCTTGCTAGCTATTGCAAATGAGGGAAGAACATTATTCTCTCTC
CTCCCCTTTTTTTTCTGATTCTTTTTTTCAGTCAGTTTGTCTCTGGGTCAAGTAGTATTACCACCTTTTCAAA
GCAACAGACTCTCACAGGGCAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 96

MSNEVETSATNGQPDQQAAPKAPSKKEKKKGPEKTDEYLLARFKGDGVKYKAKLIGIDDPDARGDKMSQDSMMK
LKGMAARGRSQGQHKQRIWVNISLSGIKIIDEKTGVIEHEHPVNKISFIARDVTDNRAFGYVCGGEGQHQFFTIK
TGQQAEPVVDLKDLDLQVIYNVKKKEEEKKKIEEASKAVENGSEALRILDDQTNKLKSGVDQMDLFGDMSTPPDL
NSPTESKDILLVDLNLSEIDTNQNSLRENPFITNGITSCSLPRPTPQASFLPENAFSANLNFFPTPNPDPFRDDPF
TQPDQSTPSSFDLSPDKKENSSTPLSNGPLNGDVDFYFGQQFDQISNRTGKQEAQAGPWPFSSSQTPAV
RTQNGVSEREQNGFSVKSSPNPFVGSPPKGLSIQNGVKQDLESSVQSSPHDSIAIIPPPQSTKPGRRRTAKSSA
NDLLASDIFAPPVSEPSGQASPTGQPTALQPNPLDLFKTSAPAPVGPLVGLGGVTVTLPQAGPWNTASLVFNQSP
SMAPGAMMGQPSGFSQPVIFGTSPAVSGWNQPSFFAASPPPPVPPVWGFSASVAPNAWSTTSPLGNPFQSNIFP
APAVSTQPPSMHSSLLVTPPQPPPRAGPPKDISSDAFTALDPLGDKEIKDVKEMFKDFQLRQPPAVPARKGEQTS
SGTLSAFASYFNKVGIPQENADHDDFDANQLLNKINEPPKPAPRQVSLPVTKSTDNAFENPFFKDSFGSSQASV
ASSQPVSEMYRDPFGNPFA

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FIGURE 97

GCCGGGGAAGTCATGCTCGCTTCACGGAGGCAATAGCTAGCCGGTGTCTGTGGGAGGTTATGTTTATTTGAGACT
TCTCCATCGGGATCGCCTGGTGTACCAAGTGTCCACTGGTACTGAGGTTTGTCTGCCTGCCTTCTTGCCATGTCT
AACGAAGTAGAAACAAGTGCAACCAATGGTCAGCCCGACCAACAGGCCGCACCAAAAGCACCCCTCAAAGAAGGAA
AAAAAGAAAGGCCCTGAAAAGACAGATGAATATCTCCTAGCAAGGTTCAAAGGCGATGGCGTAAAAATATAAGGCC
AAGCTGATTGGCATTGATGATGTGCCAGATGCAAGAGGGGATAAAATGAGCCAAGACTCTATGATGAAACTAAAG
GGAATGGCGGCACGTGGTCTCGGTCTCAGGGACAACACAAACAAAGGATCTGGGTCAACATTTCCCTTTCTGGGATA
AAAATAATTGATGAGAAAAGTGGGGTAATAGAGCATGAACATCCAGTAAATAAGATTTCTTTTATTGCCCGTGAT
GTGACAGACAACCGGGCATTGTTGATCTTAAAGACCTTTTTCAAGTTATCTATAATGTAAAGAAAAAGGAAGAA
GAAAAGAAAAAGATAGAGGAAGCCAGCAAAGCAGTTGAGAATGGGAGTGAGGCCCTAAGGATTCTAGATGACC
ACTAACAAAGTGAATCGGGTGTGACCAGATGGATTTGTTTGGGGACATGTCTACACCTCCTGACCTAAATAGT
CCAACAGAAAGCAAAGATATCCTGTTAGTGGATCTAAACTCTGAAATCGACACCAATCAGAATTCCTTAAGAGAA
AATCCATTCTTAACAAACGGCATCACCTCCTGTTCTCTTCTCGACCAACGCCTCAGGCATCCTTCTTGCTGAA
AATGCCTTTTCTGCCAATCTCAACTTCTTTCCACCCCTAATCCTGATCCTTTCCGTGACGATCCTTTCACACAG
CCAGACCAATCGACACCTTCTTCGTTTGATTCTCTCAAATCTCCAGATCAGAAGAAAGAGAATTTCGAGTAGCTCG
TCTACTCCGCTGAGTAATGGGCCCTGAATGGTGATGTTGACTACTTTGGTCAGCAATTTGACCAGATCTCTAAC
CGGACTGGCAAACAGGAAGCTCAGGCAGGCCCATGGCCCTTTTCAAGTTCGCAAACCCAGCCAGCAGTGAGAACT
CAAAATGGGGTATCTGAAAGAGAACAGAACGGCTTCTCTGTCAAATCCTCCCGAACCCCTTTGTGGGAAGCCCT
CCCAAAGGACTGTCCATACAGAATGGCGTAAAGCAGGACTTGGAAGCTCTGTCCAGTCCTCACCACATGACTCC
ATAGCCATTATCCCACCTCCACAAAGTACCAAACCAGGAAGAGGCAGAAGGACTGCTAAGTCTTCAGCCAATGAC
TTGCTTGATCAGACATCTTTGCTCCTCCCGTCTCAGAACCCTCAGGCCAGGCGTCACCCACAGGACAACCTACA
GCCCTGCAGCCCCAACCTCTGGATCTCTTCAAACAAGTGCTCCTGCCCCAGTGGGGCCCTGGTGGGTCTAGGT
GGTGTAACTGTCACTCCCTCAGGCAGGACCATGGAACACAGCATCTTTGGTCTTCAATCAGTCCCCTTCAATG
GCTCCGGGAGCCATGATGGGTGGTCAACCTTCAGGTTTTAGTCAGCCCGTCATTTTGGTACAAGTCCAGCTGTT
TCAGGTTGGAACCAGCCTTACCCTTTGCAGCCTCAACTCCCCCTCCAGTGCCTGTTGTCTGGGGCCCTTCTGCA
TCTGTGGCACCCAATGCTTGGTCAACAACAAGCCCTTGGGGAATCCTTTTCAGAGCAATATTTTCCAGCTCCT
GCTGTGTCCACTCAGCCCCATCCATGCACTCCTCTCCTGGTCACTCCTCCTCAGCCACCTCCCAGAGCTGGC
CCTCCCAAGGACATCTCCAGTGTGCTTCACTGCCTTAGACCCACTTGGGGATAAAGAGATCAAGGATGTGAAA
GAAATGTTTAAGGATTTCAAAGTGCAGGACCCCTGCTGTGCCCGCGCGGAAGGGAGAGCAGACTTCTTCTGGG
ACTTTGAGTGCCCTTTGCCAGTTATTTCAACAGCAAGGTTGGCATTCTCAGGAGAATGCAGACCATGATGACTTT
GATGCTAATCAACTATTGAACAAGATCAATGAACCACCAAAGCCAGCTCCCAGACAAGTTTCCCTGCCAGTTACC
AAATCTACTGACAATGCATTTGAGAACCCTTTCTTTAAAGATTCTTTTGGTTTCATCACAAGCCTCTGTGGCTTCT
TCTCAACCTGTATCTTCTGAGATGTATAGGGATCCATTTGGAAATCCTTTTGCCTAAATTCTGAACTTGGTCTGC
AGACCATCCAGAGGAATAAAAAGGTTGGCCTTAGTAGTCAAAAACAAAGCTGATAGCCAGACACGTTCTGATTTCT
TGCCCTTGTTCAGCTTTGACGTATTATCTGTTGCCCTATTTCTCATTGCCTCTTCTACTTGTAAATGCTTTTCT
ACTTTCTGTCTAGGTTAAAGCTAAACTGAATCTATGGCTTTAAATAAATTAAGATCCTAAACTCTCTAGCTTAAG
TGTAATGAAGTACAGTAGTTTCCCTACTGAACCTTACCTCTTGTGTCCCTGGAACCTTCTAGAACACCTGCCTT
CTACCTCTGTTTGGGAGATGCAGCCACCACATCCCTTCATATCATACTGTTTTGAATAAATTTTCAAATCCTTA
TTGTTTCAGAGTTGTTTGGGGGTTCTGTTTTCAGAGCATAAACCTAAAGGTTATAGTAGAACAAGGCACCTTCTTA
AAAGAAATCTTGCTTCAGACCATCAGTTACAGAGAATTTCTTAAAGTAAATTAAGCAACTACAACCTTCTCCTT
AGACACTTTGGAATCTAACCACTTAAGGACCTTTTAAAGAGATAGCTTCTTCTTTCTGAAGATCAATTTCTC
CCAAGGCCAAGATTGTCCTTTTCTCCATTTCTTGCTAGCTATTGCAAATGAGGGAAGAACATTATTCATCTCTC
CTCCCTTTTTTTTCTGATTCTTTTTTTCAGTCAGTTTGTCTCTGGGTTCAAGTAGTATTACCACCCTTTCACAA
GCAACAGACTCTCACAGGGCAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 98

MSNEVETSATNGQPDQQAAPKAPSKKEKKKGPEKTDEYLLARFKGDGVKYKAKLIGIDDPDARGDKMSQDSMMK
LKGMAARGRSQGQHKQRIWVNISLSGIKIIDEKTGVIEHEHPVNKISFIARDVTDNRAFGYVCGGEGQHQFFTIK
TGQQAEPVVDLKDLEFQVIYNVKKKEEEKKKIEEASKAVENGSEALRILDDQTNKLKSGVDQMDLFGDMSTPPDL
NSPTESKDILLVDLNLSEIDTNQNSLRENPFLLTNGITSCSLPRPTPQASFLPENAFSANLNFFPTPNPDPFRDDPF
TQPDQSTPSSFDSLKSPDQKKENSSSSSTPLSNGPLNGDVDFGQQFDQISNRTGKQEAQAGPWPFSSTQTPAV
RTQNGVSEREQNGFSVKSSPNPFVGSPPKGLSIQNGVKQDLESSVQSSPHDSIAIIPPPQSTKPGRGRRTAKSSA
NDLLASDIFAPPVSEPSGQASPTGQPTALQPNPLDLFKTSAPAPVGPLVGLGGVTVTLPQAGPWNTASLVFNQSP
SMAFGAMMGQP SGFSQPVI FGTS PAVSGWNQPSFFAASTPPPVVWGPSASVAPNAWSTTSPLGNPFQSNIFP
APAVSTQPPSMHSSLLVTPPQPPPRAGPPKDISSDAFTALDPLGDKEIKDVKEMFKDFQLRQPPAVPARKGEQTS
SGTLSAFASYFNSKVGIPQENADHDDFDANQLLNKINEPPKPAPRQVSLPVTKSTDNAFENPFFKDSFGSSQASV
ASSQPVSSEMYRDPFGNPFA

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FIGURE 99

AGCGCTCAGATACGCGACGCGTAGCAGGCGGGGACCGAACGGGTGCCTCAGTGTCTTCCCCTCCCCTCGCCTGG
CCTCGCCGTCTCTCCCCGAGCCGGACCGGAACATATGTGATCCCGGAAGTTCCGGGGCCTTTGCTGTGTGGGAT
AAACAGTAATGGCGGAGGCTGCAACTCCCGGAACAACAGCCACAACATCAGGAGCAGGAGCGGCAGCGGCGACGG
CGGCAGCAGCCTCCCCACCCCGATCCCCACAGTCACCGCCCCGTCCCTGGGGGCGGGCGGAGGGGGCGGCGGCA
GCGACGGCAGCGGGCGGGCGGTGGACTAAACAGGTCACCTGCAGGTATTTTATGCATGGGGTTTGTAAAGGAAGGAG
ACAACGTGTCGCTACTCGCATGACCTCTCTGACAGTCCGTATAGTGTAGTGTGCAAGTATTTTCAGCGAGGGTACT
GTATTTATGGAGACCGCTGCAGATATGAACATAGCAAACCATTGAAACAGGAAGAAGCAACTGCTACAGAGCTAA
CTACAAAGTCATCCCTTGCTGCTTCTCAAGTCTCTCATCGATAGTTGGACCACTTGTGAAATGAATACAGGCG
AAGCTGAGTCAAGAAATTCAAACCTTTGCAACTGTAGGAGCAGGTTTCAGAGGACTGGGTGAATGCTATTGAGTTTG
TTCCTGGGCAACCCTACTGTGGCCGTACTGCGCCTTCTGCACTGAAGCACCCCTGCAGGGCTCAGTGACCAAGG
AAGAATCAGAGAAAGAGCAAACCGCCGTGGAGACAAAGAAGCAGCTGTGCCCCATGCTGCAGTGGGAGAGTGCC
GATACGGGGAGAACTGTGTGTATCTCCACGGAGATTCTGTGACATGTGTGGGCTGCAGCTCCTGCATCCAATGG
ATGCTGCCCAGAGATCGCAGCATATCAAATCGTGCATTGAGGCCATGAGAAGGACATGGAGCTCTCATTTGCCG
TGCAGCGCAGCAAGGACATGGTGTGTGGGATCTGCATGGAGGTGGTCTATGAGAAAGCCAACCCCACTGAGCGCC
GCTTCGGGATCCTCTCCAACGCAACCACACCTACTGTCTCAAGTGCATTGCAAGTGGAGGAGTGCTAAGCAAT
TTGAGAGCAAGATCATAAAGTCCTGCCGAGAATGCCGATCACAATACTTTGTCAATTCCAAGTGAGTACTGGG
TGGAGGAGAAAGAAGAGAAGCAGAACTCATTCTGAAATACAAGGAGGCAATGAGCAACAAGGCGTGCAGGTATT
TTGATGAAGGACGTGGGAGCTGCCCATTGAGGGAAGTGTGTTTACAAGCATGCGTACCCTGATGGCCGTAGAG
AGGAGCCACAGAGACAGAAAGTGGGAACATCAAGCAGATACCGGGCCCCAACGAAGGAACCACTTCTGGGAACCTCA
TTGAGGAAAGAGAGAACAGCAACCCCTTTGACAACGATGAAGAAGAGGTTGTACCTTTGAGCTGGGCGAGATGT
TGCTTATGCTTTTGGCTGCAGGTGGGGACGACGAACCTAACAGACTCTGAAGATGAGTGGGACTTGTTCATGATG
AGCTGGAAGATTTTTATGACTTGGATCTATAGCAACCTTGCCTGGCGTGTGAAGTGGTCTGCTGACCTCAGACAG
CAGCTGTCCCCTGTGGTGGTGTGGCAGTGCCTGTGTTCTCTCCTAGGCAGGCCTCTCAACTCCAGGTGCTGTCTCT
AAGAATTTTTACCAGGGCCTGTCTTCTCAACCCCTCACCTTTCCCTGAGGAGTGTGTTGTTTTCCCTGTTGAAA
AAAGTTACAAAAATAAATCTTAAAGTTAGTTTTTTGTAACACGAATTTAACTGTCAGACAGTTAGTGTAGGTGTG
TTGCGTCATCTGTTTTCAACCAGATTGCATTTATGGACTTTTACACACTCATTTTGAGGACCCCAAGTTCAAAA
GTAAGCAGTGGCCCTGCTTTGGGGTCCAAGAATAGGAGTGTGGGTGAAGGGACCTAAGCTGGCCAATAGCCC
TCTGCCCCAGACATGGGATGTGGATCCTTGAGGTTTTCTGGTGAATCTGCACATCTGTGTTTTTATATCTGTTC
CTACCCTGTAATCCCTACCACGTGCATTGTTCTGTGGTTTTGGTCTCTTGTGTTAATTGCACACAAGTAATACTA
CTGGGTAAACCAGAATCAGGTGTGAATGTGTTGAGATTTTTTACTGTTTTGCATGATAGGAAAATTGAGAAAGAAT
ACGTATAAAAGATAGAGAGGCATAACATCAATGCAGAGTTGGAAGTTGGCTCCCAAGGGCTGACATGGTGTGAGT
GTGTGGGTGTGTGATAAGCTTCTCATCCCTGCATAGATGCAGTATTCTTAGCCTTAGTAGAAAAACCTGGTTTTAG
TGGTTTAAGCCTTGTGTGGCAGATAGATCTTAAAGGGCAAAGCAGTATATTGGTAGTTGTCAATATAGCAGTGCT
AGCTCTGTCTATATAAATAGAGAAATGGGGTTAGCCATAGAGGTTAAAACTACCTGGTTATCCCATATAATAACA
CAAACCTGGGTCTTGGATACACAGTTGTATTTAATGTTTTACGATCTAGCCTTTCCAGTACAGGCACCTTTCTGAGA
AACCTTTGTCCTCACTTGAGGCATTTGTTGTGCGGTTTTTGTGTTTTGTTTTGTGGGTATTTGCCCTATTCCAC
CCCTGAGCTTTTCAGGTAGACAGCGTATTCAAACCTCTGTTCTAAGGTGTTTATTGTAGTGGAGTAATGGGTTT
GCAGTGATAAGTCATACTTTTCCACCGAAAGGGAGGGCTTGGGAATCCCTGAGATTAGCTAAAGTTAAGTTGTTG
GAAGAATTCCTTGATTGGAAATTGTACCTTTGTGTTTTGTGCTCTGTTTCTGAAAATAACTCGGGGATGCTCC
TGGTTTGTCCATCTACTGCTTTGATTCCCTGGATCCCAACCTTCTTTCACTTTAAGAAAAACAAATAATTGTT
GCAGAGGTCTCTGTATTTTGCAGCTGCCCTTTTGTAAAGACACTTTTCCCAATAAAACAATTAAAAA
AAA

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FIGURE 100

MAEAATPGTTATTSGAGAAAATAAAASPTPIPTVTAPSLGAGGGGGGSDGSGGGWTKQVTCRYFMHGVCKEGDNC
RYSHDLSDSPYSVVKYFQRGYCIYGDRCRYEHSKPLKQEEATATELTTKSSLAASSSLSSIVGPLVEMNTGEAE
SRNSNFATVGAGSEDWVNAIEFVPGOPYCGRTAPSCTEAPLQGSVTKEESEKEQTAVETKKQLCPYAAVGECRYG
ENCVYLHGDSCDMCGLQLLHPMDAAQRSQHISKSCIEAHEKDMELSFVQVRSKDMVCGICMEVVYEKANPSERRFG
ILSNCNHTYCLKCIRKWRSAKQFESKIIKSCPECRITSNFVIPSEYWVEEKEEKQKLILKYKEAMSNKACRYFDE
GRGSCPFGGNCFYKHAYPDGRREEPQRQKVGTSRRYRAQRRNHFWELEERENSNPFDNDEEEVVTFFELGEMLLM
LLAAGGDDELTDSEDEWDLFHDLEDFYDLDL

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FIGURE 101

AGATGTTTAAAAATACTTTGATXCTCXGTTTCCACCTCTCTTAAATTGTCTTTCCCTATGTTAAATATACAGTCA
TCACXTTGCTGAAAAAAGTTTCGCAATGAGAACAATCATCTAAAAXTGGCTGTAAGTTCAGGCGCGGTTGCTC
ATGCCTGTAATCCCAACCACTTTGGGAGGCCGAGGCAATTGGATCACCTGAGGTCAGGATTTTGAGACCAGCTTGA
CCAACATGGTGGAATCCCATCTCTACTAAAAATACAAAAAATTAGCCGGGTGTGGTGGCACACCCCTGTAATCCC
ACCTACTCAGGAGGCTGAGGCAGGAAAATCCCTTGAACCCAGGAGGCAAGGTTGCATTGAGCCGAAATAACACC
ACTGCACTCCAGCCTGGACGATAGAGTGAGACCCCATCTCAAAAAAAGAGCAGCTGTGACAAATGCCTGTATTGA
ATTGCAGGTCAGTCTTCCACCTCCACTACCGGTGCCAAAAAAGGGCTGCCCCAAAAGGAACTAAAAGGGATCCA
GCTTTGAATTCTGGTGTCTCTCAAAAGCCTGATCCTGCCAAAACCAAGAATCGCCGCAAAAGGAAGCCATCCACT
TCTGATGATTCTGACTCTAATTTTGAGAAAATTGTTTCGAAAGCAGTCACAAGCAAGGTGAGTGTGATCCTAGT
CAGTCCTTTTGCTGTAGATGTTCTGAAACACGTAACCTAAGCCATTGTTCTTAAAAATTGGCATATCTTTAAGAA
AATTAACCTCTCATATTCTGTTAGCTTTTACTGTACATATTTAGTTTTAACAAGTTAAATATGCCACTTATTTGG
CCAATGGAAGAGTTGGCCTTAGATCTGCTTCTTATTACTTGGTAGAAAATAGAAAACCTCCTGAATATAGTGTCT
TGATACATTTTTTTTACATTACAATTATGTTGTGAGATTTACAATGTGCAAGTTACCTGGGCTTTTCTCTTTTGA
AATCCAAGGGGGAGAGTGATGACTTCCATATGGACTTTGACTCAGCTGTGGCTCCTCGGGCAAAATCTGTACGGG
CAAAGAAACCTATAAAGTACCTGGAAGAGTCAGATGAAGATGATCTGTTTTAAATGTGAGGCGATTATTTTAAG
TAATTATCTTACCAAGCCCAAGACTGGTTTTAAAGTTACCTGAAGCTCTTAACTTCCTCCCCTCTGAATTTAGTT
TGGGGAAGGTGTTTTTAGTACAAGACATCAAAGTGAAGTAAAGCCCAAGTGTCTTTAGCTTTTTTATAACTGT
ATAAATAGTGACCATCTCATGGGCATTGTTTTCTTCTGCTTTGTCTGTGTTTTGAGTCTGCTTCTTTGTCTT
TAAACCTGATTTTTTAAGTTCTTCTGAAGTGTAGAAATAGCTATCTGATCACTTCAGCGTAAAGCAGTGTGTTA
TTAACCATCCACTAAGCTAAACTAGAGCAGTTTGATTTAAAGTGTCACTCTTCCTCCTTTTCTACTTTTCAGTA
GATATGAGATAGAGCATAATTATCTGTTTTATCTTAGTTTTATACATAATTTACCATCAGATAGAAGTTTATGGT
TCTAGTACAGATACTCTACTACACTCAGCCTCTTATGTGCCAAGTTTTTCTTTAAGCAATGAGAAATTGCTCATG
TTCTTCATCTTCTCAAATCATCAGAGGCCGAAGAAAAACACTTTGGCTGTGTCTATAACTTGACACAGTCAATAG
AATGAAGAAAATTAGAGTAGTTATGTGATTATTTAGCTCTTGACCTGTCCCCTCTGGCTGCCTCTGAGTCTGAA
TCTCCCAAAGAGAGAAACCAATTTCTAAGAGGACTGGATTGCAGAAGACTCGGGGACAACATTTGATCCAAGATC
TTAAATGTTATATTGATAACCATGCTCAGCAATGAGCTATTAGATTCATTTTGGGAAATCTCCATAATTTCAATT
TGTAACCTTTGTTAAGACCTGTCTACATTGTTATATGTGTGTGACTTGAGTAATGTTATCAACGTTTTTGTAAAT
ATTTACTATGTTTTTCTATTAGCTAAATTCCAACAATTTGTACTTTAATAAAATGTTCTAAACATTGAAA

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FIGURE 102

TAGCTGGATTCCAGCCATTGCTGCAGCTGCTCCACAGCCCTTTTTCAGGACCCAAACAACCGCAGCCGCTGTTCCC
AGGATGGTGATCCGTGTATATATTGCATCTTCCTCTGGCTCTACAGCGATTAAAGAAGAAACAACAAGATGTGCTT
GGTTTCCTAGAAGCCAACAAAATAGGATTTGAAGAAAAGATATTGCAGCCAATGAAGAGAATCGGAAGTGGATG
AGAGAAAATGTACCTGAAAATAGTCGACCAGCCACAGGTTACCCCTGCCACCTCAGATTTTCAATGAAAGCCAG
TATCGCGGGGACTATGATGCCTTCTTTGAAGCCAGAGAAAATAATGCAGTGTATGCCTTCTTAGGCTTGACAGCC
CCACCTGGTTCAAAGGAAGCAGAAGTGCAAGCAAAGCAGCAAGCATTGAACCTTAAGCACTGTGCTTTAAGCATCC
TGAAAAATGAGTCTCCATTGCTTTTATAAAATAGCAGAATTAGCTTTGCTTCAAAAGAAATAGGCTTAATGTTGA
AATAATAGATTAGTTGGGTTTTACATGCAAACATTCAAATGAATACAAAATTAAAATTTGAACATTATGGTGA
TTATGGTGAGGAGAATGGGATATTAACATAAAATTATATTAATAAGTAGATATCGTAGAAATAGTGTTGTTACCT
GCCAAGCCATCCTGTATACACCAATGATTTTACAAAGAAAACACCCTTCCCTCCTTCTGCCATTACTATGGCAAC
TTAAGTGTATCTGCAGCTCTACATTAAAAAGGAGAAAGAGAAATAACCTGTCTCTCATTCCCTAAGTTGCCTCATT
AATTTTCATGAACAAGAATATGTACCTTTTTGATGCTATATTACTGCGATTAAAAAAGTTCTTGCAGGTAATGTT
TATGTATAGTTAAACGTTGTAATTTCTTATCGTAATTATAACATTCCCATTCTTTGTAGATGAAACTCTACATAT
GAACCACAGATTTTCTGAGCTTCTAAATGTAGCCTTTTCATTGCACATTTTCAGTGATCAGAATAGATATCCTTTTA
CACGCACAAAAGCAATAGATTCATTTCAGTGGACAAGTTCCCTTGTTTAACTACACAGCTATGATGGAATCATATAT
CCAAGTTCCTTGCCCTCAGTGAATATGCATATGTATATCATGAAGTGGGATGCCAAGTAAGCTTAAAATGCATTC
TCTAGCAAAGAGATTAGACTTTTAAATAACTCTTATAAAACAGGTTGGCGATCATTCCCAAGATTGGTTTCCCT
TGAGTTTTTTGTTAAACAAATCTTAGTAGTTTTGCCCGTTTAAACAACCTCACAAATCGTAAATGCTACTATTCCCT
AAGATATCTTACCTTTTTATTTCAGTTTAGCCATGTATTGTATGAGTGTATTAGTCTAAGCAGTGAGAATCTTTT
CTATGCCTCTATTCCAGCAAAAAGTAGAAGTATCAAATAAAAAGGGCAACTTTTAAAATATTAAGCCTGAAGACT
TCTAAAAAGACAAGAAACATGGCCTAAATAACCAACATAGATTTACATAGTAAGTTTCACACTACCTTATTACCA
AAAGCAAACACCTCTTACTTTAAACTACATTATCATGTATATCTATTGTATGCTGGTCTTTACTTTTTGCCAAAA
TCAACATATAATGAAGAGATGCCTTTGTTTGATGAGATTCAAACCTTGATGCTATGCTTTAAAATAAACTCAGTAC
TTTTAGAAACATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 103

MVIRVYIASSSGSTAIKKKQQDVLGFLEANKIGFEEKDIAANEENRKWMRENVPENSRPATGYPLPPQIFNESQY
RGDYDAFFEARENNAVYAFGLTAPPGSKEAEVQAKQQA

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FIGURE 104

GCCGCGCCGGCTCTGGGCACTCAGCATCGTTTCCTTTTCTCCGCTGGAGCAGCTATGCGCGCGGTGAAGACCCT
GAACCCCAAGGCCGAGGTGGCCCCGAGCGCAGGCGGCGCTGGCGGTCAACATCAGCGCAGCGCGGGGTCTGCAGGA
CGTGCTAAGGACCAACCTGGGGCCCCAAGGGCACCATGAAGATGCTCGTTTCTGGCGCTGGAGACATCAAACCTTAC
TAAAGACGGCAATGTGCTGCTTACGAAATGCAAATTCAACACCCAACAGCTTCCTTAATAGCAAAGGTAGCAAC
AGCCCAGGATGATATAACTGGTGATGGTACGACTTCTAATGTCTAATCATTGGAGAGCTGCTGAAACAGGCGGA
TCTCTACATTTCTGAAGGCCTTCATCCTAGAATAATCACTGAAGGATTTGAAGCTGCAAAGGAAAAAGGCCCTTCA
GTTTTTGAAGAAGTCAAAGTAAGCAGAGAGATGGACAGGGAAACACTTATAGATGTGGCCAGAACATCTCTTCG
TACTAAAGTTCATGCTGAACCTTGAGATGTCCTAACAGAGGCTGTAGTGGACTCCATTTTGGCCATTAAAAAGCA
AGATGAACCTATTGATCTCTTCATGATTGAGATCATGGAGATGAAACATAAATCTGAAACTGATACAAGCTTAAT
CAGAGGGCTTGTCTTGGACCACGGAGCACGGCATCCTGATATGAAGAAAAGGGTGGAGGATGCATACATCCTCAC
TTGTAACGTGTCATTAGAGTATGAGAAAACAGAAGTGAATTCTGGCTTTTTTACAAGAGTGCAGAAGAGAGAGA
AAAACCTCGTGAAGCTGAAAGAAAATTCATTGAAGATAGGGTTAAAAAAATAATAGAACTGAAAAGGAAAGTCTG
TGGCGATTGAGATAAAGGATTTGTTGTTATTAATCAAAGGGAATTGACCCCTTTTCTTAGATGCTCTTTCAA
AGAAGGCATAGTCGCTCTGCGCAGAGCTAAAAGGAGAAATATGGAGAGGCTGACTCTTGCTTGTGGTGGGGTAGC
CCTGAATTCCTTTGACGACCTAAGTCTGACTGCTTGGGACATGCAGGACTTGTATATGAGTATACATTGGGAGA
AGAGAAGTTTACCTTTATTGAGAAATGTAACAACCTCGTTCTGTACATTATTGATCAAAGGACCAAATAAGCA
CACACTCACTCAGATCAAAGATGCAGTGAGGGACGGCTTGAGGGCTGTCAAAAATGCTATTGATGATGGCTGTGT
GGTTCCAGGTGCTGGTGCCGTGGAAGTGGCAATGGCAGAAGCCCTGATTAAACATAAGCCAGTGTAAGGGCAG
GGCACAGCTTGAGTCCAAGCATTTGCTGATGCATTGCTCATTATTCCCAAGGTTCTTGCTCAGAACTCTGGTTT
TGACCTTCAGGAAACATTAGTTAAAATTCAGCAGAACATTGAGAATCAGGTCAGCTTGTGGGTGTGGACCTGAA
CACAGGTGAGCCAATGGTGGCAGCAGAAGTAGGCGTATGGGATAACTATTGTGTAAAGAAACAGCTTCTTCACTC
CTGCACTGTGATTGCCACCAACATTCTCTTGGTTGATGAGATCATGCGAGCTGGAATGTCTTCTCTGAAAGGTTG
AATTGAAGCTTCTCTGTATCTGAATCTTGAAGACTGCAAAGTGATCCTGAGGATTACAGCTGTGGAATTTTTGT
CCAAGCTTCAAATAATTTTGAAGAAAATTTTCCCATATGAAAAAAGGAGAGAACTGGCATCTGTTGAAATTTG
GAAGTTCTGAAATTATAGTATTTTTAAAAATTGCACTGAAGTGTATACACATAAAGCAGGTCTTTTATCCAGTGA
ACAGGATGTTTTGCTTTAGCAGCAGTGACATAAAATTCATGTTAGATAAGCATATGTTACTTACCTTGTTATTA
AATATTTCTTGAAAAGCAAATTTTAAATGGTTAATTTTATGTGGACGTATGTTAAATTATCCAAACTACCCTATTG
TTAAGCATTTGGTTTTAAAAATTTTATGCTAATATAAATGCTCAAGTAATTTAAATATTTGAAAGCATCCCTGTT
GGTATAAATTTCTGAGTAAATGCATTGGATCAGTTGGACTTTGAACGCCCTTTGAAATGGCTTTGCTAAATGCT
CCC GCCACAAAGTTGTAGGAAATGGGAAGAGGAGTCACTAGAGGCAAGGGAGTTGAGAGAGCTGCAACTGTAAA
GGGCAAGAACAGGCAGAGGTAAAAAGATGATGGAAGGTGTGGTGAATAAGGGCCACGGTTATTGGGTGAAATTTG
AGATGTAGGCCAACTGTATTTCAAGCTTCTGAACCTAAGGCAAAATATTCATCGCAAAGTCTCTAGCGTCATAT
TTTTCTACCCAAATTACGTTTCCACGAGTTATTATATATAGTTGGTCTATCTCTGCAGTCTTGAAGGTGAAGT
TGTGTGTTACTAGGCTGTGTTTTGGGATGTCAGCAGTGGCCTGAAGTGAGTTGTGCAATAAATGTTAAGTTGAAA
CCTCAAAAAAAA

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FIGURE 105

MAAVKTLNPKAEVARAQAALAVNISAARGLQDVLRTNLGPKGTMKMLVSGAGDIKLTGDGNVLLHEMQIQHPTAS
LIAKVATAQDDITGDGTTSNVLIIGELLKQADLYISEGLHPRIITEGFEEAKEKALQFLEEVKVSREMDRETLID
VARTSLRTKVHAEADVLTEAVVDSILAIAKKQDEPIDLFMIEIMEMKHKSETDTSLIRGLVLDHGARHPDMKKRV
EDAYILTCNVSLEYEKTEVNSGFFYKSAEEREKLVKAERKFIEDRVKKIIEELKRKVCSDKGFVVINQKGIDPF
SLDALSKEGIVALRRARRNMRERLTLACGGVALNSFDDLSPDCLGHAGLVYEYTLGEEKFTFIEKCNNPRSVTLL
IKGENKHTLTQIKDAVRDGLRAVKNAIDDGCVVPGAGAVEVAMAEALIKHKPSVKGRAQLGVQAFADALLIIPKV
LAQNSGFDLQETLVKIQAEHSESGQLVGVDLNTGEPMVAAEVGVWDNYCVKKQLLHSCTVIATNILLVDEIMRAG
MSSLKG

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FIGURE 106A

GGCACGAGCGGCGGAGGCAGTGTCTCCCGGTCGCGCGTGGAGGTCGGTCGCTCAGAGCTGCTGGGCGCAGTTTCT
CCGCTGCTGCTTCGGGCGGGCTGTATCGGCGAGCGAGCGAGTTCCCGCGAGTTCTCGGTGGCGCTCCCCCTTCC
TTTCAGTCTCCACGGACTGGCCCCCTCGTCCTTCTACTTGACCGCTCCCGTCTTCCGCCGCTTCTGGCGCTTCC
GTTGGGCCGATTCCCCGCCGCTTCTCCTGCTTCCCATCGAAGCTCTAGAAATGAATGTTTCCATCTCTTCAGAG
ATGAACCAGATTATGATGCATCATTATCACAGAAGAAATTCGTGTCTATAGCTTTTAAGGACTTGATTACATCAT
TTTCAAGCCTGATAGTTTTTGAATCACCATTAGAGCTTAAGACACACCTGCCTTCATTTCAACCACCTGTCTTCA
TACCCTGACGAAGTGCACCTTTTAACACTCCTTTGTCTTGGATTACTTAAGAGTTCACAGAAATACATTTGCCA
CCAACAGAGTAGCCAAATTTATAAGGAAAAATGATTCCCAATGGATATTTGATGTTTGAGGATGAAAATTTTATT
GAGTCTTCTGTTGCCAAATTAATGCCCTGAGGAAAAGTGGCCAGTTCTGTGATGTTGACTTCAGGTCTGTGGC
CATGAAATGTTAGCACACAGAGCAGTGCTAGCTTGCTGCAGTCCCTATTTATTTGAAATCTTTAATAGTGATAGT
GATCCTCATGGAATTTCTCACGTTAAATTTGATGATCTCAATCCAGAAGCTGTTGAAGTCTTGTGTAATTATGCC
TACACTGCTCAGTTGAAAGCAGATAAGGAATTGGTAAAAGATGTTTATTCTGCAGCAAAAAAGCTGAAGATGGAT
CGAGTAAAGCAGGTTTGTGGTGATTATTTACTGTCTAGAATGGATGTTACCAGCTGCATCTCTTACCAGAAATTTT
GCAAGTTGTATGGGAGACTCCCGTTTGTGAATAAGGTTGATGCTTATATTCAGGAGCATTGTGTTACAAATTTCT
GAAGAGGAGGAGTTTCTTAAGCTTCCAAGGCTAAAGTTGGAGGTAATGCTTGAAGATAATGTTTGCTTGCCAGC
AATGGCAAATTATATACAAAGGTAATCAACTGGGTGCAGCGTAGCATCTGGGAGAATGGAGACAGTCTGGAAGAG
CTGATGGAAGAGGTTCAAACCTTGTAATACTACTCAGCTGATCACAAGCTGCTTGATGGGAACCTACTAGATGGACAG
GCTGAGGTGTTTGGCAGTGATGATGACCACATTAGTTTGTGCAGAAAAAGCCACCACGTGAGAATGGCCATAAG
CAGATAAGTAGCAGTTCAACTGGATGTCTCTCTCTCCAAATGCTACAGTACAAAAGCCCTAAGCATGAGTGGA
ATCGTTGCTTCAGAAAAAGACTTCAAATAACACTTACTTGTGCCTGGCTGTGCTGGATGGTATATTCTGTGTCATT
TTTCTTCATGGGAGAAAACAGCCACAGAGCTACCAACAAGTACTCCAAAATAAGTAAGAGTTTAAGCTTTGAG
ATGCAACAAGATGAGCTAATCGAAAAAGCCCATGTCTCTATGCAGTACGCACGATCTGGTCTGGGAACAGCAGAG
ATGAATGGCAAACCTCATAGCTGCAGGTGGCTATAACAGAGAGGAATGTCTTCGAACAGTCGAATGCTATAATCCA
CATAACAGATCACTGGTCTTTCTTGCTCCCATGAGAACACCAAGAGCCCGATTTCAAATGGCTGTACTCATGGGC
CAGCTCTATGTGGTAGGTGGATCAAATGGCCACTCAGATGACCTGAGTTGTGGAGAGATGTATGATTCAAACATA
GATGACTGGATTCTGTTCCAGAATTGAGAATAACCGTTGTAATGCAGGAGTGTGTGCTCTGAATGGAAAGTTA
TACATCGTTGGTGGCTCTGATCCATATGGTCAAAAAGGACTGAAAAATTGTGATGTATTTGATCCTGTAACAAAG
TTGTGGACAAGCTGTGCCCCCTCTTAACATTGCGAGACACCAGTCTGCAGTCTGTGAGCTTGGTGGTTATTTGTAC
ATAATCGGAGGTGCAGAATCTTGGAATTGTCTGAACACAGTAGAACGATACAATCCTGAAAAATAATACCTGGACT
TTAATTGCACCCATGAATGTGGCTAGGCGAGGAGCTGGAGTGGCTGTTCTTAATGGAAACTGTTTGTATGTGGT
GGCTTTGATGGTTCTCATGCCATCAGTTGTGTGGAAATGTATGATCCAACCTAGAAATGAATGGAAGATGATGGGA
AATATGACTTCACCAAGGAGCAATGCTGGGATTGCAACTGTAGGGAACACCATTTATGCAGTGGGAGGATTGAT
GGCAATGAATTTCTGAATACGGTGGAGTCTATAACCTTGAGTCAAATGAATGGAGCCCCATACAAAGATTTTC
CAGTTTTAAACAAATTTAAGACCTCTCAAATAACAGGCTTAGTGATGTAATTATGGTTAGCAGAGGTACACTTG
TGAATAAAGAGGGTGGGTGGGTATAGATGTTGCTAACAGCAACACAAAGCTTTTGCATATTGCATACTATTAAAC
ATGCTGTACATACTTTTTGGGTTTATTTGGAAAGGAATGCAAAGATGAAGGTCTGTTTTGTGTACTTTTAAGACT
TTGGTTATTTTACTTTTTGGAAAAGAATAAACCAAGAATTGATTGGGCACATCATTTCAAGAAGTCCCCCTCTCCT
CCACATTTGTTTTGCCAATTTGCACATTAAATGACTCTTCCCTCAAATGTGTACTATGGGGTAAAAGGGGTAGGG
TTTAAAGATGTAGACAGTTGGGTTTTTTAAGGGCCCTTTTTCAATAACTGGAACTCTATAACAAAGGATACTT
ATTTAAATAGATGACATTGACTATTTTTGTTTTTATTTAAAGGAAGCTTACATGCCTACCAATATTTAATCTTTT
ATGATTGCCTTTTTATAACTTTTTATATTCTCAGCAGAGTGCTTTACCAATTGAAGTAAATGTGGCAGGCTGGA
GTTATTGAAGCAGAGTGGCAGTCTTCAGTTTGAGAGTAGGGGTCTGTCTTTTAAACTCTGAGTGCAAACCTTCAG
AGTTCTTGCTTGGCTGCAGTTTTTTTTCTTCAAGAATGCAGTACTAACATTTATTTGAGTGGAGTTACTGAACA
GTAACATAGCTGTGATTTTTGGTATTTGAAACACTGGTTTTAAATATTTTGACTGTTGAGGGTATGTTTTATAT
AGCAAGACATTATATAGCAGTAAAAAATGGTGTTTTATCTTCTATATAATTCCTGTTTTTATTATTAACAAACA
GTCCTAAATAGCAGCCCTCAATTGTGAAAAATTTACTTTAACTACATTAGGTTGTGAATGCAGGTTTTATCAG
AACTATGTTTTTGTTCAGTTTATCTGTTTCATATGGATAAATATTGGTTGGGATGACTTGGTGTCTAATGTGTAGT
GCTACACACCTAATTATGGGGCCAAAATAGCATGTCCTAATGCTTGCTGCTGATTTAAACACATTAAAGGTACT

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FIGURE 106B

TTGCAGGAAATCCTTGCACCATGGGATTAATATCCAATTGCTGCTTGTACACTCATTCTACTAAAAGTTTTGA
GAAATTTTTTTTTCCAGTAATGAGCTTAAGAAATTTGTGGAAAATAACTCACCTGGCATCTTACATCTGAAATAA
GGAATGATATAAGGTTTTTTTTTCTCACAGAAGATGAAGCACACAGGAACCTAATGGGCCAACTGGGATGAGGTG
ACTATTCTGAGATGACTATTCAGTGGCTAACTTGGGTTAGGAAGAAAATAATTAGGTATTTTCTCAAATGTTCA
CTGGTACTCTGCCACTTTATTTCTCTCATCTGTTACACAAAGAACCACCAGGAAAGCAAATCAGTTTGGTTGGTA
ACTCTGAATTCCTAACTATCACTGGTTTGGTTCTGGACTAAAACCTACATTGACAGATTGAATTTGCCTAATATG
ATGACTGTTTTTAATATGGATCTGTATGTGTTCTATTAGCCCAAGGAAATAAAATTTTAGTTGAGGATTCAAAA
AAAAAAAAAAAA

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FIGURE 107

MIPNGYLMFEDENFIESSVAKLNALRKSGQFCDVRLQVCGHEMLAHRAVLACCSPYLFEIFNSDSDPHGISHVKF
DDLNPEAVEVLLNYAYTAQLKADKELVKDVYSAAKKLKMDRVKQVCGDYLLSRMDVTSCISYRNFASCMGDSRLL
NKVDAYIQEHLQLISEEEFLKLPRLKLEVMLEDNVCLPSNGKLYTKVINWVQRSIWENGDSLEELMEEVQTLYY
SADHKLLDGNLLDGQAEVFGSDDDDHIQFVQKKPPRENGHKQISSSSTGCLSSPNATVQSPKHEWKIVASEKTSNN
TYLCLAVLDGIFCVIFLHGRNSPQSSPTSTPKLSKSLSFEMQQDELIKPMSPMQYARSGLGTAEMNGKLIAGG
YNREECLRTVECYNPHTDHSFLAPMRTPRARFQMAVLMGQLYVVGGSNGHSDDLSCGEMYDSNIDDWIPVPELR
TNRNAGVCALNGKLYIVGGSDPYGQKGLKNCDVFDPVTKLWTSCAPLNIRRHQSAVCELGGYLYIIGGAESWNC
LNTVERYNPENNTWTLIAPMNVARRGAGVAVLNGKLFVCGGFDGSHAISCVEMYDPTRNEWKMMGNMTSPRSNAG
IATVGNTIYAVGGFDGNEFLNTVEVYNLESNEWSPTYTKIFQF

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FIGURE 108A

CGAGACGGAAGCGGGCTGGGAGGCGTCGGCGGGCGGCAGCGCACGTGGTGACGTGCGAGGGGGTGCGGGCGCGAGCG
GTCGGCGGGCGGGAGGCGAGTGTCTCCCGGTCGCGCGTGGAGGTCGGTCGCTCAGAGCTGCTGGGCGCAGTTTCT
CCGCTGCTGCTTCGGCGCGGCTGTATCGGCGAGCGAGCGAGTTCCCGCGAGTCTCGGTGGCGCTCCCCCTTCC
TTTCAGTCTCCACGGACTGGCCCCCTCGTCTTTCTACTTGACCGCTCCCGTCTTCCGCCGCTTCTGGCGCTTTCC
GTTGGGCCGATTCCCGCCCGCTTCCTCCTGCTTCCCATCGAAGCTCTAGAAATGAATGTTTCCATCTCTTCAGAG
ATGAACCAGATTATGATGCATCATTATCACAGAAGAAATTCGTGTCTATAGCTTTTAAGGACTTGATTACATCAT
TTTCAAGCCTGATAGTTTTGGAATCACCATTAGAGCTTAAGACACACCTGCCTTCATTTCAACCACCTGTCTTCA
TACCCTGACGAAGTGCACCTTTTAACACTCCTTTGTCTTGGATTACTTAAGAGTTCCAGAAATACATTTGCCA
CCAACAGAGTAGCCAAATTTATAAGGAAAAATGATTCCCAATGGATATTTGATGTTTGAGGATGAAAATTTTATT
GAGTCTTCTGTTGCCAAATTAATGCCCTGAGGAAAAGTGGCCAGTTCTGTGATGTTGAGCTTCAGGTCTGTGGC
CATGAAATGTTAGCACACAGAGCAGTGCTAGCTTGCTGCAGTCCCTATTTATTTGAAATCTTTAATAGTGATAGT
GATCCTCATGGAATTTCTCACGTTAAATTTGATGATCTCAATCCAGAAGCTGTTGAAGTCTTGTTGAATTATGCC
TACACTGCTCAGTTGAAAGCAGATAAGGAATTGGTAAAAGATGTTTATTCTGCAGCAAAAAAGCTGAAGATGGAT
CGAGTAAAGCAGGTTTGTTGGTGATTATTTACTGTCTAGAATGGATGTTACCAGCTGCATCTCTTACCAGAAATTTT
GCAAGTTGTATGGGAGACTCCCGTTTGTTGAATAAGGTTGATGCTTATATTCAGGAGCATTGTGTACAAATTTCT
GAAGAGGAGGAGTTTCTTAAGCTTCCAAGGCTAAAGTTGGAGGTAATGCTTGAAGATAATGTTTGCTTGCCAGC
AATGGCAAATTATATACAAAGGTAATCAACTGGGTGCAGCGTAGCATCTGGGAGAATGGAGACAGTCTGGAAGAG
CTGATGGAAGAGGTTCAAACCTTGTAATACTACTCAGCTGATCACAAGCTGCTTGATGGGAACCTACTAGATGGACAG
GCTGAGGTGTTTGGCAGTGATGATGACCACATTCAGTTTGTGCAGAAAAAGCCACCACGTGAGAATGGCCATAAG
CAGATAAGTAGCAGTTCAACTGGATGTCTCTCTTCTCCAAATGCTACAGTACAAAGCCCTAAGCATGAGTGGA
ATCGTTGCTTCAGAAAAGACTTCAAATAACACTTACTTGTGCCTGGCTGTGCTGGATGGTATATTCTGTGTCTATT
TTTCTTCATGGGAGAAACAGCCACAGAGCTCACCAACAAGTACTCCAAAACCTAAGTAAGAGTTTAAGCTTTGAG
ATGCAACAAGATGAGCTAATCGAAAAGCCCATGTCTCTATGCAGTACGCACGATCTGGTCTGGGAACAGCAGAG
ATGAATGGCAAACCTCATAGCTGCAGGTGGCTATAACAGAGAGGAATGTCTTCGAACAGTCGAATGCTATAATCCA
CATAAGATCAGTGGTCCCTTTCTTGCTCCCATGAGAACACCAAGAGCCCGATTTCAAATGGCTGTACTCATGGGC
CAGCTCTATGTGGTAGGTGGATCAAATGGCCACTCAGATGACCTGAGTTGTGGAGAGATGTATGATTCAAACATA
GATGACTGGATTCCCTGTTCCAGAATTGAGAACTAACCGTTGTAATGCAGGAGTGTTGTCTCTGAATGGAAAGTTA
TACATCGTTGGTGGCTCTGATCCATATGGTCAAAAAGGACTGAAAAATTTGTGATGTATTTGATCCTGTAACAAAG
TTGTGGACAAGCTGTGCCCCCTCTTAACATTTCGGAGACACCAAGTCTGCAGTCTGTGAGCTTGGTGGTTATTTGTAC
ATAATCGGAGGTGCAGAATCTTGGAATTGTCTGAACACAGTAGAACGATACAATCCTGAAAATAATACCTGGACT
TTAATTGCACCCATGAATGTGGCTAGGCGAGGAGCTGGAGTGGCTGTTCTTAATGGAAAACCTGTTTGTATGTGGT
GGCTTTGATGGTTCTCATGCCATCAGTTGTGTGGAAATGTATGATCCAACCTAGAAATGAATGGAAGATGATGGGA
AATATGACTTCACCAAGGAGCAATGCTGGGATTGCAACTGTAGGGAAACACCATTTATGCAGTGGGAGGATTTCGAT
GGCAATGAATTTCTGAATACGGTGGAAAGTCTATAACCTTGAGTCAAATGAATGGAGCCCCCTATACAAAGATTTTC
CAGTTTTAACAAATTTAAGACCCCTCTCAAATAACAGGCTTAGTGATGTAATTATGGTTAGTAGAGGTACACTTG
TGAATAAAGAGGGTGGGTGGGTATAGATGTTGCTAACAGCAACACAAAGCTTTTGATATTGCATACTATTAAAC
ATGCTGTACATACTTTTGGGTTTATTTGGAAAGGAATGCAAGATGAAGGTCTGTTTTGTGTACTTTTAAGACT
TTGGTTATTTTACTTTTGGAAAAGAATAAACCAAGAATTGATTGGGCACATCATTTCAAGAAGTCCCTCTCCT
CCACATTTGTTTTGCCAATTTGCACATTAAATGACTCTTCCCTCAAATGTGTACTATGGGGTAAAAGGGGTAGGG
TTTAAAGATGTAGACAGTTGGGTTTTTTAAGGGCCCTTTTTCAATAACTGGAACACTCTATAACAAAGGATACTT
ATTTAAATAGATGACATTGACTATTTTTGTTTTTATTAAGGAAGCTTACATGCCTACCAATATTTAATCTTTT
ATGATTGCCTTTTTATAACTTTTTATATTCTCAGCAGAGTGCTTTACCAATTGAAGTAAATGTGGCAGGCTGGA
GTTATTGAAGCAGAGTGGCAGTCTTCAGTTTGAGAGTAGGGGTCTGTCTTTTAACTCTGAGTGCAAACTTCAG
AGTTCTTGCTTGGCTGCAGTTTTTTTTCTTCAAGAATGCAGTACTAACATTTATTTGAGTGGAGTTACTGAACA
GTAACATAGCTGTGATTTTTGGTATTTGAAACACTGGTTTTAAATATTTGACTTGTGAGGGTATGTTTTATAT
AGCAAGACATTATATAGCAGTAAAAAATGGTGTTTTATCTCTATATAATTCCTGTTTTTATTATTAACAAAACA
GTCCTAAATAGCAGCCCTCAATTGTGAAAAAATTTACTTTAACTACATTAGGTTGTGAATGCAGGTTTTATCAG
AACTATGTTTTTGTTCAGTTTATCTGTTTCATATGGATAAATATTGGTTGGGATGACTTGGTGTCTAATGTGTAGT

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FIGURE 108B

GCTACACACCTAACTTATGGGGCCAAAATAGCATGTCCTAATGCTTGCTGCTGATTAAACACATTAAAGGTACT
TTGCAGG

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FIGURE 109

MIPNGYLMFEDENFIESSVAKLNALRKSGQFCDVRLQVCGHEMLAHRAVLACCSPYLFEIFNSDSDPHGISHVKF
DDLNPEAVEVLLNYAYTAQLKADKELVKDVYSAAKKLKMDRVKQVCGDYLLSRMDVTSCISYRNFASCMGDSRLL
NKVDAYIQEHLQLISEEEFLKLPRLKLEVMLEDNVCLPSNGKLYTKVINWVQRSIWENGDSLEELMEEVQTLYY
SADHKLLDGNLLDGQAEVFGSDDDHQFVQKKPPRENGHKQISSSSTGCLSSPNATVQSPKHEWKIVASEKTSNN
TYLCLAVLDGIFCVIFLHGRNSPQSSPTSTPKLSKSLSFEMQQDELIKPMSPMQYARSGLGTAEMNGKLIAGG
YNREECLRTVECYNPHTDHSFLAPMRTPRARFQMAVLMGQLYVVGGSNGHSDDLSCGEMYDSNIDDWIPVELR
TNRCNAGVCALNGKLYIVGSDPYGQKGLKNCVDFDPVTKLWTSCAPLNIRRHQSAVCELGGYLYIIGGAESWNC
LNTVERYNPENNTWTLIAPMNVARRGAGVAVLNGKLFVCGGFDGSHASCVEMYDPTRNEWKMMGNMTSPRSNAG
IATVGNTIYAVGGFDGNEFLNTVEVYNLESNEWSPTYTKIFQF

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FIGURE 110

GAGTTCCAGCAGTCCGCGAGCTGCCGTGCGCTCCGCGGGGGGGCGGGCCGGGCACCCCGGGGCGCGGAGGAGCG
CTCCTCGCTTCTCTCCTTCCCCCTGCCGCACTCCGCCGGACCCTCCCGCCGGCCCGCGCCGCTGCACTCGCCCT
CTCCTCTCGCCCCCGGCAAACTTTCGGCCCCCTCCCCGCCCTCGCCCGTTATTTCGTCTGGCTCAAGCCCGGCC
ACGCCGCCCAAGGGCTCCTCCCGACCTCCCGGCCTGCCGTCCGGCCACTGCGGGATCCAGAAACATGTCGACC
ACACTTCTGTCCGCTTCTACGATGTGCACTTCTTGTGCAAGACAGAGAAATCCCTGGCCAACCTCAACCTGAAC
AACATGCTGGACAAGAAGGCGGTGGGGACGCCTGTGGCCGCCGCCCCAGCTCGGGCTTCGCGCCGGGATTCTC
CGACGGCACTCGGCCAGCAACCTGCATGCACTCGCCCCACCCGCGCCAGCCCGGCAGCTGCTCGCCCAAGTTC
CCGGGCGCCGCTAACGGCAGCAGCTGCGGCAGCGCGGCGGCGGCGGTCCGACCTCCTACGGCACCTTAAGGAG
CCGTGCGGGGGCGGCGGCACAGCCCTGCTCAACAAGGAGAACAATTCCGGGACCGCTCGTTTAGCGAGAACGGC
GATCGCAGCCAGCACCTCCTGCACCTGCAGCAGCAGCAGAAGGGGGGCGGCGGCTCCCAGATCAACTCCACGCGC
TACAAGACCAGCTGTGCCGGCCCTTCGAGGAGAGCGGCACGTGCAAGTACGGCGAAAAGTGCCAGTTTCGCGCAT
GGCTTCCACGAGCTGCGCAGCCTGACTCGCCATCCGAAGTACAAGACCAGCTGTGCCGCACCTTTCATACCATC
GGCTTCTGCCCCATATGGGCCGCGCTGCCACTTCATCCACAACGCGGACGAGCGGCGGCCCGCGCCGTCGGGGGGC
GCCTCCGGGGACCTGCGTGCTTTTGGCACGCGCATGCGTTGCACCTGGGCTTCCGCGGGGAGCCGCGGCCCAAG
TTGCACCACAGCCTCAGCTTCTCGGGCTTCCGTCGGGCCACCATCAGCCCCGGGCGGCCTCGAGTCGCCGCTG
CTGCTCGACAGCCCCACGTGCGCACGCGCGCCGCCCTCCTGCTCTTCGGCTCGTCTGCTCCTCCTCCGCC
TCCTCCTGTTCTCGGCCTCCGCGGCCTCCACGCCCTCGGGCGCCCCGACATGCTGCGCCTCCGCGCGGCCGCG
GCTGCGGCCGCTCTGCTGTACGGCACCGGGGGCGCCGAGGACCTGCTGGCGCCGGGGGGCCCCGTGCGCGGCCTGC
TCGTGCGCCTCGTGCGCCAACAACGCCTTCGCCTTCGGTCCGGAGCTCAGCAGCCTCATCAGCCGCTCGCCATC
CAGACCCACAACCTTGCCGCGCTGGCCGCCGCCGCTACTACCGCAGTCAGCAGCAGCAGCAGCAGCAGGGCCTG
GCGCCCCCGCGCAGCCGCCGCGCGCCAGCGGACCTCCCCGCCGGGGCGCCGCACCTCCCTCGCCGCC
TTCAGCTTCCAGCTGCCGCGCCGCTGTCCGACTCGCCCGTGTTCGACGCGCCCCCAGCCCCCGGACTCGCTG
TCGGACCGCGACAGCTACCTAAGCGGCTCCCTGAGCTCCGGCAGCCTCAGCGGCTCTGAGTCTCCAGCCTCGAC
CCTGGCCGCCGCTGCCAATCTTCAGCCGCCTCTCCATCTCCGACGACTGAGGCAAGAGGGCGCCAGTGAGGAGG
AAGGGAAGGCGGTTTCAAGATGTTGGAGGACACCCCTCGCCATCTCGCCCTTGCTGGGGGCACGGGAGTGGGGG
GGTGACATGGGCCCTAGGCAGACTGCAAGCCCGACCGAGCACTTGGACTCGAACTCTGTGCCGGGAGGGGCCCCC
ACCCCTCCTTTTTTCGGTTTTCTCTTGTCTTTTTTTTTTTATTTTTATTACGAAGTTTCATTCTTTTTGAGCAAAA
AAGTCGAACTTTTTCTGTTGAACAAAATATTACAAACAGGGCAGTTGTGATACGAATAGAACAAAAAAAAAAAAA
AAACACTTAAACTTTGTTAGGACTCCGATGAGTTTGGGACTTCAGGAAAAATCAACCCAGCACCCAGCAGCTACCA
ACCACCATTCATCTCTTCACTTGAACAGCATTAGTTAAGTCCAGATGTGGGAACCCCTTCTCTTGGAAGAAGTTC
CTAATTGTGTCTCAGACCGGTGTAAACAAACCAGCCAGCCGCCACCTTGCTAAACCTATAAGCTTTTTTAAATCC
AATATATTCTGCCAAGAATATGCCTTGATAGTTAGCCCTCAGCCCATAGGTGTTTTTTGTTTTTTAACAGAATTA
TATATGTCTGGGGGTAAAAAACCTTGCAATCCAAAGGTCCATACTGGTTACTTGGTTTCATTGCCACCACTTA
GTGGATGTTTCAGTTTAGAACCATTTTGTCTGCTCCCTCTGGAAGCCTTGCGCA

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FIGURE 111

MSTLLSAFYDVDFLCKTEKSLANLNLNNMLDKKAVGTPVAAAPSSGFAPGFLRRHSASNLHALAHPAPSPGSCS
PKFPGAANGSSCGSAAAGGPTSYGTLKEPSGGGGTALLNKENKFRDRSFSENGDRSQHLLHLQQQKGGGGSQIN
STRYKTELCRPFEEESGTCKYGEKCQFAHGFFHELRLTRHPKYKTELCRTFHTIGFCPYGPRCHFIIHNADERRPAP
SGGASGDLRAFGTRDALHLGFPREPRPKLHHSLSFSGFPSGHHQPPGGLESPLLLDSPTSRTPPPPSCSSASSCS
SSASSCSSASAASTPSGAPTCCASAAAAAALLYGTGGAEDLLAPGAPCAACSSASCANNAFAFGPELSSLITP
LAIQTHNFAAVAAAAYYRSQQQQQQQLAPPAQPPAPPSATLPAGAAAPPSPPFQLPRLSDSPVFDAPPSP
DSLSDRDSYLSGSLSSGSLSGSESPSLDPGRRLPIFSRLSISDD

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FIGURE 112A

CAGATTTACGAGGTTCTGTTCTAGTGCCAAAGGCTCTTGGTAGTAAATAGTGAGCAAAATAGATACCTGTCTCCT
GATGGATCTTGCCAGCCCCNTCCNTATTTTTTNTTAAGTTATTTATTTAAACCACACACACCTTGCAAAGAAAA
GGGAACTGGCAGTCTCTGTAGAGGAAGCCGGTGGCATCGCTCAGAGCCACAACTGTATTTCTAAACAGCCCTT
TCCCTGGTTCCTCTCTCTGCCCCACTTTTTTTTAAATCCAGACTGTAAAAACACATCTACTGACACTCACTT
TACTTTAAAAAAGAAGAGAAAAAGTAAAGCGTTACAAGACTTTCTCTGGAACCTATAAACTGAAAAAAAT
CCATAAAAGATTAAATCCTGGCGGGTTGTGGGGTGGCGGGGCGCGGGGAGGGGGCGCGGAGTGGAGATTGGC
TCTCTGAGGTGGTCAGGGGGCCCTGTGACAGCTTGGGACTTTCAGCACCTGGTTTGGGGTCATTATCTGCTCAAC
TGTCAGGACCCCCACCCCCAACCCACAGCCACCAACACAACCATCGTAGAAGGGAACACAACACAGAGGGTCTT
TTTTCATTTTTTTTAAAAATCGGTTTGGTTGTGTTTTTGTTCATGGGGGAGCTTTAAACTCATTATTGCAA
CACTAGTTCCATTTTTTCGCCAGGGTTCCAATAACACGGCATCATAAAGGCAACGCAACCCACAGTTCTCAAGACA
TTTACCACGGTCACTACATCCGGCAGCGGGTGGCCCTAGCTCCTGTGCCCCCGCCCTTTCTCCCCGCCCG
CCCCGGAGCTCAGCCGATTCTGAGGCTCCAACCTCTACCCACTCCCTCCCCGGGCGCCGCCGCCGCCCTTCC
CCCATTCTTACTCCCTCGAGGAGAGCCACAGGTTGCAAATCCAACCAACCTCGCAATCTATTTTGTCAAATCAC
TCACAAAGATCTCCCTTTCGCGCCCGCGCCCGCTCCTCCCGCGCCGGGTCCCCTCAGCCACGGCCACAAAGTGCC
CTTCTCTCTCTGAGTCTTGACATAAGGAACGCGGGCTGGGGCTCTGTTTCGTCTTTCTCTCTCGCCCAAGGTAA
GGACCTCGGGAATCTGAAGCCTGGCGTCCACTACGCTCAGGCCCGCAGTTCCCTTTTTACAGAGCTTGCAACATG
GGAAAAAATAAAATAAAATTTAGGTAAGGGAGGCAACAGCCATTGGGAGCCAACACAGAGTCACGCAGCGCCCAA
AATACAAACACCGCAGCGGCCAGAAATCCCGCCACCTTTCTCGTTCTCCAGGCTGTCTGCGAGGTTCCCTGA
GTCCCCCGCACACTGAAAGGCATCGCAGGTGCAGTGCACCCCTTTCCACCCACCCCAAGAAGCCCTGTCCC
GCCATCAGTCTCTCTCTCGGGATGAGCAGGGAGAGCGCGCGGAGGTTCCCGACTCCCTCGACTACAACCAAGAA
AGAATAATTTTCAAAGTGTTCAACATCCCCGCCCCCAAGCTCCCCAAAACACAGGGGCAGGGAACACCAAAACAC
TCGGCTCTCGTTAGGAAGATCACGGCTCTGAAAGGAAATAGTAGACACGATACTTCATCTCATCTGGATTATGA
CCAAAAAACAAAAACAAAAACCCAAAGAGTTTCGCTTGCAATTTTTCTCTTCCAAATCTCGGTTTCGGCTCGAAGGC
AGGGAATCTAAAGACCGAGGCCGATGGAAGAGAGCCAGCGGGGCGAGCGAGCGGGCAGCCTCCCTTTTTGCCTC
CCGGAGTCACCCGTTATTTCGTCTGTGGCTCAAGCCCGGCCACGCCGCCCAAGGGCTCCTCCCGACCTCCCGGCCT
GCCGCTCCGGCCACTGCGGGATCCAGAAACATGTCGACCACACTTCTGTCCGCTTCTACGATGTGCACTTCTTG
TGCAAGACAGAGAAATCCCTGGCCAACCTCAACCTGAACAACATGCTGGACAAGAAGGCGGTGGGGACGCCTGTG
GCCGCCGCCCCAGCTCGGGCTTCGCGCCGGGATTCTCCGACGGCACTCGGCCAGCAACCTGCATGCACTCGCC
CACCCCGCGCCAGCCCCGGCAGCTGCTCGCCCAAGTTCCCGGGCGCCGCTAACGGCAGCAGCTGCGGCAGCGCG
GCGGCCGGCGGTCCGACCTCCTACGGCACCTTAAGGAGCCGTGGGGGGCGGGCGGCACAGCCCTGCTCAACAAG
GAGAACAATTCGGGACCGCTCGTTTAGCGAGAACGGCGATCGCAGCCAGCACCTCCTGCACCTGCAGCAGCAG
CAGAAGGGGGGCGGGCTCCAGATCAACTCCACGCGCTACAAGACCGAGCTGTGCCGGCCCTTCGAGGAGAGC
GGCAGTGCAAGTACGGCGAAAAGTGCCAGTTTCGCGCATGGCTTCACGAGCTGCGCAGCCTGACTCGCCATCCG
AAGTACAAGACCGAGCTGTGCCGCACCTTTCATACCATCGGCTTCTGCCCCATGCGGCCGCGCTGCCACTTCATC
CACAAACGCGGACGAGCGGCGGCCCGCGCCGTTCGGGGGGCGCCTCCGGGGACCTGCGTGCCCTTTGGCACGCGCGAT
GCGTTGCACCTGGGCTTCCCGCGGGAGCCCGGGCCCAAGTTGCACCACAGCCTCAGCTTCTCGGGCTTCCCGTCG
GGCCACCATCAGCCCCGGGGCGGCTCGAGTCGCCGCTGCTGCTCGACAGCCCCACGTGCGGCACGCGCGCGCCG
CCCTCTGCTCTTCGGCTCTGTCCTGCTCCTCCTCCGCTCCTCCTGTTTCTCGGCCTCCGCGGCTCCACGCCC
TCGGGCGCCCCGACATGCTGCGCCTCCGCGGCGGCCGCGGCTGCGGCCGCTCTGCTGTACGGCACGGGGGCGCC
GAGGACCTGCTGGCGCGGGGGCCCCGTGCGCGGCTGCTCGTTCGGCTCTGTCGCCAACAACGCCTTCGCTTC
GGTCCGGAGCTCAGCAGCCTCATCACGCCGCTCGCCATCCAGACCCACAATTTGCCGCCGTGGCGCGCGCGCC
TACTACCGCAGTCAGCAGCAGCAGCAGCAGGCGCTGGCGCCCCCGCGCAGCCGCCGGCGCGCCAGCGCG
ACCCTCCCCGCGGGGGCGCGCACCTCCCTCGCGGCCCTTCAGCTTCCAGCTGCCGCGCGCCTGTCCGACTCG
CCCGTGTTCGACGCGCCCCCAGCCCCCGGACTCGCTGTGCGACCGCGACAGCTACCTAAGCGGCTCCCTGAGC
TCCGGCAGCCTCAGCGGCTCTGAGTCTCCAGCCTCGACCTGGCCGCGCCTGCCAATCTTCAGCGCCTCTCC
ATCTCCGACGACTGAGGCAAGAGGGCGCCAGTGAGGAGGAAGGGAAGGCGGTTTCAGAGATGTTGGAGGACACCCC
TCGCCATCTCGCCCTTGCTGGGGGACGGGAGTGGGGGGGTGACATGGGCCCTAGGCAGACTGCAAGCCCGACC
GAGCACTTGGACTCGAACTCTGTGCCGGGAGGGGCCCCACCCCTCCTTTTTTCGGTTTCCTCTTGCTCTTTTTT

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FIGURE 112B

TTTATTTTTATTACGAAGTTTCATTCTTTTTGAGCAAAAAGTCGAACTTTTCTGTTGAACAAAATATTCACAA
CAGGGCAGTTGTGATACGAATAGAACAAAAAGAAAAAAGAACTTAAACTTTGTTAGGACTCCGATGAGTTT
GGGACTTCAGGAAAAATCAACCCAGCACCAGCAGCTACCAACCACCATTCCATCTCTTCATTGAACAGCATTAG
TTAAGTCCAGATGTGGGAACCTTCTCTTGAAGAAGTTCCTAATTGTGTCTCAGACCGGTGTAAACAAACCAGC
CAGCCGCCACCTTGCTAAACCTATAAGCTTTTTTAAATCCAATATATTCTGCCAAGAATATGCCTTGATAGTTAG
CCCTCAGCCCATAGGTGTTTTTTGTTTTTTTAAACAGAATTATATATGTCTGGGGGTGAAAAACCTTGCATTCCA
AAGGTCCATACTGGTTACTTGGTTTCATTGCCACCACCTTAGTGGATGTTTCAGTTTAGAACCATTTTGTCTGCTCC
CTCTGGAAGCCTTGCGCAGAGCTTACTTTGTAATTGTTGGAGAATAACTGCTGAATTTTTAGCTGTTTTGAGTTG
ATTGCGCACTGCACCACAACCTCAATATGAAAACCTTTAACTTATTTATTATCTTGTGAAAAGTATACAATGA
AAATTTTGTTCATACTGTATTTATCAAGTATGATGAAAAGCAATAGATATATATCTTTTATTATGTTAAATTAT
GATTGCCATTATTAATCGGCAAAATGTGGAGTGTATGTTCTTTTACAGTAATATATGCCTTTTGTAACTTCACT
TGTTATTTTATTGTAAATGAGTACAAAATTCTTAATTTAAGAGATTGTATGTAATATTTATTTTATTAATTTCT
TTCCTTGTTTACGTAAATTTTGAAAGATTGCATGATTTCTTGACAGAAATCGATCTTGATGCTGTGGAAGTAGTT
TGAGGAACATCCTATGAGTTTCTTAGAATGTATAAAGGTTGTAGCCCATCCAACCTTCAAAGAAAAAATGACCA
CATACTTTGCAATCAGGCTGAAATGTGGCATGCTTTTCTAATTCCAACCTTATAAACTAGCAAAAAAGTGTTC
TTATTCCACCAGTTCTACTGTGACATACTCGAGTATAAAGACATGTAGCAATAACGGGGAGTGGGGGGGAGTCT
CACAGTGCCTTTGAAGGGGCCGAACCTTGCCTTAAATCTTCTCAACCAAATAAGTATTTTATTAGTGCTTGAGA
GAATCTGAATGTAGGATGGGTTCAACTGCACAAAAGGAAAAGATTTTACCACCTTTTTTATATAGATATAAAGT
GAAGCAACCGCCTTAGTGCTGAAATATGTAGTACATGAATATGCCTTGTTTAATTACAGAAAATTCCAAAACCTG
TACTATTTTTTTTTTCCATGTAGAAAGGCAGGAATGTCTCCTAAGCTTTCCTGGACAGCAGATGAATGAGCGGTA
GCTTTAGTTTGTACGTAGGTACAGTTGGAGCACTATATGTACTCTCTGGACTACTTTGGACAGAAGTAGGTTTTT
GAATGTAACAAGATAAGTCAACTTGAGTTGTAATATATTTTGGGGAATCAGCTCACTACAAATTGTGACTGTAAA
CATTGTACTGTAAATGTTTTGTAGTTTTCCCCAATAAAATTTTGGGAAAAAAGGTATTAACATGTAAGAGCT
TTCTTTTTTAAACAGGAATGTCTTAGCTTTCTAGCTTCCCAGCTAACCATGTCTGCCATTCCCAGGTCTTGGCAT
GGTGGGGGAGGACTTGAGAGCTGGCAGAGCCAGAGTTCAGAAGAGCCTGCGTCCTCTCAGCCGTATATATTTT
ATAAGCAAGTTCTTCTAATGAAAGAAAGTAATTATTTGGACTGTCAAGGGCATTAGTT

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FIGURE 113

MEESQRGERAGSLPFCLPESPVIRRGSSPATPPQGLLPTSRPAAPATAGSRNMSTTLLSAFYDVDFLCKTEKSLA
NLNLNNMLDKKAVGTPVAAAPSSGFAPGFLRRHSASNLHALAHPAPSPGSCSPKFGAANGSSCGSAAAGGPTSY
GTLKEPSGGGGTALLNKENKFRDRSFSENGDRSQHLLHLQQQQKGGGGSQINSTRYKTELCRPFEEESGTCKYGEK
CQFAHGFHELRLTRHPKYKTELCRTFHTIGFCPYGPRCHFIHNADERRPAPSGGASGDLRAFGTRDALHLGFPR
EPRPKLHHSLSFSGFPSGHHQPPGGLESPLLLDSPTSRTPPPPSCSSASSCSSASSCSSASAASTPSGAPTCCA
SAAAAAAAAALLYGTGGAEDLLAPGAPCAACSSASCANNAFAFGPELSSLITPLAIQTHNFAAVAAAAAYRSQQQQ
QQQGLAPPAQPPAPPSATLPAGAAAPPSPFFSFQLPRRLSDSPVFDAPPSPDLSDRDSYLSGSLSSGSLSGSE
SPSLDPGRRLPIFSRLSISDD

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FIGURE 114

GAGTTCCAGCAGTCCGCGAGCTGCCGTCCGGCTCCGCGGGGGGGGGCGGGCCGGGCACCCCGGGGCGCGGAGGAGCG
CTCCTCGCTTCTCTCCTTCCCCCTGCCGCACTCCGCCGGACCTCCCCGCCGGCCCGCGCCGCTGCACTCGCCCT
CTCCTCTCGCCCCCGGGCAAACCTTTCGGCCCTCCCCGCCCTCGCCCGTTATTCTGTCGTGGCTCAAGCCCGGCC
ACGCCGCCCCAAGGGCTCCTCCCGACCTCCCGGCCTGCCGCTCCGGCCACTGCGGGATCCAGAAACATGTCGACC
ACACTTCTGTCCGCTTCTACGATGTCGACTTCTTGTGCAAGACAGAGAAATCCCTGGCCAACCTCAACCTGAAC
AACATGCTGGACAAGAAGGCGGTGGGGACGCCTGTGGCCGCCGCCCGCCAGCTCGGGCTTCGCGCCGGGATTCTCTC
CGACGGCACTCGGCCAGCAACCTGCATGCACTCGCCACCCCGCGCCAGCCCGGCAGCTGCTCGCCCAAGTTC
CCGGGCGCCGCTAACGGCAGCAGCTGCGGCAGCGCGCGCGCGCGGTCCGACCTCCTACGGCACCTTAAGGAG
CCGTCCGGGGGGCGGGCGCACAGCCCTGCTCAACAAGGAGAACAATTCGGGACCGCTCGTTTAGCGAGAACGGC
GATCGCAGCCAGCACCTCCTGCACCTGCAGCAGCAGAGAAGGGGGCGGCGGTCCCAGATCAACTCCACGCGC
TACAAGACCGAGCTGTGCCGGCCCTTCGAGGAGAGCGGCACGTGCAAGTACGGCGAAAAGTGCCAGTTTCGCGCAT
GGCTTCCACGAGCTGCGCAGCCTGACTCGCCATCCGAAGTACAAGACCGAGCTGTGCCGCACCTTTCATACCATC
GGCTTCTGCCCCTATGGGCCGCGTGGCACTTCATCCACAACGCGGACGAGCGGCGGCCCGCGCCGTCCGGGGGGC
GCCTCCGGGGACCTGCGTGCCCTTGGCACGCGCATGCGTTGCACCTGGGCTTCCGCGGGAGCCGCGGCCCAAG
TTGACCACAGCCTCAGCTTCTCGGGCTTCCGTCGGGCCACCATCAGCCCCCGGGCGGGCTCGAGTCGCGCGTG
CTGCTCGACAGCCCCACGTGCGGCACGCCGCGCGCCCTCCTGCTCTTCGGCCTCGTCTCTCTCTCCGCC
TCTCTGTCTCTCGGCCTCCGCGGCCTCCACGCCCTCGGGCGCCCCGACATGCTGCGCCTCCGCGGCGGCCGCG
GCTGCGGCGCTCTGCTGTACGGCACCGGGGGCGCCGAGGACCTGCTGGCGCCGGGGGCCCGTGC GCGGCCTGC
TCGTGCGCCTCGTGCGCCAACAACGCCTTCGCCTTCGGTCCGGAGCTCAGCAGCCTCATCAGCCGCTCGCCATC
CAGACCCACAACCTTTGCCGCCGTGGCCGCCGCCGCTACTACCGCAGTCAGCAGCAGCAGCAGCAGGCGCTG
GCGCCCCCGCGCAGCCGCCGGCGCCGCGCCAGCGCAGCCCTCCCCGCCGGGGCGCCGCACCTCCCTCGCCGCC
TTCAGCTTCCAGCTGCCGCGCCGCTGTCCGACTCGCCCGTGTTCGACGCGCCCCCAGCCCCCGGACTCGCTG
TCGGACCGCGACAGCTACCTAAGCGGCTCCCTGAGCTCCGGCAGCCTCAGCGGCTCTGAGTCTCCAGCCTCGAC
CCTGGCCGCCGCTGCCAATCTTCAGCCGCTCTCCATCTCCGACGACTTGAGGCAAGAGGGCGCCAGTGAGGAGG
AAGGGAAGGCGGTTAGAGATGTTGGAGGACACCCCTCGCCATCTCGCCCTTGTGGGGGCACGGGAGTGGGGGG
GGTGACATGGGCCCTAGGCAGACTGCAAGCCGACCGAGCACTTGGAATCGAACTCTGTGCCGGGAGGGGCCCCC
ACCCCTCCTTTTTCGGTTTCTCTTGTCTTTTTTTTTTATTTTTATTACGAAGTTTCATTCTTTTTGAGCAAAA
AAGTCGAACTTTTCTGTTGAACAAAATATTACAAACAGGGCAGTTGTGATACGAATAGAACAAAAAAAAAAAA
AAACACTTAACTTTGTTAGGACTCCGATGAGTTTGGGACTTCAGGAAAAATCAACCCAGCACCAGCAGCTACCA
ACCACCATTCATCTCTTCACTTGAACAGCATTAGTTAAGTCCAGATGTGGGAACCCCTTCTCTTGAAGAAGTTC
CTAATTGTGTCTCAGACCGGTGTAAACAAACAGCCAGCCGCCACCTTGCTAAACCTATAAGCTTTTTTAAATCC
AATATATTCTGCCAAGAATATGCCTTGATAGTTAGCCCTCAGCCCATAGGTGTTTTTTGTTTTTAAACAATTA
TATATGTCTGGGGGTGAAAAAACCCCTTGCAATCCAAAGGTCCATACTGGTTACTTGGTTTCATTGCCACCACTTA
GTGGATGTTTCACTTAGAACCATTTTGTCTGCTCCCTCTGGAAGCCTTGCGCA

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FIGURE 115

MSTTLLSAFYDVDFLCKTEKSLANLNLNNMLDKKAVGTPVAAAPSSGFAPGFLRRHSASNLHALAHPAPSPGSCS
PKFPGAANGSSCGSAAAGGPTSYGTLKEPSGGGGTALLNKENKFRDRSFSENGDRSQHLLHLQQQOKGGGGSQIN
STRYKTELCRPFEEESGTCKYGEKCQFAHGFEHLRSLTRHPKYKTELCTRFTHTIGFCPYGPRCHF IHNADERRPAP
SGGASGDLRAFGTRDALHLGFPREPRPKLHHSLSFSGFPPSGHHQPPGGLESPLLLDSPTSRTPPPSCSSASSCS
SSASSCSSASAASTPSGAPTCCASAAAAAALLYGTGGAEDLLAPGAPCAACSSASCANNAFAFGPELSSLITP
LAIQTHNFAAVAAAAAYYRSQQQQQQQLAPPAQPPAPPSATLPAGAAAPPSPPFQLPRLSDSPVFDAPPSP
DSLSDRDSYLSGSLSSGSLSGSESPSLDPGRRLP IFSRLSISDD

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FIGURE 116

AAAAGAAAAAAAAAAGATTTTTCTTCTCTTAATCGGAATCGTGATGGTGTGGATTATTTCAATGGTGGGGTT
AATATAGCATGTTATCCTGTCTATCTTTTAAAGATTTCTGTATAAGACTGTTGAGCAGTTTTTAAAATAGTGTAG
GATAATATAAAAAGCAGATAGATGGCGCTATGTTTGATTCTTACAACGAAATTATCACCAGCTTTTTTTCATTCT
TAACTCTTTAAAGGATTCAAACGCAACTCAAATCTGTGCTGGACTTTAAAAAACAATTCAGGACCAAATTTTTT
CTCAGTGTGTGTTTATTTCCTTATAGGTGTAAATGAGAAGACGTGTTTTTTTTCCTTCACCGATGCTCCATCCTC
GTATTTCTTTTTCTTGTAAATGTAATCAGATGCCATTTTATATGTGGACGTATTTATACTGGCCAAACATATTT
TTTCTTTTGTCCCTTTTTTTCTTTCTTTCTTTTACTTCCTTTATTTCTTATTCTCCTTTCCNTTTTTNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGTAGTTGTTGTTACCCACGCCATTTTACGTCTCCTTCACTGAAGGG
CTAGAGTTTTTAACTTTTAATTTTTTATATTTAAATGTAGACTTTTGACACTTTTAAAAAACAAAAAAGACAAGA
GAGATGAAAACGTTTGATTATTTCTCAGTGTATTTTGTAAAAAATATATAAAGGGGGTGTAAATCGGTGTAAA
TCGCTGTTTGGATTTCCTGATTTTATAACAGGGCGGCTGGTTAATATCTCACACAGTTTAAAAAATCAGCCCCTA
ATTTCTCCATGTTTACACTTCAATCTGCAGGCTTCTTAAAGTGACAGTATCCCTTAACCTGCCACCAGTGTCCAC
CCTCCGGCCCCCGTCTTGTA AAAAGGGGAGGAGAATTAGCCAAACACTGTAAGCTTTTAAGAAAAACAAAGTTT
AAACGAAATACTGCTCTGTCCAGAGGCTTTAAACTGGTGCAATTACAGCAAAAAGGGATTCTGTAGCTTTAACT
TGTA AACCACATCTTTTTTGCACTTTTTTTATAAGCAAAAACGTGCCGTTTAAACCACTGGATCTATCTAAATGC
CGATTTGAGTTCGCGACACTATGTACTGCGTTTTTCACTTCTGTATTTGACTATTTAATCCTTTCTACTTGTGCGC
TAAATATAATTGTTTTAGTCTTATGGCATGATGATAGCATATGTGTTTCAAGGTTTATAGCTGTTGTGTTTAAAAAT
TGAAAAAAGTGAAAACATCTTTGTACATTTAAGTCTGTATTATAATAAGCAAAAAGATTGTGTGTATGTATGTT
TAATATAACATGACAGGCACTAGGACGTCTGCCTTTTTAAGGCAGTTCCGTTAAGGGTTTTTGTTTTTAACTTT
TTTTTGCCATCCATCCTGTGCAATATGCCGTGTAGAATATTTGTCTTAAATTTCAAGGCCACAAAAACAATGTTT
GGGGGAAAAAAAAGAAAAAATCATGCCAGCTAATCATGTCAAGTTCACTGCCTGTCAGATTGTTGATATATACCT
TCTGTAAATAACTTTTTTTGAGAAGGAAATAAAATCAGCTGGAACCTGAACCCTAAAAAAAATCTATGTCGGGTGC
GGAGAAAGAGGTAATGAAATGGCA

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FIGURE 117

MRRRVFFLHRC SILVFLFPCKCNQMPFYMWTYLYWPNIFFLLSLFFFPFFLLPLFLIPPFXXXXXXXXXXXXX

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FIGURE 118

GGGCGCGCCAGAGACGCAGCCGCGCTCCCACCACCCACACCCACCGCGCCCTCGTTTCGCCTCTTCTCCGGGAGCC
AGTCCGCGCCACCGCCGCGCCGCCCAGGCCATCGCCACCCTCCGCAGCC**ATGT**CCACCAGGTCCGTGTCCTCGTCCT
CCTACCGCAGGATGTTTCGGCGGGCCCGGGCACCGCGAGCCGGCCGAGCTCCAGCCGGAGCTACGTGACTACGTCCA
CCCGCACCTACAGCCTGGGCAGCGCGCTGCGCCCCAGCACCCAGCCGCGAGCCTCTACGCCTCGTCCCCGGGGCGGCG
TGTATGCCACGCGCTCCTCTGCCGTGCGCCTGCGGAGCAGCGTGCCCGGGGTGCGGCTCCTGCAGGACTCGGTGG
ACTTCTCGCTGGCCGACGCCATCAACACCGAGTTCAAGAACACCCGCAACCAACGAGAAGGTGGAGCTGCAGGAGC
TGAATGACCGCTTCGCCAACTACATCGACAAGGTGCGCTTCCTGGAGCAGCAGAATAAGATCCTGCTGGCCGAGC
TCGAGCAGCTCAAGGGCCAAGGCAAGTCGCGCCTAGGGGACCTCTACGAGGAGGAGATGCGGGAGCTGCGCCGGC
AGGTGGACCAGCTAACCAACGACAAAGCCCCGCGTCGAGGTGGAGCGCGACAACCTGGCCGAGGACATCATGCGCC
TCCGGGAGAAAATTGCAGGAGGAGATGCTTCAGAGAGAGGAAGCCGAAAACACCCTGCAATCTTTCAGACAGGATG
TTGACAATGCGTCTCTGGCACGTCTTGACCTTGAACGCAAAGTGGAATCTTTGCAAGAAGAGATTGCCTTTTTGA
ACAACTCCACGAAGAGGAAATCCAGGAGCTGCAGGCTCAGATTCAGGAACAGCATGTCCAAATCGATGTGGATG
TTTCCAAGCCTGACCTCACGGCTGCCCTGCGTGACGTACGTACGCAATATGAAAGTGTGGCTGCCAAGAACCTGC
AGGAGGCAGAAGAATGGTACAAATCCAAGTTTGCTGACCTCTCTGAGGCTGCCAACCGGAACAATGACGCCCTGC
GCCAGGCAAAGCAGGAGTCCACTGAGTACCGGAGACAGGTGCAGTCCCTCACCTGTGAAGTGGATGCCCTTAAAG
GAACCAATGAGTCCCTGGAACGCCAGATGCGTGAAATGGAAGAGAACTTTGCCGTTGAAGCTGCTAACTACCAAG
ACACTATTGGCCGCCCTGCAGGATGAGATTGAGAATATGAAGGAGGAAATGGCTCGTCACCTTCGTGAATACCAAG
ACCTGCTCAATGTTAAGATGGCCCTTGACATTGAGATTGCCACCTACAGGAAGCTGCTGGAAGGCGAGGAGAGCA
GGATTTCTCTGCCTCTTCCAACTTTTCCTCCCTGAACCTGAGGGGAACTAATCTGGATTCACTCCCTCTGGTTG
ATACCCACTCAAAAAGGACATTCTGATTAAGACGGTTGAACTAGAGATGGACAGGTTATCAACGAACTTCTC
AGCATCACGATGACCTTGAA**TAAAA**ATTGCACACACTCAGTGGCAGGCGATATATTACCCAGGCAAGAATAAAAA
AGAAATCCCATATCTTAAAGAAACAGCTTTCAAGTGCCCTTCTGCAGTTTTTCAGGAGCGCAAGATAGATTTGGA
ATAGGAATAAGCTCTAGTTCTTAACAACCGACACTCCTACAAGATTTAGAAAAAAGTTTACAACATAATCTAGTT
TACAGAAAAATCTTGTGCTAGAATACTTTTTTAAAGGTATTTTGAATACCATTAAACTGCTTTTTTTTTTCCAG
CAAGTATCCAACCAACTTGGTTCTGCTTCAATAAATCTTTGGAAACTCCA

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FIGURE 119

MSTRSVSSSSYRRMFGGPGTASRPSSSRSYVTTSTRTYSLGSALRPSTSRSLYASSPGGVYATRSSAVRLRSSVP
GVRLQLQDSVDFSLADAINTEFKNTRTNEKVELQELNDRFANYIDKVRFLQQNKILLAELEQLKGQKSR LGDLY
EEEMRELRRQVDQLTNDKARVEVERDNLAEDIMRLREKLQEEMLQREEAENTLQSFQDQVDNASLARLDLERKVE
SLQEEIAFLKKLHEEEIQELQAQIQEQHVQIDVDVSKPDLTAALRDVRQQYESVAAKNLQEAEEWYKSKFADLSE
AANRNNDALRQAKQESTEYRRQVQSLTCEVDALKGTNESLERQMREMEENFAVEAANYQDTIGRLQDEIQNMKEE
MARHLREYQDLLNVKMALDIEIATYRKLLERGEESRISLPLPNFSSLNLRETNLDSLPLVDTHSKRTFLIKTVETR
DGQVINETSQHDDLE

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FIGURE 120

TGCCTGCTGAGGGTGGAGACCCACGAGCCGAGGCCTCCTGCAGTGTTCCTGCACAGCAAACCGCACGCTATGGCTG
ACAGCCGGGATCCCGCCAGCGACCAGATGCAGCACTGGAAGGAGCAGCGGGCCGCGCAGAAAGCTGATGTCCTGA
CCACTGGAGCTGGTAACCCAGTAGGAGACAACTTAATGTTATTACAGTAGGGCCCCGTGGGCCCCCTTCTTGTTT
AGGATGTGGTTTTCTACTGATGAAATGGCTCATTTTGACCGAGAGAGAATTCCTGAGAGAGTTGTGCATGCTAAAG
GAGCAGGGGCCCTTTGGCTACTTTGAGGTCACACATGACATTACCAAATACTCCAAGGCAAAGGTATTTGAGCATA
TTGGAAGAAGACTCCCATCGCAGTTCGGTTCTCCACTGTTGCTGGAGAATCGGGTTCAGCTGACACAGTTCGGG
ACCTTCGTGGGTTTGCAGTGAAATTTTACACAGAAGATGGTAACTGGGATCTCGTTGGAAATAACACCCCCATTT
TCTTCATCAGGGATCCCATATTGTTTCCATCTTTTATCCACAGCCAAAAGAGAAATCCTCAGACACATCTGAAGG
ATCCGGACATGGTCTGGGACTTCTGGAGCCTACGTCCTGAGTCTCTGCATCAGGTTTCTTTCTTGTTTCAGTGATC
GGGGGATTCCAGATGGACATCGCCACATGAATGGATATGGATCACATACTTTCAAGCTGGTTAATGCAAATGGGG
AGGCAGTTTATTGCAAATTCATTATAAGACTGACCAGGGCATCAAAAACCTTTCTGTTGAAGATGCGGCGAGAC
TTTCCAGGAAGATCCTGACTATGGCATCCGGGATCTTTTAAACGCCATTGCCACAGGAAAGTACCCCTCCTGGA
CTTTTTACATCCAGGTCATGACATTTAATCAGGCAGAACTTTTCCATTTAATCCATTTCGATCTCACCAAGGTTT
GGCCTCACAAGGACTACCCTCTCATCCCAGTTGGTAACTGGTCTTAAACCGGAATCCAGTTAATTACTTTGCTG
AGGTTGAACAGATAGCCTTCGACCCAAGCAACATGCCACCTGGCATTGAGGCCAGTCTGACAAAATGCTTCAGG
GCCGCTTTTGCCTATCCTGACACTACCGCCATCGCCTGGGACCCAATTATCTTCATATACCTGTGAAGTCTC
CCTACCGTGCTCGAGTGGCCAATACCAGCGTGATGGCCCGATGTGCATGCAGGACAATCAGGGTGGTGCTCCAA
ATTACTACCCCAACAGCTTTGGTGCTCCGGAACAACAGCCTTCTGCCCTGGAGCACAGCATCCAATATTCTGGAG
AAGTGCGGAGATTCAACACTGCCAATGATGATAACGTTACTCAGGTGCGGGCATTCTATGTGAACGTGCTGAATG
AGGAACAGAGGAAACGTCTGTGTGAGAACATTGCCGGCCACCTGAAGGATGCACAAATTTTCATCCAGAAGAAAG
CGGTCAAGAACTTCACTGAGGTCCACCCTGACTACGGGAGCCACATCCAGGCTCTTCTGGACAAGTACAATGCTG
AGAAGCCTAAGAAATGCGATTACACCTTTGTGCAGTCCGGATCTCACTTGGCGGCAAGGGAGAAGGCAAATCTGT
GAGGCCGGGGCCCTGCACCTGTGCAGCGAAGCTTAGCGTTTCATCCGTGTAACCCGCTCATCACTGGATGAAGATT
CTCCTGTGCTAGATGTGCAAAATGCAAGCTAGTGGCTTCAAAATAGAGAATCCCACCTTTCTATAGCAGATTGTGTA
ACAATTTTAATGCTATTTCCCCAGGGGAAAATGAAGGTTAGGATTTAACAGTCATTTAAAAAATTTGTTTT
GACGGATGATTGGATTATTCATTTAAATGATTAGAAGGCAAGTTTCTAGCTAGAAATATGATTTTATTTGACAA
AATTTGTTGAAATTATGTATGTTTACATATCACCTCATGGCCTATTATATTTAAATATGGCTATAAATATATAAA
AAGAAAAGATAAAGATGATCTACTCAGAAATTTTTATTTTTCTAAGGTTCTCATAGGAAAAGTACATTTAATACA
GCAGTGTCATCAGAAGATAACTTGAGCACCGTCATGGCTTAATGTTTATTCTGATAATAATTGATCAAATTCAT
TTTTTTCACTGGAGTTACATTAATGTTAATTCAGCACTGATTTCAACAACAGATCAATTTGTAATTGCTTACATTT
TTACAATAAATAATCTGTACGTAAGAACA

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FIGURE 121

MADSRDPASDQM QHWKEQRAAQKADVLT TGAGNPVGDKLNVITVGPRGPLL VQDVVFTDEMAHFDRERIPERVVH
AKGAGAFGYFEVTHDITKYSKAKVFEHIGKKTPIAVRFSTVAGESGSADTVRDPRGFAVKFYTEDGNWDLVGNNT
PIFFIRDPI LFPSFIHSQKRNPQTHLKDPDMVWDFWSLRPESLHQVSFLFSDRGIPDGHRHMNGYGSHTFKLVNA
NGEAVYCKFHYKTDQG IKNLSVEDAARLSQEDPDYGIRDLFNAIATGKYP SWTFYIQVMTFNQAETFPFNPFDLT
KVWPHKDYPLIPVGKLV LNRNPVNYFAEVEQIAFDPSNMPPGIEASPDKMLQGRLFAYPDTHRHLGPNYLHIPV
NCPYRARVANYQRDGP MCMQDNQGGAPNYYPN SFGAPEQQPSALEHSIQYSGEVRRFNTANDDNVTQVRAFVNV
LNEEQRKRLCENIAGHLKDAQIFIQKKAVKNFTEVHPDYGSHIQALLDKYNAEKPKNAIHTFVQSGSHLAAREKA
NL

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FIGURE 122

ATCAGCGAGGGATTACGGCGAAATGAGACTGTTCTGTGAGTGATGGCGTCCCGGGTTGCTTGCCGGTGCTGGCCG
CCGCCGGGAGAGCCCCGGGGCAGAGCAGAGGTGCTCATCAGCACTGTAGGCCCGGAAGATTGTGTGGTCCCGTTCC
TGACCCGGCCTAAGGTCCCTGTCTTGACGCTGGATAGCGGCAACTACCTCTTCTCCACTAGTGCAATCTGCCGAT
ATTTTTTTTTTGTATCTGGCTGGGAGCAAGATGACCTACTAACCAGTGGCTGGAATGGGAAGCGACAGAGCTGC
AGCCAGCTTTGTCTGCTGCCCTGTACTATTTAGTGGTCCAAGGCAAGAAGGGGGAAGATGTTCTTGGTTTCAGTGC
GGAGAGCCCTGACTCACATTGACCACAGCTTGAGTCGTGAGAAGTGTCTTCTTGGCTGGGGAGACAGAATCTC
TAGCCGACATTGTTTTGTGGGGAGCCCTATACCCATTACTGCAAGATCCCGCCTACCTCCCTGAGGAGCTGAGTG
CCCTGCACAGCTGGTTCAGACACTGAGTACCCAGGAACCATGTGACGAGCTGCAGAGACTGTACTGAAACAGC
AAGGTGTCTGGCTCTCCGGCCTTACCTCCAAAAGCAGCCCCAGCCAGCCCCGCTGAGGGAAGGGCTGTCACCA
ATGAGCCTGAGGAGGAGGAGCTGGCTACCCTATCTGAGGAGGAGATTGCTATGGCTGTTACTGCTTGGGAGAAGG
GCCTAGAAAGTTTGGCCCCGCTGCGGCCCCAGCAGAATCCAGTGTGCTGTGGCTGGAGAAAGGAATGTGCTCA
TCACCAGTGCCCTCCCTTACGTCAACAATGTCCCCACCTTGGGAACATCATTGGTTGTGTGCTCAGTGCCGATG
TCTTTGCCAGGTACTCTCGCCTCCGCCAGTGGAAACACCCTCTATCTGTGTGGGACAGATGAGTATGGTACAGCAA
CAGAGACCAAGGCTCTGGAGGAGGGACTAACCCCCCAGGAGATCTGCGACAAGTACCACATCATCCATGCTGACA
TCTACCGCTGGTTTAACATTTTCGTTTGATATTTTTGGTTCGCCACCACCCTCCACAGCAGACCAAAATCACCAGG
ACATTTTCCAGCAGTTGCTGAAACGAGGTTTTGTGCTGCAAGATACTGTGGAGCAACTGCGATGTGAGCACTGTG
CTCGCTTCTGGCTGACCGCTTCGTGGAGGGCGTGTGTCCCTTCTGTGGCTATGAGGAGGCTCGGGGTGACCAGT
GTGACAAGTGTGGCAAGCTCATCAATGCTGTGAGCTTAAGAAGCCTCAGTGTAAGTCTGCCGATCATGCCCTG
TGGTGCAGTCGAGCCAGCACCTGTTTCTGGACCTGCCTAAGCTGGAGAAGCGACTGGAGGAGTGGTTGGGGAGGA
CATTGCCTGGCAGTGACTGGACACCCAATGCCAGTTTATCACCCGTTCTTGGCTTCGGGATGGCCTCAAGCCAC
GCTGCATAACCCGAGACCTCAAATGGGGAACCCCTGTACCCCTTAGAAGGTTTTGAAGACAAGGTATTCTATGTCT
GGTTTGATGCCACTATTGGCTATCTGTCCATCACAGCCAACTACACAGACCAGTGGGAGAGATGGTGGAAGAACC
CAGAGCAAGTGGACCTGTATCAGTTTATGGCCAAAGACAATGTTCCCTTCCATAGCTTAGTCTTCTTCTGCTCAG
CCCTAGGAGCTGAGGATAACTATACCTTGGTCAGCCACCTCATTGCTACAGAGTACCTGAACTATGAGGATGGGA
AATTCTCTAAGAGCCGCGGTGTGGGAGTGTGGGGACATGGCCAGGACACGGGGATCCCTGCTGACATCTGGC
GCTTCTATCTGCTGTACATTTCGGCCTGAGGGCCAGGACAGTGCTTTCTCCTGGACGGACCTGCTGCTGAAGAATA
ATTCTGAGCTGCTTAACAACCTGGGCAACTTCATCAACAGAGCTGGGATGTTTGTGTCTAAGTTCTTTGGGGGCT
ATGTGCCTGAGATGGTGTACCCCTGATGATCAGCGCCTGCTGGCCCATGTACCCCTGGAGCTCCAGCACTATC
ACCAGCTACTTGAGAAGGTTTCGGATCCGGGATGCCTTGCGCAGTATCCTCACCATATCTCGACATGGCAACCAAT
ATATTCAGGTGAATGAGCCCTGGAAGCGGATTAAAGGCAGTGAGGCTGACAGGCAACGGGCAGGAACAGTGACTG
GCTTGGCAGTGAATATAGCTGCCTTGCTCTCTGTCTATGCTTACGCTTACATGCCACGGTTAGTGCCACAATCC
AGGCCCAGCTGCAGCTCCACCTCCAGCCTGCAGTATCCTGCTGACAACTTCTGTGTACCTTACCAGCAGGAC
ACCAGATTGGCACAGTCAGTCCCTTGTTCCAAAAATTGGAATGACCAGATTGAAAGTTTAAGGCAGCGCTTTG
GAGGGGGCCAGGCAAAAACGTCCCCGAAGCCAGCAGTTGTAGAGACTGTTACAACAGCCAAGCCACAGCAGATAC
AAGCGCTGATGGATGAAGTGACAAAACAAGGAAACATTGTCCGAGAACTGAAAGCACAAAAGGCAGACAAGAACG
AGGTTGCTGCGGAGGTGGCGAACTCTTGATCTAAAGAAACAGTTGGCTGTAGCTGAGGGGAAACCCCTGAAG
CCCCTAAAGGCAAGAAGAAAAAGTAAAGACCTTGGCTCATAGAAAGTCACTTTAATAGATAGGGACAGTAATAA
ATAAATGTACAATCTCTATA

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FIGURE 123

MRLFVSDGVPGLPVLAAAGRARGRAEVLISTVGPEDCVVPFLTRPKVPVLQLDSGNYLFSTSAICRYFFLLSGW
EQDDL TNQWLEWEATELQPALSAALYYLVVQGKKGEDVLGSVRRAL THIDHSLSRQNC PFLAGETESLADIVLWG
ALYPLLQDPAYLPEELSALHSWFQTLSTQEPCQRAAETVLKQQGV LALRPYLQKQPQPSPAEGRAVTNEPEEEEL
ATLSEEEIAMAVTAWEKGLSLEPPLRPQQNPVLPVAGER NVLITSALPYVNNVPHLGNIIGCVLSADVFARYSRL
RQWNTLYLCGTDEYGTATETKALEEGLTPQEICDKYHIIHADIYRWFNISFDIFGRITTPQQTKITQDIFQQLLK
RGFVLQDTVEQLRCEHCARFLADRFVEGVCPFCGYEEARGDQCDKCGKLINAVELKKPQCKVCRSCPVVQSSQHL
FLDLPKLEKRLEEWLGRTLPGSDWTPNAQFITRSWLRDGLKPRCITRDLKWGTPVPLEGFEDKVFYVWF DATIGY
LSITANYTDQWERWWKNPEQVDLYQFMAKDNVPFHSLVFPCSALGAEDNYTLVSHLIATEYLN YEDGKF SKSRGV
GVFGDMAQDTGIPADIWRFYLLYIRPEGQDSAFSWTDLLLKNNS ELLNNLGNFINRAGMFVSKFFGGYVPEMVL T
PDDQRLLAHV TLELQHYHQLLEKVRIRDALRSILTISR HGNQYIQVN EPWKRIKGSEADRQRAGTVTGLAVNIAA
LLSVMLQPYMPTVSATIQAQLQLPPPAC SILLTNFLCTLPAGHQIGTVSPLFQKLENDQIESLRQRFGGGQAKTS
PKPAVVETVTTAKPQQIQALMDEVTKQGNIVRELKAQKADKNEVAAEVAKLLDLKKQLAVAEGKPPEAPKGKKKK

[illegible]

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FIGURE 125

MHVIKRDGRQERVMFDKITSRIQKLCYGLNMDFVDPAQITMKVIOGLYSGVTTVELDTLAAETAATLTTKHPDYA
ILAARIAVSNLHKETKKVFSVDMEDLYNYINPHNGKHSPMVAKSTLDIVLANKDRLNSAIIYDRDFSYNFYGFKT
LERSYLLKINGKVAERPQHMLMRVSVGIHKEDIDAAIETYNLLSERWFTHASPTLTFNAGTNRPQLSSCFLLSMKD
DSIEGIYDTLKQCALISKSAGGIGVAVSCIRATGSYIAGTNGNSNGLVPMLRVYNNTARYVDQGGNKRPGAFAIY
LEPWHLDIFEFLDLKKNTGKEEQRARDLFFALWIPDLFMKRVETNQDWSLMCPNECPGLDEVWGEEFEKLYASYE
KQGRVRKVVKQAQQLWYAIIESQTETGTPYMLYKDCNRKSNQQNLGTIKCSNLCTEIVEYTSKDEVAVCNLASLA
LNMYVTSEHTYDFKKLAEVTKVVVRNLNKIIDINYYPVPEACLSNKRHRPIGIGVQGLADAFILMRYPFESAEAQ
LLNKQIFETIYYGALEASCDLAKEQGPYETIEGSPVSKGILQYDMWNVPTDLWDWKVLKEKIAKYGIRNSLLIA
PMPTASTAQILGNNESEPYTSNIYTRRVLSGEFQIVNPHLLKDLTERGLWHEEMKNQIIACNGSIQSIPEIPDD
LKQLYKTVWEISQKTVLKMAAERGAFIDQSQSLNIHIAEPNYGKLTSMHFYGWKQGLKTGMYYLRTRPAANPIQF
TLNKEKLDKEKVSKEEEEKERNTAAMVCSLENRDECLMCGS

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FIGURE 126

TCTGGGCGCGCGGACGTCAGTTTGAGTTCTGTGTTCTCCCGCCCCGTGTCCCGCCCGACCCGCGCCCCGCGATGC
TGGCGCTGCGCTGCGGCTCCCCGCTGGCTCGGCCTGCTCTCCGTCCCGCGCTCCGTGCCGCTGCGCCTCCCCGCGG
CCCGCGCCTGCAGCAAGGGCTCCGGCGACCCGTCTCTCTCTCTCTCCGGGAACCCGCTCGTGTACCTGGACG
TGGACGCCAACGGGAAGCCGCTCGGCCGCGTGGTGTGAGCTGAAGGCAGATGTCTGTCCCAAAGACAGCTGAGA
ACTTCAGAGCCCTGTGCACTGGTGAGAAGGGCTTCGGCTACAAAGGCTCCACCTCCACAGGGTGATCCCTTCCT
TCATGTGCCAGGCGGGCGACTTCACCAACCACAATGGCACAGGCGGGAAGTCCATCTACGGAAGCCGCTTTCCTG
ACGAGAACTTTACTGAAGCACGTGGGGCCAGGTGTCTGTCCATGGCTAATGCTGGTCCTAACACCAACGGCT
CCCAGTTCTTCATCTGCACCATAAAGACAGACTGGTTGGATGGCAAGCATGTTGTGTTCCGGTCACGTCAAAGAGG
GCATGGACGTCGTGAAGAAAATAGAATCTTTCGGCTCTAAGAGTGGGAGGACATCCAAGAAGATTGTCATCACAG
ACTGTGGCCAGTTGAGCTAACTCTGTGGCCAGGGTGTGGCATGGTGGCAGCTGCAAATGTCCATGCACCCAGGTG
GCCGCGTTGGGCTGTGAGCCAAGGTGCCTGAAACGATACGTGTGCCCACTCCACTGTCACAGTGTGCCTGAGGAA
GGCTGCTAGGGATGTTAGACCTCGGCCAGGACCCACCACATTGCTTCCCTAATAACCCACCCTTCCTCACGACCTCA
TTTCTGGGCATCTTGTGGACATGATGTCACCCACCCCTTGTCAAGCATTGCCTGTGATTGCCAGCCCAGATTTC
ATCTGTGCCTTGGACATGGTGATGGTGATGGGTGGCATCCAAGTGAAAGTCTTTTCCTTGACCAAGGGGGACAG
TCAGTTTTGCAAAGGACTCTAATACCTGTTTAATATTGTCTTCCTAATTGGGATAATTTAATTAACAAGATTGA
CTAGAAGTGAACTGCAACACTAATTCCCCGTGCTGTGGTGTGACCTGAGTTGGTGACACAGGCCACAGACCCC
AGAGCTTGGCTTTTGAAACACAACCTCAGGGCTTTTGTGAAGGTTCCCCCGCTGAGATCTTTCCTCCTGGTTACTG
TGAAGCCTGTTGGTTTGCTGCTGTCGTTTTTGGAGAGGGCCCATGGGGGTAGGAGCAGTTGAACCTGGGAACAAA
CCTCACTTGAGCTGTGCCTAGACAAATGTGAATTCCTGTGTTGCTAACAGAAAGTGGCCTGTAAGCTCCTGTGCTCC
GGAGGGAAGCATTTCTGTTAGGCTTTGATTTTTCTGTGTGTTAAAGAAATCAATCTACTCATGATGTGTTATG
CATAAAACATTTCTGGAACATGGATTTGTGTTACCTTAAATGTGAAAATAAATCCTATTTTCTATGAAAAAAA
AAAAAAAAAAAAAAAAA

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FIGURE 127

MLALRCGSRWLGLLSVPRSVPLRLPAARACSKGSGDPSSSSSSGNPLVYLDVDANGKPLGRVVLELKADVVPKTA
ENFRALCTGEKGFYKGSTFHRVIPSFMCQAGDFTNHNGTGGKSIYGSRFPDENFTLKHVGPVLSMANAGPNTN
GSQFFICTIKTDWLDGKHVVFGHVKEGMDVVKKIESFGSKSGRTSKKIVITDCGQLS

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FIGURE 128

TCTGGGCGCGCGCGACGTCAGTTTGAGTTCTGTGTTCTCCCCGCCCGTGTCCCGCCCGACCCGCGCCCGCGGATGC
TGGCGCTGCGCTGCGGCTCCCCGCTGGCTCGGCCTGCTCTCCGTCCCGCGCTCCGTGCCGCTGCGCCTCCCCGCGG
CCCGCGCCTGCAGCAAGGGCTCCGGCGACCCGTCTCTTCTCTCTCTCCGGGAACCCGCTCGTGTACCTGGACG
TGGACGCCAACGGGAAGCCGCTCGGCCGCGTGGTGTGGAGCTGAAGGCAGATGTCTGCCAAAGACAGCTGAGA
ACTTCAGAGCCCTGTGCACTGGTGAGAAGGGCTTCGGCTACAAAGGCTCCACCTCCACAGGGTGATCCCTTCCT
TCATGTGCCAGGCGGGCGACTTCACCAACCACAATGGCACAGGCGGGAAGTCCATCTACGGAAGCCGCTTTCCTG
ACGAGAACTTTACACTGAAGCACGTGGGGCCAGGTGTCCTGTCCATGGCTAATGCTGGTCCTAACACCAACGGCT
CCCAGTTCTTCATCTGCACCATAAAGACAGACTGGTTGGATGGCAAGCATGTTGTGTTCCGGTCACGTCAAAGAGG
GCATGGACGTCGTGAAGAAAAATAGAATCTTTCGGCTCTAAGAGTGGGAGGACATCCAAGAAGATTGTCATCACAG
ACTGTGGCCAGTTGAGCTTAATCTGTGGCCAGGGTGTGGCATGGTGGCAGCTGCAAATGTCCATGCACCCAGGTG
GCCGCGTTGGGCTGTGAGCCAAGGTGCCTGAAACGATACGTGTGCCCACTCCACTGTCACAGTGTGCCTGAGGAA
GGCTGCTAGGGATGTTAGACCTCGGCCAGGACCCACCACATTGCTTCCTAATAACCCACCCCTTCCTCACGACCTCA
TTTCTGGGCATCTTTGTGGACATGATGTCACCCACCCCTTGTCAAGCATTGCCTGTGATTGCCAGCCCAGATTCTC
ATCTGTGCCTTGGACATGGTGATGGTGATGGGTGGCATCCAAGTGAAAGTCTTTTCCTTGACCAAGGGGGACAG
TCAGTTTTGCAAAAGGACTCTAATACCTGTTTAATATTGTCTTCCTAATTGGGATAATTTAATTAAACAAGATTGA
CTAGAAGTGAACTGCAACACTAACTTCCCCGTGCTGTGGTGTGACCTGAGTTGGTGACACAGGCCACAGACCCC
AGAGCTTGGCTTTTGAACACAACTCAGGGCTTTTGTGAAGGTTCCCCCGCTGAGATCTTTCCTCCTGGTTACTG
TGAAGCCTGTTGGTTTGCTGCTGTCGTTTTTGAAGAGGGCCCATGGGGGTAGGAGCAGTTGAACCTGGGAACAAA
CCTCACTTGAGCTGTGCCTAGACAAATGTGAATTCCTGTGTTGCTAACAGAAGTGGCCTGTAAGCTCCTGTGCTCC
GGAGGGAAGCATTTCCTGGTAGGCTTTGATTTTTCTGTGTGTTAAAGAAATTCAATCTACTCATGATGTGTTATG
CATAAAACATTTCTGGAACATGGATTTGTGTTACCTTAAATGTGAAAATAAATCCTATTTTCTATGGAAAAAAA
AAAAAAAAAAAAAAAA

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FIGURE 129

MLALRCGSRWLGLLSVPRSVPLRLPAARACSKGSGDPSSSSSSGNPLVYLDVDANGKPLGRVVLELKADVVPKTA
ENFRALCTGEKGFYKGSTFHRVIPSFMCQAGDFTNHNGTGGKSIYGSRFPDENFTLKHVGPVLSMANAGPNTN
GSQFFICTIKTDWLDGKHVVFGHVKEGMDVVKKIESFGSKSGRTSKKIVITDCGQLS

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FIGURE 130

CGGCGGAGCTGGTCCCGTTGTGCTGCGGCGCCGCGCGGCCTGCAGTCCCGGGCCCGCGCCCCGCGCCGCCCCGCCC
GCCCCGCCATGGAGCCCCGGCCCCGACGGCCCCGCGCCTCCGGCCCCGCGCCATCCGCGAGGGCTGGTTCCGCGA
GACCTGCAGCCTGTGGCCCGGCCAGGCCCTGTCGCTGCAGGTGGAGCAGCTGCTCCACCACCGGCGCTCGCGCTA
CCAGGACATCCTCGTCTTCCGCAGTAAGACCTATGGCAACGTGCTGGTGTTGGACGGTGTCTATCCAGTGCACGGA
GAGAGACGAGTTCTCCTACCAGGAGATGATCGCCAACCTGCCTCTCTGCAGCCACCCCAACCCGCGAAAGGTGCT
GATCATCGGGGGCGGAGATGGAGGTGTCTGCGGGAGGTGGTGAAGCACCCCTCCGTGGAGTCCGTGGTCCAGTG
TGAGATCGACGAGGATGTCTATCCAAGTCTCCAAGAAGTTCTGCCAGGCATGGCCATTGGCTACTCTAGCTCGAA
GGTGACCCTACATGTGGGTGACGGTTTTGAGTTCATGAAACAGAAATCAGGATGCCTTCGACGTGATCATCACTGA
CTCCTCAGACCCCATGGGCCCCGCGAAAGTCTCTTCAAGGAGTCTATTACCAGCTCATGAAGACAGCCCTCAA
GGAAGATGGTGTCTCTGCTGCCAGGGCGAGTGCAGTGGCTGCACCTGGACCTCATCAAGGAGATGCGGCAGTT
CTGCCAGTCCCTGTTCCCCGTGGTGGCCTATGCCTACTGCACCATCCCCACCTACCCACGCGCCAGATCGGCCTT
CATGCTGTGCAGCAAGAACCCGAGCACGAACCTCCAGGAGCCGGTGCAGCCGCTGACACAGCAGCAGGTGGCGCA
GATGCAGCTGAAGTACTACAACCTCCGACGTGCACCGCGCCGCTTTGTGCTGCCCGAGTTTGCCCGCAAGGCCCT
GAATGATGTGAGCTTGAGCCCCAGGCGCCACCACTGATGCCACCCAGGACCTCGGACCTTGGAGCCTGCGGGGTGCC
TCGGCCCCCTCCAGCCCCGGGCGGACCTCCTGCTGGCTCTCGCCCAACCAAGTGTTACAAGCCCCAGAATGC
TGCCCGGCCTGCCCTGCTGGGCGGACTGTCTGTGTGTCTGTCTCTCTGGCGTTCCACCTCCAAGCCTATACCAGC
TGTGTACAGCGCCATCTCTCTGCCTTCTGTTGCCCCCG

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FIGURE 131

MEPGPDGPAASGPAAIREGWRETCSLWPGQALSLOVEQLLHRRSRYQDILVFRSKTYGNVLVLDGVIQCTERD
EFSYQEMIANLPLCSHPNPRKVLIIIGGGDGGVLREVVKHPSVESVQCEIDEDVIQVSKKFLPGMAIGYSSSKVT
LHVGDGFEFMKQNQDAFDVIIITDSSDPMGPAESLFKESYYQLMKTALKEDGVLCCQGECEWLHLDLIKEMRQFCQ
SLFPVVAYAYCTIPTYPGQIGFMLCSKNPSTNFQEPVQPLTQQQVAQMLKYNSDVHRAAFVLPEFARKALND
VS

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FIGURE 132

GCGCTCCGGGCCTGGAATCCCTACGCGTCCCTTTGGGTTTAGCACGATGAGCTCAATCGGCACTGGGTATGACCT
GTCAGCCTCTACATTCTCTCCTGACGGAAGAGTTTTTCAAGTTGAATATGCTATGAAGGCTGTGGAAAAATAGTAG
TACAGCTATTGGAATCAGATGCAAAGATGGTGTGTCTTTGGGGTAGAAAAATTAGTCCTTTCTAAACTTTATGA
AGAAGGTTCCAACAAAAGACTTTTTTAATGTTGATCGGCATGTTGGAATGGCAGTAGCAGGTTTGTGGCAGATGC
TCGTTCTTTAGCAGACATAGCAAGAGAAGAAGCTTCCAACCTTCAGATCTAACTTTGGCTACAACATTCCACTAAA
ACATCTTGCAGACAGAGTGGCCATGTATGTGCATGCATATACACTCTACAGTGCTGTTAGACCTTTTGGCTGCAG
TTTCATGTTAGGGTCTTACAGTGTGAATGACGGTGCGCAACTCTACATGATTGACCCATCAGGTGTTTCATACGG
TTATTGGGGCTGTGCCATCGGCAAAGCCAGGCAAGCTGCAAAGACGGAAATAGAGAAGCTTCAGATGAAAGAAAT
GACCTGCCGTGATATCGTTAAAGAAGTTGCAAAAATAATTTACATAGTACATGACGAAGTTAAGGATAAAGCTTT
TGAAGTAGAACTCAGCTGGGTTGGTGAATTAATAATGGAAGACATGAAATTGTTCCAAAAGATATAAGAGAAGA
AGCAGAGAAATATGCTAAGGAATCTCTGAAGGAAGAAGATGAATCAGATGATGATAATATGTAAACATTTACTCCA
GCATCTATTGTATTTTAAATTTCTACTCCAGTCCAATGTAAGTATTTAGCCCTGGATTATACATACTGTCCAATT
TTCATTAAATTTTTGTCTTATAACTATAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 133

MSSIGTGYDLSASTFSPDGRVFQVEYAMKAVENTSSTAIGIRCKDGVVFGVEKLVLSKLYEEGSNKRLFNVD RHVG
MAVAGLLADARSLADIAREEASNFRSNGYNIPLKHLADRVAMYVHAYTLYSAVRPFGCSFMLGSYSVNDGAQLY
MIDPSGVSYGYWGCAIGKARQAAKTEIEKLQMKEMTCRDIVKEVAKIIYIVHDEVKDKAFELELSWVGELTNGRH
EIVPKDIREEAKEYAKESLKEEDESDDDNM

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FIGURE 134

CGGCACGAGGCGACTTTGGTGGAGGTAGTTCTTTGGCAGCGGGC**ATG**CGGGTACCGTGGTGCTGGACGATGTGG
AGCTGCGGGAGGCTCAGAGAGATTACCTGGACTTCCTGGACGACGAGGAAGACCAGGGAATTTATCAGAGCAAAG
TTCGGGAGCTGATCAGTGACAACCAATACCGGCTGATTGTCAATGTGAATGACCTGCGCAGGAAAAACGAGAAGA
GGGCTAACCGGCTTCTGAACAATGCCTTTGAGGAGCTGGTTGCCTTCCAGCGGGCCTTAAAGGATTTTGTGGCCT
CCATTGATGCTACCTATGCCAAGCAGTATGAGGAGTTCTACGTAGGACTGGAAGGCAGCTTTGGCTCCAAGCACG
TCTCCCGCGGACTCTTACCTCCTGCTTCCTCAGCTGTGTGGTCTGTGTGGAGGGCATTGTCTACTAAATGTTCTC
TAGTTTCGTCCCAAAGTCGTCCGAGTGTCCTACTGTCTGCTACTAAGAAGACCATAGAGCGACGTTATTCTG
ATCTCACCACCCTGGTGGCCTTTCCCTCCAGCTCTGTCTATCCTACCAAGGATGAGGAGAACAATCCCCTTGAGA
CAGAATATGGCCTTTCTGTCTACAAGGATCACCAGACCATCACCATCCAGGAGATGCCGAGAAGGCCCCAGCCG
GCCAGCTCCCCGCTCTGTGGACGTCATTCTGGATGATGACTTGGTGGATAAAGCGAAGCCTGGTGACCGGGTTC
AGGTGGTGGGAACCTACCGTTGCCTTCCTGGAAAGAAGGGAGGCTACACCTCTGGGACCTTCAGGACTGTCTGTA
TTGCCTGTAATGTTAAGCAGATGAGCAAGGATGCTCAGCCCTCTTTCTCTGCTGAGGATATAGCCAAGATCAAGA
AGTTCAGTAAAACCCGATCCAAGGATATCTTTGACCAGCTGGCCAAGTCATTGGCCCCAAGTATCCATGGGCATG
ACTATGTCAAGAAAGCAATCCTCTGCTTGCTCTTGGGAGGGGTGGAACGAGACCTAGAAAATGGCAGCCACATCC
GTGGGGACATCAATATTCTTCTAATAGGAGACCCATCCGTTGCCAAGTCTCAGCTTCTGCGGTATGTGCTTTGCA
CTGCACCCCGAGCTATCCCCACCACTGGCCGGGGCTCCTCTGGAGTGGGTCTGACGGCTGCTGTCAACCACAGACC
AGGAAACAGGAGAGCGCCGCTCTGGAAGCAGGGGCCATGGTCTGGCTGACCGAGGCGTGGTTTGCAATTGATGAAT
TTGACAAAATGTCTGACATGGATCGCACAGCCATCCATGAAGTGATGGAGCAGGGTCGAGTGACCATTGCCAAGG
CTGGCATCCATGCTCGGCTGAATGCCCGCTGCAGTGTTTTGGCAGCTGCCAACCTGTCTACGGCAGGTATGACC
AGTATAAGACTCCAATGGAGAACATTGGGCTACAGGACTCACTGCTGTACGATTTGACTTGCTCTTCATCATGC
TGGATCAGATGGATCCTGAGCAGGATCGGGAGATCTCAGACCATGTCTTCGGATGCACCGTTACAGAGCACCTG
GGGAGCAGGATGGCGATGCTATGCCCTTGGGTAGTGCTGTGGATATCCTGGCCACAGATGATCCCAACTTTAGCC
AGGAAGATCAGCAGGACACCCAGATTTATGAGAAGCATGACAACCTTCTACATGGGACCAAGAAGAAAAAGGAGA
AGATGGTGAGTGCAGCATTTCATGAAGAAGTACATCCATGTGGCCAAAATCATCAAGCCTGTCTGACACAGGAGT
CGGCCACCTACATTGCAGAAGAGTATTCACGCCTGCGCAGCCAGGATAGCATGAGCTCAGACACCGCCAGGACAT
CTCCAGTTACAGCCCGAACACTGGAACTCTGATTCGACTGGCCACAGCCCATGCGAAGGCCCGCATGAGCAAGA
CTGTGGACCTGCAGGATGCAGAGGAAGCTGTGGAGTTGGTCCAGTATGCTTACTTTAAGAAGGTTCTGGAGAAGG
AGAAGAAACGTAAGAAGCGAAGTGAGGATGAATCAGAGACAGAAGATGAAGAGGAGAAAAGCCAAGAGGACCAGG
AGCAGAAGAGGAAGAGAAGGAAGACTCGCCAGCCAGATGCCAAAGATGGGGATTCTACGACCCCTATGACTTCA
GTGACACAGAGGAGGAAATGCCTCAAGTACACACTCCAAAGACGGCAGACTCACAGGAGACCAAGGAATCCCAGA
AAGTGGAGTTGAGTGAATCCAGGTTGAAGGCATTCAAGGTGGCCCTCTTGATGTGTTCCGGGAAGCTCATGCGC
AGTCAATCGGCATGAATCGCCTCACAGAATCCATCAACCGGACAGCGAAGAGCCCTTCTCTTCAGTTGAGATCC
AGGCTGCTCTGAGCAAGATGCAGGATGACAATCAGGTCATGGTGTCTGAGGGCATCATCTTCCTCATCT**GAGGAG**
GCCTCGTCTCTGAAGTTGGGTTGTGCCGAGAGAGTTTGTCTGTGTTCCACCCCTCTCCCTGACCCAAGTCTTT
GCCTCTACTCCCTTAACAGTGTTGAATTCAACTGAAGCGAGGAATGTTGGTGATGAAGCTGAGTTCAGGACTCG
GTGGACCCTTTGGGAATGGGTCTATGAAAGCTGCCATGGGGTGAGGAAAGAGGAGACAGTGGGAGAGGACAATGAC
TATTGCATCTTCATTGCAAAAGCACTGGCTCATCCGCCCTACTTCCCATCCCACACAAACCAATTGTAAATAAC
ATATGACTTCTGAGTACTTTTGGGGGCACAAGTGTCTTCTGTTTGCTGTTTTTTTGTGTTTTTTTCTCCAG
AGCACTTTGGTCTAGACTAGGCTTTGGGTGGTTCCAATTGGTGGAGAGAAGCTCTGAGGCACGTCATGCAGGTCA
AGAAAGCTTTCTTTGCAGTAGCACCAGTTAAGGTGAATATGTATTGTATCACAAAACAAACCCAATATCCAGATG
AATATCCGAGATGTTGAATAAACTTAGCCATTTCTGTACAAAAAAGGGGGGGCCCGGTAAAC

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FIGURE 135

MAGTVVLDDELREAQRDYLDLDEEDQGIYQSKVRELISDNQYRLIVNVNDLRRKNEKRANRLLNNAFEELVA
FQRAKDFVASIDATYAKQYEEFYVGLGSGFGSKHVSPTLTSCFLSCVVCVEGIVTKCSLVRPKVVRVSVHYCPA
TKKTIERRYSDLTTILVAFPSSTVPTKDEENNPLETEYGLSVYKDHQTITIQEMPEKAPAGQLPRSDVILDDDL
VDKAKPGDRVQVVGTYRCLPGKKGGYTSGETFRTVLIACNVKQMSKDAQPSFSAEDIAKIKKFSKTRSKDIFDQLA
KSLAPSIHGHYVKKAILCLLLGGVERDLENGSHIRGDIINILLIGDPSVAKSOLLRYVLCTAPRAIPTTGRGSSG
VGLTAAVTTDQETGERRLEAGAMVLADRGVVCIDEFDKMSDMDRTAIHEVMEQGRVTIAKAGIHARLNARCSVLA
AANFVYGRYDQYKTPMENIGLQDSLRSRFDLLFIMLDQMDPEQDREISDHVLRMHRYRAPGEQDGDAMPLGSAVD
ILATDDPNFSQEDQDQTIYEKHDNLLHGTKKKKKEKMSAAFMKKYIHVAKI IKPVLTKESATYIAEEYSRLRSQ
DSMSSDTARTSPVTARTLETILRLATAHAKARMSKTVDLQDAEEAVELVQYAYFKKVLEKEKKRKRSEDESETE
DEEEKSQEDQEQRKRKRKTRQPDAGDGSYDPYDFSDTEEMPQVHTPKTADSQETKESQKVELSESRLKAFKVA
LLDVFREAHQAQSIGMNRLTESINRDSEEPFSSVEIQAAALSKMQDDNQVMVSEGIIFLI

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FIGURE 136

TGCTGCGAACCACGTGGGTCCCGGGCGCGTTTCGGGTGCTGGCGGCTGCAGCCGGAGTTCAAACCTAAGCAGCTG
GAAGGAACCATGGCCAACGTGTGAGCGTACCTTCATTGCGATCAAACCAGATGGGGTCCAGCGGGGTCTTGTGGGA
GAGATTATCAAGCGTTTTGAGCAGAAAGGATTCCGCCTTGTTGGTCTGAAATTCATGCAAGCTTCCGAAGATCTT
CTCAAGGAACACTACGTTGACCTGAAGGACCGTCCATTCTTTGCCGGCCTGGTGAAATACATGCACTCAGGGCCG
GTAGTTGCCATGGTCTGGGAGGGGCTGAATGTGGTGAAGACGGGCGGAGTCATGCTCGGGGAGACCAACCCTGCA
GACTCCAAGCCTGGGACCATCCGTGGAGACTTCTGCATACAAGTTGGCAGGAACATTATACATGGCAGTGATTCT
GTGGAGAGTGCAGAGAAGGAGATCGGCTTGTTGGTTTTACCCTGAGGAACCTGGTAGATTACACGAGCTGTGCTCAG
AACTGGATCTATGAATTGACAGGAGGGCAGACCACATTGCTTTTACATCCATTTCCCCCTCCTTCCCATGGGCAGA
GGACCAGGCTGTAGGAAATCTAGTTATTTACAGGAACCTTCATCATAATTTGGAGGGAAGCTCTTGGAGCTGTGAG
TTCTCCCTGTACAGTGTTACCATCCCCGACCATCTGATTAAAATGCTTCCTCCCAGC

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FIGURE 137

MANCERTFIAIKPDGVQRGLVGEIIKRFEQKGFRLVGLKFMQASEDLLKEHYVDLKDRPFFAGLVKYMHS GPVVA
MVWEGLNVVKTGRVMLGETNPADSKPGTIRGDFCIQVGRNIIHGSDSVESAEKEIGLWFHPEELVDYTSCAQNWI
YE

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FIGURE 138A

GGCTCATAGAGCTGAACAGTTGCAGGATGCGGAGGAGGAAAAAGATGATTCAAATGAAGAAGAAAACAAAGACAG
CCTTGATAGATGATGAAGAAGAGAAAAGAAGATCTTGGCGATGAGGATGAAGCAGAGGAAGAAGAGGAGGAGGACAA
CTTGGCTGCTGGTGTGGATGAGGAGAGAAGTGAGGCCAATGATCAGGGGCCCCCAGGAGAGGACGGTGTGACCCG
GGAGGAAGTAGAGCCTGAGGAGGCTGAAGAAGGCATCTCTGAGCAACCCTGCCCAGCTGACACAGAGGTGGTGGGA
AGACTCCTTGAGGCAGCGTAAAAAGTCAGCATGCTGACAAGGGACTGTAGATTTAATGATGCGTTTTCAAGAATAC
ACACCAAAACAATATGTCAGCTTCCCTTTGGCCTGCAGTTTGTACCAAATCCTTAATTTTTCTGAATGAGCAAG
CTTCTCTTAAAAGATGCTCTCTAGTCATTTGGTCTCATGGCAGTAAGCCTCATGTATACTAAGGAGAGTCTTCCA
GGTGTGACAATCAGGATATAGAAAAACAAACGTAGTGTGGGATCTGTTTGGAGACTGGGATGGGAACAAGTTCA
TTTACTTAGGGGTGAGAGAGTCTCGACCAGAGGAGGCCATTCCCAGTCCTAATCAGCACCTTCCAGAGACAAGGC
TGCAGGCCCTGTGAAATGAAAGCCAAGCAGGAGCCTTGGCTCCTGAGCATCCCCAAAGTGTAACGTAGAAGCCTT
GCATCCTTTTTCTTGTGTAAAGTATTTATTTTTGTCAAATTGCAGGAAACATCAGGCACCACAGTGCATGAAAAAT
CTTTCACAGCTAGAAATTGAAAGGGCCTTGGGTATAGAGAGCAGCTCAGAAGTCATCCAGCCCTCTGAATCTCC
TGIGCTAIGTTTTATTTCTTACCTTTAATTTTTCCAGCATTTCACCATGGGCATTGAGGCTCTCCACACTCTTC
ACTATTATCTCTTGGTCAGAGGACTCCAATAACAGCCAGGTTTACATGAAGTGTGTTTGTTCATTCTGACCTAAG
GGGTTTAGATAATCAGTAACCATAACCCCTGAAGCTGTGACTGCCAAACATCTCAAATGAAATGTTGTGGCCATC
AGAGACTCAAAGGAAGTAAGGATTTTACAAGACAGATTAAAAAAAATGGTTTTGTCCAAAAATATAGTTGTTGT
TGATTTTTTTTTTAAGTTTTCTAAGCAATATTTTTCAAGCCAGAAGTCTCTAAGTCTTGCCAGTACAAGGTAGTC
TTGTGAAGAAAAGTTGAATACTGTTTTGTTTTCTATCTCAAGGGGTTCCTGGGTCTTGAAGTACTTTAATAATAA
CTAAAAAACCACTTCTGATTTTCTTCAGTGATGTGCTTTTGGTGAAAGAATTAATGAAGTCCAGTACCTGAAAG
TGAAAGATTTGATTTTGTTCATCTTCTGTAATCTTCCAAAGAATTATATCTTTGTAAATCTCTCAATACTCAA
CCTACTGTAAGTACCCAGGGAGGCTAATTTCCCTTAAAAAAAATCTATCCATCTACTTCTCTTACCTGAT
TTATGTGTTAGAATAAATTCATGAAATTCGATTCCAAGCATACGAAAGATGCCTAAAGTTGATTCTATGCTCCTT
AGATCCAGACAGAATAATGAGTACAGGTTTATGAAATTCATAAAGTTTTCTGTCTCTTTAAAAAGGAACGTGCAG
TATATTTCTATCTGGCTGTTTAGATAACCCTTTCCTTGTATTAATTGTGAGCACGGAGCTCACTGGTGGGGGAGG
TTCTGAAACTCTCTGCCCTCCTGTGGTTGAATGAAGATGTTGCAAGACTTGCACAAAGGAGGTTATCTTCTGAC
AGCATCAACTTTTAGAGATGGTTCTTTTTCTATCTTTCCAATTGAGTTACTTGACAGTCTCCTTCCCCAGTATGCT
GAAGTTTGTGAAGAGTACCAGTAATTGTGCTTTTCAGACAGTAGTGCAGCTTCAAATCGAGGCCATCACTGGG
CTGATGGGCTGGGAGAACCTTGCCATGTGCTGCTGTTTCTGCCCCCTTAGTCACTGCCCATTTCTGCCCCC
TTGGTCTGCTGACACACCTTCACCCAAAGTGCCATGGTTCTGATGGTGGCAGTTCCATCTCCCTGACATCAGGAAG
CTTTTCTCGATCAGAGCAGAGCGGGCCTGCTGCCCCCTGCTGCTACTGGATTCTTTCTCTTATAATCAGCTGAA
ACAGAGTTCTCAAAGAACAGTAAACTCAGGTTTCAAGGATATTATGGAATAAGAATGGTTTTCATAGTTTGGCTTTT
CTATATAATTCCTCCCTCTCAAAGTAAATATTCATTTTTTTAGTGGAGTATTTGACTAGAGAGAAGGTAAGGCA
GAAATACAGTCTACACTGGCTTTTAAAAATGTAAGCCAATTTCCAACCGGACCCCAAATAGTACAGGTTGAACA
TTCCGTTCCAACAATCCAAAACCCCAAATGCTCCAAAATCTTAACTTTGAGTTCCAGCATTCCGTCAGAAAGTG
AAAATTTTACACCTGACCTCATTGACAGGTGGCAGTTACAGTGCAATCAAACCTTTGTTCCATGCCCAAGATTA
TTAAAAATATTGGATAAAATTACCTTCAAGCTATGTTGTATAAGGTGTATATAAAACAAATGAATTTTGTGTTTA
GACTTGGGTTACTCCCAAGATACCTCATTATATATATACAAAAATCCCCAAATCCAAAAACATTTGAAACACTT
CTGGTCCCACACATTTTGGATAAGGGATATTTGACCTATATCTAATTATATAAAGAAAAATGATTTTCTTTT
TTTTTTTTTTTTGAGATGGAGTTTCACTCTTGTGTGCGCCAGGCTGCAATGGCACAATCTTGGCTTACTACAA
CCTCCGCTCCCTAGTTCAAGGGATTCTCCTGCCTCAGCCTCCCAGGTAGCTGGGATTACAGGCATGTGCCACCA
TGCTTGGCTAATTTTGTATTTTGTAGTAGAGACGGGGTTTTCGCCATGTTGGTTCAGACTGGTCTTGAAGTCTGACC
TCAGGTGATCCGCCCCCTCAGCCTCCCAACGTGCTGGGATTACAGGTGTGAGCCACCGTACCTGGCAGAAAATG
TACTTTCTTTCTCAGAAATCTTTTAAAAAAATTTGAAGGGTGAGGAGAAAAACATCTTGAGAGAAGAGGACCCAT
TAAACCTTTAAATATCTGTGGGAACCATTTTTCTGATTTTCCCTTTTTTAACATCATGGCAAAGATGGGTTTTT
TTCCAACAAAATTTAATTTAATATCTTTCCACTTGAAGATTTTAGGTTTGTTCATACTTAATGAATATAAAA
CTAAAGGAGAAAAGCCAACCTGAAATAATTTAACTTTATATGAACATTTGATAAGAGTTTGTGGATTTTTCT
GTAGATAATATATTTGATCCAGAACTCAAGTGCATGGAAACATGATTTTGAATTTTTAAATCTAAAAAATAAA
AATTAATATCATGCTTCCCTCTATTGCAGTATCAGTTATTTAGTCACAGAATGGTATTTTATGTAAATTAATTAAT

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FIGURE 138B

AGGTGAATGCAATGCAGGTAAGTGGTTTTGGAATGGGAATGTGCAGTGCTTTATGTTTGGGGAGTTGGAGCAGGG
TATCTTTTCATCAATTAGAAGGAAAGTTTGAACTTCTGATTACCTTTATGTTGGTTTCTCTTATTATTTGTCTC
TTGCTAGATCTGCTAAACCAACCCAGCTTGCTCAGAGATCTCATATTGAAGCAACATACAGGCAATCCACATCTT
TCTTTCCCTTTGAAGTATAGTCATTGGATGGGATGAGGGACAGGGCCTGTTGGGTTTCACAGGGCCTTGCACTGCA
TGGGCACATACTTAAAAGCTCTTGTCATGGAATCCCTGTCTGTTAGCCACAGGCCTCTTTAGCTCTATACATT
AAAATAACTACTGTAGTAGAAAATAGATAAGCTTCAGCTGAGTTGGCTTTTGATAGTGGAAAAAAACAAAATTT
GACTTTTTATGGCCAAAATTCCTTGTTGACAGCTGTGATGTTCTAATATGATTTGGGAATATGTCAGTCTACAGA
ACCTGCATCCTGTAAAAACACCTTTGGGGTAGACGATAAAAGTCATTTTTAAGGCAAATACTTACCATGTGACTT
TTTATTACCAAATGCATCAGTAGTGAGCTGGTATGTTGTTTCATAGGATGGAAACATTAGAAGTCCAGAGAAAA
ATAAATTTTTAAAAAAGGTGGAAAAGTTACGGCAAACCTGAGATTTTCAGCATAAAATCTTTAGTATGAAGTGAGA
GAAAGAAGAGGGAGGCTGGTTCTGTTGCTCGTATCAATAGGTTATCTGTGTCCCTCATCTTGGTGTTACAGTGTT
ATTTCTGTCAGTATTATGAATATGTGGTTGACCCATCCTGTCAAATGTACCAACATTTTCGAAAGAATTCATTCA
AATCTCTTATGCCAACAGAAAAGTTCCCTTCTGTTTAATATCTCTTTACCTCAGTCCTACATTTTGATTCTCTGG
AGGAGATTTTAGCTTGTCTTAAAAAGCCAAATTTGGAGTCATCAAGCCTGCTGAACCTGATGGGGCAGCTTTTTG
AACAGCTTTCTGGAAGTAAGAAGTTCAGTTGAAAAGCCCTTTGATCGCTTCAGCCCGGGACATGCCCTTCAGATG
GCTTATTCTCAGTAAAGCTTTATGTAGACTGTGACACTGTATATGTGTGACTCGTACAACCTTGACGTGTTTCTG
AAGTGGTTTAAATCGTATTTGTTATTAGCTTCTTTGTGGAAATGCAATTTTTATACTAAAAACATTGCTTATTTGC
AATGCAATATGTTATAAATTTGTTGTTTATATTACTGGTATTAGTCTTAGCCTAATGAACCTAATTATTTTTCTT
TCTGTATTCTTTGCTTCCCTCAAATAGCATCTGCAGCAATTGGAATGAGAAATCCAGATATGTGTTTCAAGTAGTA
CATTGCCTGAATCACAAATCACTTGATCACAGTATTGTATATAATCCCTGATCCTATTTGTTTCATTTTATTGTA
AATTCCCATTTCATCAAAACCTAATGATAGTGATTGGTAAGTAAAAACAAATGGTGTATTGCTTTTCATACAAG
TGTTTTACAAAAGCCATTTGCCTAGGCAGCAAAAAATATTAATTTGTT

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FIGURE 139

CTGAAGATGGCGGCTGCTGTAGGACGGTTGCTCCGAGCGTCGGTTGCCCGACATGTGAGTGCCATTCCCTTGGGGC
ATTTCTGCCACTGCAGCCCTCAGGCCTGCTGCATGTGGAAGAACGAGCTTGACAAATTTATTGTGTTCTGGTTCC
AGTCAAGCAAAATTATTTCAGCACCAGTTCCTCATGCCATGCACCTGCTGTCACCCAGCATGCACCCTATTTTAAG
GGTACAGCCGTTGTCAATGGAGAGTTCAAAGACCTAAGCCTTGATGACTTTAAGGGGAAATATTTGGTGCTTTTC
TTCTATCCTTTTGGATTTACCTTTGTGTGTCCTACAGAAATTGTTGCTTTTAGTGACAAAGCTAACGAATTTTAC
GATGTGAAGTGTGAAGTTGTGCGAGTCTCAGTGGATTCCCACTTTAGCCATCTTGCCTGGATAAATACACCAAGA
AAGAATGGTGGTTTGGGCCACATGAACATCGCACTCTTGTGAGACTTAACCTAAGCAGATTTCCCGAGACTACGGT
GTGCTGTTAGAAGGTTCTGGTCTTGCACTAAGAGGTCTCTTCATAATTGACCCCAATGGAGTCATCAAGCATTG
AGCGTCAACGATCTCCAGTGGGCCGAAGCGTGGAAGAAACCTCCGCTTGGTGAAGGCGTTCCAGTATGTAGAA
ACACATGGAGAAGTCTGCCAGCGAAGTGGACACCGGATTCTCTACGATCAAGCCAAGTCCAGCTGCTTCCAAA
GAGTACTTTCAGAAGGTAAATCAGTAGATCACCCATGTGTATCTGCACCTTCTCAACTGAGAGAAGAACCACAGT
TGAAACCTGCTTTTATCATTTTCAAGATGGTTATTTGTAGAAGGCAAGGAACCAATTATGCTTGTATTTCATAAGT
ATTACTCTAAATGTTTTGTTTTGTAAATCTGGCTAGGACCTTTTAAACATGGTTAGTTGCTAGTACAGGAATCG
TTTATTGGTAACATCTTGGTGGCTGGCTAGCTAGTTTCTACAGAACATAAATTGCTCTATAGAAGGCTATTCTT
AGATCATGTCTCAATGGAAACACTCTTCTTTCTTAGCCTTACTTGAATCTTGCCTATAATAAAGTAGAGCAACAC
ACATTGAAAGCTTCTGATCAACGGTCTGAAATTTTCATCTTGAATGTCTTTGTATTAACTGAATTTTCTTTTA
AGCTAACAAAGATCATAATTTTCAATGATTAGCCGTGTAACCTCTGCAATGAATGTTTATGTGATTGAAGCAAAT
GTGAATCGTATTATTTTAAAAAGTGGCAGAGTGACTTAACCTGATCATGCATGATCCCTCATCCCTGAAATTGAGT
TTATGTAGTCATTTTACTTATTTTATTTCATTAGCTAACTTTGTCTATGTATTTTCTAGATATTGATTAGTGTA
TCGATTATAAAGGATATTTATCAAATCCAGGGATTGCATTTTGAATTTATAATTATTTTCTTTGCTGAAGTATTC
ATTGTAAACATACAAATAACATATTTAAACAAAAA

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FIGURE 140

MAAAVGRLLRASVARHVSAIPWGISATAALRPAACGRTSLTNLLCSGSSQAKLFSTSSSCHAPAVTQHAPYFKGT
AVVNGEFKDLSLDDFKGKYLVLFFYP LDFTFVCPT EIVAFSDKANEFDVNCEVVAVSVDSHF SHLAWINTPRKN
GGLGHMNIALLSDLTKQISR DYGVLL EGSGLALRGLFIIDPNGVIKHL SVNDLPVGRSVEETLRLVKAFQYVETH
GEVCPANWTPDSPTIKPSPAASKEYFQKVNQ

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FIGURE 141

ACTTGGCCTTACACTCCGCTCGGCTCACCATGTGTCACTCTCGCAGCTGCCACCCGACCATGACCATCCTGCAGG
CCCCGACCCCGGCCCCCTCCACCATCCCGGGACCCCGGCGGGGCTCCGGTCCTGAGATCTTCACCTTCGACCCTC
TCCCGGAGCCCGCAGCGGCCCTGCCGGCGCCCCAGCGCCTCTCGCGGGCACCGAAAGCGCAGCCGCAGGGTCT
CTCTACCCCTCGAGTGGTGAGTATCGCCGAAGTGGGCATTTCGCGGTGTGCGCTGCCCTGGAGTCACTGGGGAACGA
CCCGACTCCAGAGCCTCGACCTGACCTGTCTCCTGTTTTGTCTCCCTTAGTCCGGCGCCAGCTGCCAGTCGAGG
AACCGAACCAGCCAAAAGGCTTCTCTTTCTGCTGCTCACCATCGTCTTCTGCCAGATCCTGATGGCTGAAGAGG
GTGTGCCGGCGCCCCCTGCCTCCAGAGGACGCCCTAACGCCGCATCCCTGGCGCCACCCCTGTGTCCCCCGTCC
TCGAGCCCTTTAATCTGACTTCGGAGCCCTCGGACTACGCTCTGGACCTCAGCACTTTCCTCCAGCAACACCCGG
CCGCCTTCTTAACTGTGACTCCCCGCACTCCCCAAAAAGAATCCGAAAAACCACAAAGAAACACCAGGCGTACCTG
GTGCGCGAGAGCGTATCCCCAACTGGGACTTCCGAGGCAACTTGAACCTCAGAACACTACAGCGGAGACGCCACCC
GGTGCTTGAGGCGGGACCGAGGCGCACAGAGACCGAGGCGCATAGAGACCGAGGCACAGCCAGCTGGGCTAGGC
CGGTGGGAAGGAGAGCGTCGTTAATTTATTTCTTATTGCTCCTAATTAATATTTATATGTATTTATGTACGTCCT
CCTAGGTGATGGAGATGTGTACGTAATATTTATTTTAACTTATGCAAGGGTGTGAGATGTTCCCTCTGCTGTAAA
TGCAGGTCTCTTGGTATTTATTGAGCTTTGTGGGACTGGTGGAAGCAGGACACCTGGAACCTGCGGCAAAGTAGGA
GAAGAAATGGGGAGGACTCGGGTGGGGGAGGACGTCCCGGCTGGGATGAAGTCTGGTGGTGGGTTCGTAAGTTTAG
GAGGTGACTGCATCCTCCAGCATCTCAACTCCGTCTGTCTACTGTGTGAGACTTCGGCGGACCATTAGGAATGAG
ATCCGTGAGATCCTTCCATCTTCTTGAAGTCGCCCTTtagGGTGGCTGCGAGGTAGAGGGTTGGGGTTGGTGGGC
TGTCACGGAGCGACTGTCGAGATCGCCTAGTATGTTCTGTGAACACAAATAAAATTGATTTACTGTCTGC

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FIGURE 142

MCHSRSCHPTMTILQAPTPAPSTIPGPRRGSGPEIFTFDPLPEPAAAPAGRPSASRGHRKRSRRVSLPSSGEYRR
SGHSRCALPWSHWGTTRLQSLDLTCLLFCLPLVRRQLPVEEPNPAKRLLFLLLTIVFCQILMAEEGVPAFLPPED
APNAASLAPTPVSPVLEPFNLTSEPSDYALDLSTFLQQHPAAF

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FIGURE 143A

ATGGCAGAAGGTGTGAATGAGCCTTGTTTCCCGGGGGACTGTGGCATATTTGTCACTAAAGTGGACAAAGGAAGC
ATTGCTGATGGCCGCTTAAGGGTCAATGACTGGCTGCTGAGAATCAACGATGTGGACCTCATCAACAAGGACAAG
AAGCAGGCCATCAAGGCGCTCCTCAATGGGGAGGGGGCCATCAACATGGTCGTGCGGCGGAGGAAGTCCCTGGGT
GGGAAGGTGGTCACGCCGCTGCACATCAACCTCAGTGGACAGAAAGACAGTGGCATCAGTCTGGAGAATGGAGTG
TATGCTGCCGCTGTGCTGCCTGGAAGCCCTGCCGCTAAAGAAGGGTCCCTTGCTGTGGGAGACAGGATCGTTGCG
ATCAATGGCATTGCACTGGACAACAAGTCTCTGAATGAATGTGAATCTCTGCTGCGGAGCTGCCAGGACTCCCTG
ACCCTGTCCCTCCTGAAGGTATTCCCTCAGAGCTCCTCGTGGAGTGGCCAGAACATTTTGTAAAATATCAAAGAC
TCTGATAAGATGCTGAGTTTTCGAGCCCATGGCCCGGAGGTCCAGGCTCATAACAAACGGAAC TTGATACAGCAC
AATAACTCCACGCAGACAGACATCTTCTACACGGACAGGCTGGAAGACAGGAAGGAGCCAGGCCCCCCAGGAGGC
AGCAGCTCCTTTCTGCATAAGCCATTCCCTGGGGGACCCCTGTCAGGTCTGCCCCCAGGCCTGTCCAGTGCCTCT
GAGCGTAGCCTGAGCTCCTTCCGCTCAGATGCCTCTGGGGACCGTGGCTTTGGGCTGGTGGACGTGCGTGGCCGG
CGCCCACTGCTGCCCTTTGAGACCGAGGTGGGCCCCCTGTGGGGTTGGGGAGGCCTCCCTGGACAAGGCAGACTCT
GAAGGCTCCAACAGCGGCGGGACCTGGCCCAAGGCCATGCTCAGCTCCACGGCAGTGCCTGAGAAGCTCTCTGTT
TATAAAAAGCCAAAGCAAAGAAAGTCCATCTTTGACCCTAACACTTTCAAACGCCCCCAGACACCCCCCAAATA
GACTACCTGCTTCCAGGTCTTGGCCCTGCTCACTCTCCCCAGCCCTCCAAGAGGGCGGGGCCTCTGACACCCCCA
AAACCTCCCAGAAGGAGCGACTCCATTAAGTTCAGCACAGGCTGGAGACTAGTCCGAGTCAGAAGCCACTCTG
GTGGGCAGCTCCCCATCCACTAGTCCCCGAGCGCCCTGCCCCCTGACGTGGACCCCGGGGAGCCCATGCACGCA
TCACCCCTCGCAAGGCCAGGCTCCGATTGCTTCCAGCTACTACCCTGAAGGAGATGGGGACTCCTCCACCTG
CCGGCCAAGAAATCCTGTGATGAGGACCTCACCTCCAGAAGGTGGATGAGCTGGGGCAGAAGCGTCGCCGGCCA
AAATCTGCTCCAGTTTTTCGGCCGAAGCTTGCTCCAGTAGTGATTCTCTGCTCAGTTCTTGAGGAACAGAAGTGT
GTCCCGGCCAGTGGAGA ACTCTCCCCGAGCTCCAGGAGTGGGCACCTTACTCGCCTGGGCATTCCAGCCGGCAC
AGCAACCCCCCGCTATACCCTAGCAGGCCGTCTGTGGGTACTGTTCCCCGGAGTTTGACCCCCAGCACCCTGTG
AGCTCCATCCTGCGGAACCCCATCTACACTGTGCGCAGTCACAGGGTCGGCCCCCTGCAGCTCTCCACCTGCGGCC
CGAGATGCTGGCCCCCAGGTTTGCATCCCAGTGTCCAGCACCAGGGGACGCCCTGAGCCTGGACCTGAGCCACAGG
ACCTGCAGCGACTACTCCGAGATGAGAGCCACCCATGGGTCCA ACTCACTGCCCTCCAGCGCCCGCCTGGGTTCT
TCGAGTAACTTGCA GTTCAAGGCGGAACGCATTAAAAATCCCATCAACACCAAGATATCCGCGGAGTGTCTGTTGGC
TCCGAGAGAGGTTCA GTGTACATTCTGAATGCAGCACTCCTCCACAGTCACCCCTGAACATCGACACCCTGTCC
TCTTGTAGCCAGTCCCAGACCTCAGCCTCCACATTGCCCAGAATCGCTGTCAACCCCGCGTCCCTCGGGGAGCGG
AGAAAGGACAGGCCTTA GTGGAGGAGCCACGCCACGTGAAGGTGCAGAAGGGCTCAGAGCCGCTGGGCATCTCC
ATCGTGAGTGGAGAGAAGGGCGGCATCTACGTCTCCAAGGTGACCGTGGGGAGCATCGCTCACCAGGCTGGCCTC
GAGTATGGGGATCAGTTACTGGAGTTCAACGGCATAAACCTGCGGAGCGCCACGGAGCAGCAGGCGCGGCTCATC
ATCGGGCAGCAGTGTGATACCATCACCATCCTGGCCAGTACAACCCCCACGTGCACCAGCTCAGCAGCCACTCC
CGGTCCAGCTCACACCTGGACCCTGCCGGTACCCACTCCACTCTCCAGGGCAGTGGCACCACCACCCCGGAGCAT
CCATCTGTATCGACCCACTGATGGAGCAGGACGAGGGGCCTAGCACCCCCCAGCCAAGCAGAGCAGCTCCAGG
ATTGCGGGAGATGCCAACAAGAAGACCCTGGAGCCACGCGTTGTCTTCATCAAAAAGTCCCAGCTGGAGCTTGGG
GTGCACTTGTGTGGTGGGAACCTGCATGGGGTGTGTTGTGGCCGAGGTGGAGGATGACAGTCTGCCAAGGGTCCT
GACGGCTCGTGCCAGGGGACCTCATCCTGGAGTATGGCAGCCTGGACGTGCGGAACAAGACAGTGGAGGAAGTC
TATGTGGAGATGCTGAAGCCCAGGGATGGCGTCCGCCTGAAGGTGCAGTACCGCCCTGAGGAGTTCACGAAGGCC
AAGGGCTGCCTGGTGACAGCTTCTACATCAGGGCCCTGTACGACCGGCTGGCAGATGTGGAGCAAGAGTTGAGC
TTTAAGAAGGACGACATCCTCTACGTGGATGACACCTTACCCAGGGCACGTTCCGGTCTGATGGCTTGGCAG
CTGGACGAGAATGCCCAGAAGATCCAGCGCGGGCAGATTCCCAGCAAATATGTGATGGACCAAGAATTCTCCAGG
AGGCTCAGCATGTCTGAAGTCAAAGATGACAATAGCGCCACAAAAGACGCTGTCAGCGGCTGCACGCCGGTCCCTT
TTTCGGAGGAAACACAAGCACAAACGCAGCGGGTCCAAGGACGGGAAAGACCTGCTCGCCTTGGATGCCTTTTCC
AGTGA CTCCATTCCACTCTTTGAAGATTCCGGTGGAGCTGGCCTATCAGCGGGTCCAGAAGGTGGACTGCACCGCT
CTGAGGCCGTGCTGATTCTGGGGCCTTTGCTGGACGTGGTGAAGGAGATGCTGGTGAATGAGGCTCCTGGCAAG
TTCTGCAGATGTCCCTTGAGGTGATGAAGGCCTCCAGCAGGCCATTGAGCGGGGTGTCAAAGATTGCCTGTTT
GTCGACTATAAGCGGAGAAGCGGCCATTTTCGATGTGACCACTGTGGCGTCAATAAAGGAGATCACAGAAAAGAAC
CGACACTGCCTCCTGGACATTGCTCCGCACGCTATTGAGCGGCTCCACCACATGCACATCTACCCATTGTCTATC

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FIGURE 143B

TTCATCCACTACAAGAGCGCCAAGCACATCAAGGAGCAGAGAGACCCCATCTACCTGAGGGACAAGGTGACTCAG
AGGCATTCCAAAGAGCAGTTTGGAGCGGCGCAGAAGCTTGAGCAGGAGTACAGCAGGTACTTCACAGGGGTCATC
CAGGGAGGAGCCCTGTCAAGCATTGCACTCAGATCTTGGCAATGGTCAATCAAGAACAAAATAAAGTCCTGTGG
ATTCCAGCCTGCCCGCTCTAGGAGAATGCTGTGCTGTGGATGACTGCAGCTGGCCGCCTGAGGGGACGCCAGACT
CAGCTCTTTTCTAGCGACTGAAAGTAGAAGTCTGTCTGTCTATGAACATGCGGGGGAAGGATCCGGAACCAGGAC
CCAGAAGCACCTCCTTTGTAGACAGAGGGCCACGGCTGCGTGCGATCCAGGCCCAGGCCCACACACTCTGCCCCGT
GTCACACGTGTGCTTTAACACAAAACAGATAACACTAAAGACGGGTTTCAGCACCCACCTTTCTTTAGCCAGCTGA
TCAGAGATGCTGCAAAGAGAACCTTTTCGGATCACTCGTTTACAAGCCTTTTCTAAGTATTTGGTGGTTTATGTTT
ACTTGAACGGCTCCATGTTGCCGGTGCCAGCCCCCTGTCCCTCTGTCAACCCCTGTGCGTTTGGTGTGGTTT
CGTTCCCGTCTTCAGCAAAACGACCTTGGAACCTCAATGGGGGCTGCTTTGCTTTGGGAGGTTCTTGTGGTGGG
ACCAGAGCTTTGACAAACCTCCTGCTCCTTGGTGGCACCTCTCCTGGAAGGACATCACAACCTCCAGGTGCTCAGA
CTGCCTGTGGCAGCAGAACCAGTGCCCTTGGCATTTCCTCCCAATGGGGAAGGTGACTTTGGCATTCTTACA
AACTCGTCTCTCGGCCCTTCTCTCCTGCCTTCCACAGCCTCTCGTTTCTCCTCCATCTGTGCTTATTACTTGAGG
ACTGTGTCTGCTCCGTGAGAGCTGCGTGGGCAGGGCTGCAGTGGGGTCCAGGTGGTGTTCAGCTGTGCTGATGCC
TGCCATTGGGTCCCTCCTTAGGCTCTGTAAGTCGTGACAGCCTTCATCAGTGCAATGTTTGCAGGGTAATTCTTAA
ACTTTTLAGAGGGTGGCAGGTACATCAGTTCTTTTTGATATGAAAACATTCATGTTTCAGACATTGAATTGAGAG
CTTTTAGGGGAAGCATAATGGTTATTGTCACTATCAACAGTCTAAAAAGAAAACTGAGGTCTTTTAACTTTGA
TTACAGCACTCACGGCATGCACCTACTCAGTGTGGGTGTCTTCGTTTGGGGGCTTTTTTTTTTTTGCACCTTCT
GAGGCTAGATATGTCTGGCTGAAGATTTGATGTGGTTCCCTCCTTAAGCTATGCGTCCTGTTAATAATAGGTACTG
TACTGGGCTCTGTGTAAGTGTGCTTGGGGTAGGACCTATATTTAATACTGTTCTAACATTTCAATTTTACTAGC
GAGAAATCTTTGATTTCAATTTTATTCTTTGTAATTCTAGACACTAGATTGTAGTTTAGCCATAACTGATGTTTTT
TAAAAAGGGATATATTTCTTGACAGTTGTTCAAAAAGAGACAAGTTTCAGTCCTCAATGCTGTCCTTTGTTT
TACAGGTACAAGTTTCTAGCTCAGACAACTATGAAAACTGTAGACTATTCTCAAGGTATTAACTCGCAGACC
CTCTGGGGGTAGGGGCTGTTTTCTAAGTTACAGGCAGAGTGGGACTGAGATGGTACAGTGTGCACAGACAGGTAC
TGAGCTGACAGACTGGGATTTTCTGTACTAAAATGTTACTTTGTATCAAAAGTTAAACAGGCTTTAGTACAACAA
ATAAAGGTCAATTTCTGT

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FIGURE 144

CGCAACGCCGGTGCCTGAGGAGCG**ATG**CCGAGGGAAATCATCACCCCTACAGTTGGGCCAGTGCGGCAATCAGATT
GGGTTCGAGTTCTGGAAACAGCTGTGCGCCGAGCATGGTATCAGCCCCGAGGCGATCGTGGAGGAGTTCGCCACC
GAGGGCACTGACCGCAAGGACGTCTTTTTCTACCAGGCAGACGATGAGCACTACATCCCCCGGGCCGTGCTGCTG
GACTTGGAACCCCCGGGTGATCCACTCCATCCTCAACTCCCCCTATGCCAAGCTCTACAACCCAGAGAACATCTAC
CTGTCCGGAACATGGAGGAGGAGCTGGCAACAACCTGGGCCAGCGGATTCTCCCAGGGAGAAAAGATCCATGAGGAC
ATTTTTGACATCATAGACCGGGAGGCAGATGGTAGTGACAGTCTAGAGGGCTTTGTGCTGTGTCACTCCATTGCT
GGGGGGACAGGCTCTGGACTGGGTTCCCTACCTCTTAGAACGGCTGAATGACAGGTATCCTAAGAAGCTGGTGCAG
ACATACTCAGTGTTTCCCAACCAGGACGAGATGAGCGATGTGGTGGTCCAGCCTTACAATTCACTCCTCACACTC
AAGAGGCTGACGCAGAATGCAGACTGTCTGGTGGTGTGACAAACACAGCCCTGAACCGGATTGCCACAGACCGC
CTGCACATCCAGAACCCATCCTTCTCCCAGATCAACCAGCTGGTGTCTACCATCATGTGAGCCAGCACCACCACC
CTGCGCTACCCCTGGCTACATGAACAATGACCTCATCGGCCCTCATCGCCTCGCTCATTCCACCCCCACGGCTCCAC
TTCTCATGACCGGCTACACCCCTCTCACTACGGACCAGTCAGTGGCCAGCGTGAGGAAGACCACGGTCTTGAT
GTCATGAGGCGGCTGCTGCAGCCCAAGAACGTGATGGTGTCCACAGGCCGAGACCGCCAGACCAACCACTGCTAC
ATCGCCATCCTCAACATCATCCAGGGAGAGGTGGACCCACCCAGGTCCACAAGAGCTTGAGAGGATCCGGGAA
CGCAAGTTGGCCAACTTCATCCCGTGGGGCCCCGCCAGCATCCAGGTGGCCCTGTGAGGAAGTCTCCCTACCTG
CCCTCGGCCACCAGGCTCAGCGGGCTCATGATGGCCAACCACACCAGCATCTCCTCGCTCTTCGAGAGAACCTGT
CGCCAGTATGACAAGCTGCGTAAGCGGGAGGCCTTCCTGGAGCAGTTCGCAAGGAGGACATGTTCAAGGACAAC
TTTGATGAGATGGACACATCCAGGGAGATTGTGCAGCAGCTCATCGATGAGTACCATGCGGCCACACGGCCAGAC
TACATCTCCTGGGGCACCAGGAGCAG**TGAG**TCCCCCAGGACAGGGGACCCTCATCTGCCTTACTGGTTGGCCCA
AGCCCTGCCTGACTGACCACCCCTCAGAGCACAGATCAGGGACCTCAGCATCTCTTTCTCATATACATGGACT
CTCTGTTGGCCTGCAAACACATTTACTTCTCCTCTTATGAGACTATTTATCTTTAATAAAGCACTGGG

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FIGURE 145

MPREIITLQLGQCGNQIGFEFWKQLCAEHGISPEAIVEEFATEGTDRKDVFFYQADDEHYIPRAVLLDLEPRVIH
SILNSPYAKLYNPENIYLSEHGGGAGNNWASGFSQGEKIHEDIFDIIDREADGSDSLEGFVLCHSIAGGTGSGLG
SYLLERLNDRYPKKLVQTYSVFPNQDEMSDVVVQPYNSLLTLKRLTQNADCLVLDNTALNRIATDRLHIQNPSF
SQINQLVSTIMSASTTTLRYPGYMNDLIGLIASLIPTPRLHFLMTGYTPLTTDQSVASVRKTTVLDVMRLLQP
KNVMVSTGRDRQTNHCYIAILNIIQGEVDPTQVHKSLQRIRERKLANFIPWGPASIQVALSRKSPYLP SAHRVSG
LMMANHTSISSLFERTCRQYDKLRKREAFLEQFRKEDMFKDNFDEMDTSREIVQQLIDEYHAATRPDYISWGTQE
Q

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FIGURE 146

AGATAACAAGAGTAATCCACAGACTTAAACATGAGCTCAGATGCCAGCCAAGGCGTGATTACCACTCCTCCTCC
TCCCAGCATGCCTCACAAAGAGAGATATTTTGACCGCATCAATGAAAATGACCCAGAATACATTAGGGAGAGGAA
CATGTCTCCTGATCTACGACAAGACTTCAACATGATGGAGCAGAGGAAACGAGTTACTCAGATCCTGCAAAGTCC
TGCCTTTTCGGGAAGACTTGGAATGCCTTATTCAAGAACAGATGAAGAAAGGCCACAACCCAACTGGATTACTAGC
ATTACAGCAGATTGCAGATTACATCATGGCCAATTCTTTCTCGGGTTTTTCTTCACCTCCTCTCAGTCTTGGCAT
GGTCACACCTATCAATGACCTTCCTGGTGCAGATACATCCTCATATGTGAAGGGAGAAAACTTACTCGCTGTAA
ACTTGCCAGCCTGTACAGACTTGTAGACTTGTGGATGGGCACACCTGGCAAATACCTATATCTCAGTAAGAAT
AAGTAAGGAGCAAGACCACATTATAATAATTTCCAGAGGCCTATCTTTTTCTGAAGCTACAGCCTCCAATTTGGT
GAAAGTCAATATAATAGGAGAAGTGGTTGACCAGGGAAGTACCAATTTGAAAATTGACCATACAGGATTCAGTCC
CCATGCTGCAATCTATTCAACACGTCCTGATGTTAAGTGTGTATACATCCATACCCTTGCAACAGCAGCTGT
ATCCTCCATGAAATGTGGGATCCTTCCAATTTCTCAAGAGTCTCTTCTTCTGGGAGATGTTGCCTATTATGACTA
CCAAGGGTCACTTGAAGAACAGGAGGAGAGAATTCAACTGCAGAAGGTTCTGGGACCAAGTTGTAAGGTGCTGGT
ACTCAGGAATCATGGTGTGGTTGCACTTGGAGAAACATTAGAGGAGGCTTTTCATTATATTTTTAATGTGCAACT
AGCCTGTGAGATTCAGGTGCAGGCCCTAGCAGGTGCAGGTGGAGTAGACAATCTCCATGTACTGGACTTTTCAGAA
GTATAAAGCTTTTCACTTACACTGTAGCAGCGTCTGGTGGAGGAGGTGTGAATATGGGTTCCCATCAAAAATGGAA
GGTTGGCGAAATTGAGTTTGAAGGGCTTATGAGGACTCTGGACAACCTGGGGTATAGAACAGGCTATGCTTACAG
GCATCCTCTCATTCGAGAGAAGCCTAGGCACAAGAGTGATGTGGAATCCCAGCAACTGTGACTGCTTTTTCTCTT
TGAAGACGATACAGTGCCACTCTCTCCTCTCAAATACATGGCACAGAGGCAACAGCGTGAAAAACAAGATGGCT
GAACTCACCAAATACTTACATGAAAGTGAATGTGCCTGAGGAGTCTCGGAACGGAGAAACCAGTCCCCGAACCAA
AATCAGTGAGTGAAGCAGAAGACTCATCTAAAGTTAGTGGTGAACACCTATCAAATTTGAAGATCCAAATCA
GTTTGTTCTTTTAAACACAAACCCGAATGAGGTACTAGAAAAGAGAAATAAGATTCGGGAACAAAATCGATATGA
CTTGAAAACAGCAGGACCACAATCTCAGTTGCTTGCTGGAATTGTTGTGGATAAGCCACCTTCTACTATGCAATT
TGAAGATGATGATCATGGCCCACCAGCTCCTCCTAACCCATTTAGTCATCTCACAGAAGGAGAAGTTGAAGAGTA
TAAGAGGACAATCGAACGTAAACAACAAGGCCTAGAAGATGCTGAGCAGGAATTACTCTCAGATGACGCTTCATC
TGTTTCACAAATTCAGTCTCAAACCTCAGTCACCGCAAAATGTCCCTGAAAAATTAGAAGAAAACCATGAGCTGTT
TTCCAAGAGCTTCATCTCCATGGAAAGTGCCTGTATGGTAGTAAATGGCAAGGATGATATGCATGATGTTGAAGA
TGAGCTTGCTAAGCGAGTGAGTAGGTTAAGCACAAGTACAACCATAGAAAACATCGAGATTACTATTAAGTCTCC
AGAGAAAATCGAAGAAGTCCTGTCACCTGAAGGCTCCCCTTCAAATCGCCATCCAAGAAAAAGAAAGAAATTCG
CACTCCTTCTTTTCTGAAAAAGAACAAAAAAAGGAGAAAGTTGAGGCCCTAAATAAAGTCTTTTTATAATTATTA
TTATAACAATGTGACATTGCACATCTAAATACCACATTTAAGTTGATCATTAAATGCAATGGTAGATCAGATTG
GGGGATGTAGCAAACTGGACTTTTAAAGAACTGGAAAGAGGTTTTACAAAAGAAAACTTTCAGATTCATCTCTCAT
TTTATATGTCCAGAAATGGCTTTGAATTTTAAAGCAATTACTAGTTTTAATTAGCTCTGCCCTCATGAAGTATTAT
TATAATTCACCATAAACAGCTATCTGTCTGAATTACTTCAGGCCTTCTCCATAATATCTGTTAGAAAGAAATTGC
CAGTGAGCAAGTGAGAATTTTTATTCTCAATACCTGCTTCACCTTGATAATCATATTATAATTTTTTATCATGAT
TATTGACTATATTTTTGGAGTCCCATTTGTTTCAGTGGGCATTAACAGAATGCTTTAAAACTTCTAAGACAAGAA
TCTATAGCATTAGTATACACTGGCACATAATTTTTTAAAAAGTTTTAAGAAAAGATTCAATTTGGAATTTTATTCA
CAGTATAAAATTTCTCACCTGAAGTAACTTTGTTTGCCAAAAAGTTGTTTTAATAAACTATAATTTTTGAAAA
CTTCCTTTTTTATTAGTTTAGAAAGCCCTTATTTTTCAACAAAGGGGATTTTGACACATAACATGGGTTATTT
AGTTTAACTCTGGC

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FIGURE 147

MSSDASQGVITTPPPPSMPHKERYFDRINENDPEYIRERNMSPDLRQDFNMMEQRKRV TQILQSPAFREDLECLI
QEQMKKGHNPTGLLALQQIADYIMANSFSGFSSPPLSLGMVTPINDLPGADTSSYVKGEKLTRCKLASLYRLVDL
FGWAHLANTYISVRISKEQDHIIIPRGLSFSEATASNLVKVNIIGEVVDQGSTNLKIDHTGFS PHAAIYSTRPD
VKCVIHIHTLATAAVSSMKCGILPISQESLLLGDVAYYDYQGSLEEQEERIQLQKVLGP SCKVLVLRNHGVVALG
ETLEEAFHYIFNVQLACEIQVQALAGAGGVNDLHVLD FQKYKAFTYTVAASGGGGVNMGSHQKWKVGEIEFEGLM
RTL DNLGYRTGYAYRHPLIREKPRHKS DVEIPATVTAFSFEDDTVPLSPLKYMAQRQQREKTRWLN SPNTYMKVN
VPEESRNGETSPR TKITWMKAEDSSKVSGGTP IKIEDPNQFVPLNTNPNEVLEKRNKIREQNRYDLKTAGPQSQL
LAGIVVDKPPSTMQFEDDDHGPPAPPNPF SHLTEGELEEYKRTIERKQQGLEDAEQELLSDDASSVSQIQSQTQS
PQNVPEKLEENHELFSKSFISMEVPVMVVNGKDDMHDVEDELAKRVSRLSTSTTIENIEITIKSPEKIEEVL SPE
GSPSKSPSKKKKKFRTPSFLKKNKKKEKVEA

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FIGURE 148

AGATAACAAGAGTAATCCACAGACTTAAAACATGAGCTCAGATGCCAGCCAAGGCGTGATTACCACTCCTCCTCC
TCCCAGCATGCCTCACAAAGAGAGATATTTTGACCGCATCAATGAAAATGACCCAGAATACATTAGGGAGAGGAA
CATGTCTCCTGATCTACGACAAGACTTCAACATGATGGAGCAGAGGAAACGAGTTACTCAGATCCTGCAAAGTCC
TGCCTTTCGGGAAGACTTGGAATGCCTTATTCAAGAACAGATGAAGAAAGGCCACAACCCAAGTGGATTACTAGC
ATTACAGCAGATTGCAGATTACATCATGGCCAATTCTTTCTCGGGTTTTTCTTCACCTCCTCTCAGTCTTGGCAT
GGTCACACCTATCAATGACCTTCCTGGTGAGATACATCCTCATATGTGAAGGGAGAAAACTTACTCGCTGTAA
ACTTGCCAGCCTGTACAGACTTGTAGACTTGTGTTGGATGGGCACACCTGGCAAATACCTATATCTCAGTAAGAAT
AAGTAAGGAGCAAGACCACATTATAATAATTCCAGAGGCCTATCTTTTCTGAAGCTACAGCCTCCAATTTGGT
GAAAGTCAATATAATAGGAGAAGTGGTTGACCAGGGAAGTACCAATTTGAAAATTGACCATACAGGATTCAAGTCC
CCATGCTGCAATCTATTCAACACGTCTGATGTTAAGTGTGTCTATACACATCCATACCTTGCAACAGCAGCTGT
ATCCTCCATGAAATGTGGGATCCTTCCAATTTCTCAAGAGTCTCTTCTTCTGGGAGATGTTGCCATTATGACTA
CCAAGGGTCACTTGAAGAACAGGAGGAGAGAATTCAACTGCAGAAGGTTCTGGGACCAAGTTGTAAGGTGCTGGT
ACTCAGGAATCATGGTGTGGTTGCACTTGGAGAAACATTAGAGGAGGCTTTTTCATTATATTTTAAATGTGCAACT
AGCCTGTGAGATTCAAGTGCAGGCCCTAGCAGGTGCAGGTGGAGTAGACAATCTCCATGTACTGGACTTTCAGAA
GTATAAAGCTTTCACTTACACTGTAGCAGCGTCTGGTGGAGGAGGTGTGAATATGGGTTCCCATCAAAAATGGAA
GGTTGGCGAAATTGAGTTTGAAGGGCTTATGAGGACTCTGGACAACCTTGGGGTATAGAACAGGCTATGCTTACAG
GCATCCTCTCATTGAGAGAAGCCTAGGCACAAGAGTGATGTGGAATCCAGCAACTGTGACTGCTTTTTCTCTT
TGAAGACGATACAGTGCCACTCTCTCCTCTCAATACATGGCACAGAGGCAACAGCGTGAAAAACAAGATGGCT
GAACTACCAAATACTTACATGAAAGTGAATGTGCCTGAGGAGTCTCGGAACGGAGAAACAGTCCCCGAACCAA
AATCACGTGGATGAAAGCAGAAGACTCATCTAAAGTTAGTGGTGGAAACACCTATCAAAATTGAAGATCCAAATCA
GTTTGTTCCTTTAAACACAAACCCGAATGAGGTACTAGAAAAGAGAAATAAGATTCGGGAACAAAATCGATATGA
CTTGAAAACAGCAGGACCACAATCTCAGTTGCTTGTGGAATTGTTGTGGATAAGCCACCTTCTACTATGCAATT
TGAAGATGATGATCATGGCCCACCAGTCTCTCCTAACCCTTTAGTCATCTCACAGAAGGAGAACTTGAAGAGTA
TAAGAGGACAATCGAACGTAAACAACAAGGCCTAGAAGAAAACCATGAGCTGTTTTCCAAGAGCTTCATCTCCAT
GGAAGTGCCTGTGATGGTAGTAAATGGCAAGGATGATATGCATGATGTTGAAGATGAGCTTGCTAAGCGAGTGAG
TAGGTTAAGCACAAAGTACAACCATAGAAAACATCGAGATTACTATTAAGTCTCCAGAGAAAATCGAAGAAGTCCT
GTCACCTGAAGGCTCCCCCTTCAAAATCGCCATCCAAGAAAAGAAGAAATTCCGCACTCCTTCTTTTCTGAAAAA
GAACAAAAAAAAGGAGAAAAGTTGAGGCCATAATAAAGTCTTTTTATAATTATTATTATAACAATGTGACATTGCA
CATCTAAATACCACATTTAAGTTGATCATTAAATATGCAATGGTAGATCAGATTGGGGGATGTAGCAAACCTGGACT
TTAAGAACTGGAAAAGAGGTTTTACAAAAGAAAACTTTAGATTATCTCTCATTTTTATATGTCCAGAAATGGCT
TTGAATTTTAAGCAATTACTAGTTTTAATTAGCTCTGCCCTCATGAAGTATTATTATAATTACCATAAACAGCT
ATCTGTCTGAATTACTTCAGGCCTTCTCCATAATATCTGTTAGAAAAGAAATTGCCAGTGAGCAAGTGAGAATTTT
TATTTCTCAATACCTGCTTCACTTGATAATCATATTATAATTTTTTATCATGATTATTGACTATATTTTTGGAGT
CCCATTGTTTCAGTGGGCATTAACAGAATGCTTTAAAACTTCTAAGACAAGAATCTATAGCATTAGTATACACT
GGCACATAATTTTTTAAAAAGTTTTAAGAAAAGATTCATTTGGAATTTTATTCACAGTATAAAATTTCTCACCT
GAAGTAACCTTTGTTTGCCAAAAAAGTTGTTTTAATAAACTATAATTTTGAAAACCTCCTTTTTTTATTAGTTTAG
AAAGCCCCTTATTTTTCAACAAAGGGGATTTTGTACACATAACATGGGTATTATTAGTTTAACTCTGGC

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FIGURE 149

MSSDASQGVITTPPPPSMPHKERYFDRINENDPEYIRERNMSPDLRQDFNMMEQRKRVITQILQSPAFREDLECLI
QEQMKKGHNPTGLLALQQIADYIMANSFSGFSSPPLSLGMVTPINDLPGADTSSYVKGEKLTRCKLASLYRLVDL
FGWAHLANTYISVRISKEQDHIIIPRGLSFSEATASNLVKVNIIGEVVDQGSTNLKIDHTGFSPHAAIYSTRPD
VKCVIHIHTLATAAVSSMKCGILPISQESLLGADVAYDYQGSLEEQEERIQLQKVLGPSCKVLVLRNHGVVALG
ETLEEFHYIFNVQLACEIQVQALAGAGGVDNLHVLDLQKYKAFTYTVAAASGGGGVNMGSHQWKVGEIEFEGLM
RTL DNLGYRTGYAYRHPLIREKPRHKS DVEIPATVTAFS FEDDTVPLSPLKYMAQRQQREKTRWLN SPNTYMKVN
VPEESRNGETSPRIKITWKAEDSSKVSGGTPIKIEDPNQFVPLNTNPN EVLEKRNKIREQNRYDLKTAGPQSQL
LAGIVVDKPPSTMQFEDDDHGPPAPPNPFSHLTEGELEEYKRTIERKQQGLEENHELFSKSFISMEVPVMVVNGK
DDMHDVEDELAKRVSRLSTSTTIENIEITIKSPEKIEEVLSPEGSPSKSPSKKKKKFRTPSFLKKNKKKEKVEA

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FIGURE 150

TTTTCCCGCGAACTCGGCGGCTGAGCGTGGAGGTTCTTGTCTCCCCTGGTTTGTGAAGTGCGGAAAACCAGAGG
CGCAGTCAATGTCGGGATTCGACGATCCTGGCATTCTTCTACAGCGACAGCTTCGGGGGCGACGCCAGGCCGACGA
GGGGCAGGCCCCGAAATCGCAGCTGCAGAGGCGCTTCAAGGAGTTCTGCGGCAGTACCGAGTGGGCACCGACCG
CACGGGCTTACCTTCAAATACAGGGATGAACTCAAGCGGCATTACAACCTGGGGGAGTACTGGATTGAGGTGGA
GATGGAGGATCTGGCCAGCTTTGATGAGGACCTGGCCGACTACTTGTACAAGCAGCCAGCCGAGCACCTGCAGCT
GCTGGAGGAAGCTGCCAAGGAGGTAGCTGATGAGGTGACCCGGCCCCGGCCTTCTGGGGAGGAGGTGCTCCAGGA
CATCCAGGTCACTGCTCAAGTCGGACGCCAGCCCTTCCAGCATTCTGATAGCCTGAAGTCGGACATGATGTCACACCT
GGTGAAGATCCCTGGCATCATCATCGCGGCCCTCTGCGGTCCGTGCCAAGGCCACCCGCATCTCTATCCAGTGCCG
CAGCTGCCGCAACACCCTCACCAACATTGCCATGCGCCCTGGCCTCGAGGGCTATGCCCTGCCAGGAAGTGCAA
CACAGATCAGGCTGGACGCCCCAAATGCCCATTGGACCCGTACTTCATCATGCCCCGACAAATGCAAATGCGTGGA
CTTCCAGACCCTGAAGCTGCAGGAGCTGCCTGATGCAGTCCCCACGGGGAGATGCCAGACACATGCAGCTCTA
CTGCGACAGGTACCTGTGTGACAAGGTGCTCCCTGGGAACAGGGTTACCATCATGGGCATCTACTCCATCAAGAA
GTTTGGCCTGACTACCAGCAGGGGCGGTGACAGGGTGGGCGTGGGCATCCGAAGCTCCTACATCCGTGTCTCTGGG
CATCCAGGTGGACACAGATGGCTCTGGCCGCGAGCTTTGCTGGGGCCGTGAGCCCCAGGAGGAGGAGGAGTTCCG
TCGCTTGGCTGCCCTCCCAAATGTCTATGAGGTCACTCTCCAAGAGCATCGCCCCCTCCATCTTTGGGGGACAGA
CATGAAGAAGGCCATTGCCCTGCCTGCTCTTTGGGGGCTCCCGAAAGAGGCTCCCTGATGGACTTACTCGCCGAGG
AGACATCAACCTGCTGATGCTAGGGGACCCTGGGACAGCCAAGTCCCAGCTTCTGAAGTTTGTGGAGAAGTGTTC
TCCCATTTGGGGTATACACGTCTGGGAAAGGCAGCAGCGCAGCTGGACTGACAGCCTCGGTGATGAGGGACCCCTC
GTCCCGGAATTTTCATCATGGAGGGCGGAGCCATGGTCTTGGCCGATGGTGGGGTCTGTCTGTATTGACGAGTTTGA
CAAGATGCGAGAAGATGACCGTGTGGCAATCCACGAAGCCATGGAGCAGCAGACCATCTCTATCGCCAAGGCTGG
GATCACCACCACCCTGAACTCCCGCTGCTCCGTCTGGCTGCTGCCAACTCAGTGTTTCGGCCGCTGGGATGAGAC
GAAGGGGGGAGGACAACATTGACTTCATGCCCCACCATCTTGTGCGGCTTCGACATGATCTTCATCGTCAAGGATGA
GCACAATGAGGTGAGGGATGTGATGCTGGCCAAGCATGTCACTCTGCACGTGAGTGCACTGACACAGACACA
GGCTGTGGAGGGCGAGATTGACCTGGCCAAGCTGAAGAAGTTTATTGCCTACTGCCGAGTGAAGTGTGGCCCCCG
GCTGTGACGAGAGGCTGCAGAGAACTGAAGAACCGCTACATCATCATGCGGACGGGGCCCCGTGAGCAGCAGAGG
GACAGTGACCGCGTCCAGCATCCCCATCACTGTGCGGCAGTTGGAGGCCATTGTGCGCATCGCGGAAGCCCTCAG
CAAGATGAAGCTGCAGCCCTTCGCCACAGAGGCAGATGTGGAGGAGGCCCTGCGGCTCTTCCAAGTGTCCACGTT
GGATGCTGCCTTGTCCGGTACCCTGTGAGGGGTGGAGGGCTTACCAGCCAGGAGGACCAGGAGATGCTGAGCCG
CATCGAGAAGCAGCTCAAGCGCCGCTTTTGCCATTGGCTCCAGGTGTCTGAGCACAGCATCATCAAGGACTTCAC
CAAGCAGAAAATACCCGGAGCACGCCATCCACAAGGTGCTGCAGCTCATGCTGCGGCGCGGCGAGATCCAGCATCG
CATGCAGCGCAAGGTTCTCTACCGCTCAAGTGAGTCGCGCCGCTCACTGGACTCATGGACTCGCCACGCTCGCC
CTCCTTGGCCGCTGCCCTGCCATTGACAATGTTGCTGGGACCTCTGCCTCCCCACTGCAGCCCTCGAACTTCCCAGG
CACCCCTCCTTTCTGCCCCAGAGGAAGGAGCTGTAGTGTCTGCTGCCTCTGGGCGCCCGCTCTAGCGGGTTCTGG
GAAGTGTGCTTTTGGCATCCGTTAATAATAAAGCCACGGTGTGTTTCAGGT

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FIGURE 151

MSGFDDPGIFYSDSFGGDAQADEGQARKSQLQRRFKEFLRQYRVGTDRTGFTFKYRDELKRHYNLGEYWIEVEME
DLASFDEDLADYLYKQPAEHLQLLEEAKEVADEVTRPRPSGEEVLQDIQVMLKSDASPSSIRSLKSDMMSHLVK
IPGIIIAASAVRAKATRISIQCRSCRNTLTNIAMRPGLEGYALPRKCNTDQAGRPKCPLDPYFIMPDKCKCVDFQ
TLKLQELPDVPHGEMPRHMQLYCDRYLCDKVVPGNRVTIMGIYSIKKFGLTTSRGRDRVGVGIRSSYIRVLGIQ
VDTDGSGRSFAGAVSPQEEEEFRRLAALPNVYEVIKSIAPSIFFGGTDMKKAIACLLFGGSRKRLPDGLTRRGI
NLLMLGDPGTAKSQLLKFEKCSPIGVYTSKGSSAAGLTASVMRDPSSRNFIIEGGAMVLADGGVVCIDEFDKM
REDDRVAIHEAMEQQTISIAGITTTLSRCSVLAAANSVFGRWDETKGEDNIDFMPTILSRFDMIFIVKDEHN
EVRDVMLAKHVITLHVSALTQTQAVEGEIDLAKLKKFIAYCRVKCGPRLSAEAAEKLNRYIIMRTGPVSTRGTV
TASSIPITVRQLEAIVRIAEALSKMKLQPFATEADVEEALRLFQVSTLDAALSGTSLSGVEGFTSQEDQEMLSRIE
KQLKRRFAIGSQVSEHSIIKDFTKQKYPEHAHKKVLQLMLRRGEIQHRMQRKVLYRLK

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FIGURE 152

ATATAACCGCGTGGCCCGCGCGCGCTTCCCTCCCGGCGCAGTCACCGGCGGGTCTATGGCTGCGACTTCTCT
AATGTCTGCTTTGGCTGCCCCGGCTGCTGCAGCCCGCGCACAGCTGCTCCCTTCGCCTTCGCCCTTCCACCTCGC
GGCAGTTCGAAATGAAGCTGTTGTCAATTTCTGGAAGGAACTGGCCCAGCAGATCAAGCAGGAAGTGCGGCAGGA
GGTAGAAGAGTGGGTGGCCTCAGGCAACAAACGGCCACACCTGAGTGTGATCCTGGTTGGCGAGAATCCTGCAAG
TCACTCCTATGTCCTCAACAAAACCAGGGCAGCTGCAGTTGTGGGAATCAACAGTGAGACAATTATGAAACCAGC
TTCAATTTAGAGGAAGAATTGTTGAATTTAATCAATAAACTGAATAATGATGATAATGTAGATGGCCTCCTTGT
TCAGTTGCCTCTTCCAGAGCATATTGATGAGAGAAGGATCTGCAATGCTGTTTCTCCAGACAAGGATGTTGATGG
CTTTTCATGTAATTAATGTAGGACGAATGTGTTTGGATCAGTATTCCATGTTACCGGCTACTCCATGGGGTGTGTG
GGAAATAATCAAGCGAACTGGCATTCCAACCTAGGGAAGAATGTGGTTGTGGCTGGAAGGTCAAAAAACGTTGG
AATGCCCATTGCAATGTTACTGCACACAGATGGGGCGCATGAACGTCCCGGAGGTGATGCCACTGTTACAATATC
TCATCGATATACTCCCAAAGAGCAGTTGAAGAAACATACAATTCTTGAGATATTGTAATATCTGCTGCAGGTAT
TCCAAATCTGATCACAGCAGATATGATCAAGGAAGGAGCAGCAGTCATTGATGTGGGAATAAATAGAGTTCACGA
TCCTGTAACCTGCCAAACCCAAGTTGGTTGGAGATGTGGATTTTGAAGGAGTCAGACAAAAGCTGGGTATATCAC
TCCAGTTCCCTGGAGGTGTTGGCCCCATGACAGTGGCAATGCTAATGAAGAATACCATTATTGCTGCAAAAAAGGT
GCTGAGGCTTGAAGAGCGAGAAGTGCTGAAGTCTAAAGAGCTTGGGGTAGCCACTAATTAACTACTGTGTCTTCT
GTGTCACAAACAGCACTCCAGGCCAGCTCAAGAAGCAAAGCAGGCCAATAGAAATGCAATATTTTTAATTTATTC
TACTGAAATGGTTTTAAATGATGCCTTGTATTTATTGAAAGCTTAAATGGGTGGGTGTTTCTGCACATACCTCTG
CAGTACCTCACCAGGGAGCATTCCAGTATCATGCAGGGTCTGTGATCTAGCCAGGAGCAGCCATTAACTAGTG
ATTAATATGGGAGACATTACCATATGGAGGATGGATGCTTCACTTTGTCAAGCACCTCAGTTACACATTTCGCCTT
TTCTAGGATTGCATTTCCCAAGTGCTATTGCAATAACAGTTGATACTCATTTTAGGTACCAGACCTTTTGAGTTC
AACTGATCAAACCAAAGGAAAAGTGTGCTAGAGAAAATTGGGGAAAAGGTGAAAAAGAAAAAATGGTAGTAATT
GAGCAGAAAAAATTAATTTATATATGTATTGATTGGCAACCAGATTTATCTAAGTAGAACTGAATTGGCTAGGA
AAAAAGAAAACTGCATGTTAATCATTTTCCTAAGCTGTCTTTTGAGGCTTAGTCAGTTTATTGGGAAAATGTT
TAGGATTATTCCTTGCTATTAGTACTCATTTTATGTATGTTACCCTTCAGTAAGTTCTCCCCATTTTAGTTTTCT
AGGACTGAAAGGATTCTTTTCTACATTATACATGTGTGTTGTCATATTTGGCTTTTGCTATATACTTTAACTTCA
TTGTTAAATTTTGTATTGTATAGTTTCTTTGGTGTATCTTAAACCTATTTTGGAAAAACAACTTGGCTTGAT
AATCATTTGGGCAGCTTGGGTAAGTACGCAACTTACTTTTCCACCAAAGAACTGTCAGCAGCTGCCTGCTTTTCT
GTGATGTATGTATCCTGTTGACTTTTCCAGAAATTTTTTAAGAGTTTGAGTTACTATTGAATTTAATCAGACTTT
CTGATTAAAGGGTTTTCTTTCTTTTTTAATAAAACACATCTGTCTGGTATGGTA

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FIGURE 153

MSALAARLLQPAHSCSLRLRPFHLAAVRNEAVVISGRKLAQQIKQEVQRQEEVWVASGNKRPHLSVILVGENPAS
HSYVLNKTRAAAVVGINSETIMKPASISEEELLNLINKLNDDNVDGLLVQLPLPEHIDERRICNAVSPDKDVDG
FHVINVGRMCLDQYSMLPATPWGVWEIIKRTGIPTLGKNVVVAGRSKNVGMPIAMLLHTDGAHERPGGDATVTIS
HRYTPKEQLKKHTILADIVISAAGIPNLITADMIKEGAAVIDVGINRVHDPVTAKPKLVGDVDFEGVRQKAGYIT
PVPGGVGPMTVAMLMKNTIIAAKKVLRLEEREVLKSKELGVATN

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FIGURE 154

CTCCACCGCGGCGAGAGGCATGGGCACGTGGCTGCCGAGGGTGGCCGAGCTCTGGGAAGAAAAGCCCGTGTGCCT
CTGCATAGCGTCGCTACAGCGCTGACTCGGTGTGGATTGATTGGAAAGGTTTGAGGGAGTACTTGGGAAGCATGG
TGGCACATGATGAGACTGGAGGTCTCCTACCTATTAAAAGGACCATAACGAGTCCTAGATGTCAATAACCGATCCT
TCAGAGAACAAGAGGAGCCAAGCAATAAAAAGAGTTTCGACCTCTGGCTCGTGTACGTCCTTGGCAAATTTAATCT
CTCCTGTAAGAAATGGAGCTGTGACAGCTTTTGGTCAAACAATACAGTCATTTACCCCTTCGTGGTGACCACAGAT
CCCCAGCCTCTGCCAGAAGTTTTCTAGCAGGTCAACAGTCCCAACACCCGCCAAGAGAAGGAGCAGTGCACTGT
GGTCAGAGATGCTGGACATCACCATGAAGGAGTCTCTCACCACCAGGGAGATCAGACGGCAGGAGGCAATATATG
AAATGTCCCGAGGTGAACAGGATTTAATTGAGGATCTCAAACCTTGCAAGAAAGGCCTACCATGACCCCATGTTAA
AGTTGTCCATCATGTGAGAAGAGGAACCTCACACATATATTTGGTGATCTGGACTCTTACATACCTCTGCATGAAG
ATTTGTTGACAAGAATAGGAGAAGCAACCAAGCCTGATGGAACAGTGGAGCAGATTGGTCACATTCTCGTGAGCT
GGTTACCGCGCTTGAATGCCTACAGAGGTACTGTAGTAACAGCTGGCAGCCAAAGCTCTTCTTGATCAAAAAGA
AACAGGATCCAAGAGTCCAAGACTTCCTCCAGCGATGTCTCGAGTCTCCCTTCAGTCGAAAAGTAGATCTTTGGA
GTTTCTTAGATATCCCTCGAAGTCGCCTAGTCAAATACCCCTTACTGTAAAAGAAATTCTTAAACACACTCCAA
AAGAGCACCCGTGATGTTTCAGCTTCTGGAGGATGCTATATTGATAATACAGGGAGTCCTCTCTGATATCAACTTGA
AGAAAGGTGAATCCGAGTGCCAGTATTACATCGACAAGCTGGAGTACCTGGATGAAAAGCAGAGGGGACCCCGAGAA
TCGAAGCGAGCAAAGTGCTGCTGTGCCATGGGGAGCTGCGGAGCAAGAGTGGACATAAACTTTACATTTTCTGT
TTCAAGACATCTTGGTTCTGACTCGGCCCCGTACACGGAACGAACGGCACTCTTACCAGGTTTACCGGCAGCCAA
TCCAGTCCAAGAGCTAGTCTTAGAAGACCTGCAGGATGGAGATGTGAGAATGGGAGGCTCCTTTTCGAGGAGCTT
TCAGTAACTCAGAGAAAGCTAAAAATATCTTTAGAATTCGCTTCCATGACCCCTCTCCAGCCCAGTCTCACACTC
TGCAAGCCAATGACGTGTTCCACAAGCAGCAGTGGTTCAACTGTATTGAGCGGCCATTGCCCCCTTCCAGTCGG
CAGGCAGTCCACCTGAGCTGCAGGGCCTGCCGGAGCTGCACGAAGAGTGTGAGGGGAACCAACCCCTCTGCGAGGA
AACTCACAGCCCAGAGGAGGGCATCCACAGTTTCCAGTGTTACTCAGGTAGAAGTTGATGAAAACGCTTACAGAT
GTGGCTCTGGCATGCAGATGGCAGAGGACAGCAAGAGCTTAAAGACACACCAGACACAGCCCGGCATCCGAAGAG
CGAGGGACAAAGCCCTTTCTGGTGGCAAACGGAAAGAGACTTTGGTGAGAGAAGGCTCTGTGTGTTAACTGATG
GGAGAGACTGTTTGTGTTATAAATGTGTACAGTTTTGTTTTCTCGTAAGGGGAGCATCATAGGGTTACTTTATACC
AGTTGTAACATTTTCATTGTTTTTGGTTGTTCTTTTTTCTTTTTTAATGGCAGCTAAAGATATACAGATTACTG
TTAAATTGCAGTCCTTTTTTTTTTAAAGATATTTTCTTGAATTATTTAGAACATGGTAAGCCTGGTATTTTTTA
ATCAAAACAAAATATTTATGAAATGGGTTTTCTCTTAATTCTGGATTCATCATGGCTTTCTAATACCAATTGTAAT
ATTTACAATATTCACCAAAACCTTAGAATTTTGCAAATGCTGGAATTCTGCCAGTGTCTTTTGCTAAGCCTTGCA
TGCAAAATTTGAAATTTTAACATTGGCACCCAAAACCTACATGGAATGTATGTCTGGAGTATTTCAAACCTTTACA
TTGAAACATAATTTCTTGGAAAACAAACCATAAGCCTGAGGAGGTTTTTATCAACTGGAATGCTTTATATTAGT
TTGTTTTTCACTGTACATTCCCTCATTTTACATTCAATTAACCTGCCGATTATTTAATTTTTTTATTGTAAAGTAG
TTTTTAGCATTGCTTTTTATTTTTTACTTTGATGCCTTTTCAAATTGGCATGTCTTTAAAGTATTTTTCTTCCT
GATTAATAATGTGTGTGTATGTGTGTGTGTGTGTATATATATATATTTTTTTTAAATCACATTAATTTTACCAA
GTGAAACCAAGCCATACTGTTTTTGGCCAATTAAGAAAATTGCCATTTTAAAGTGTAGCATTTCAGGGTAAAG
ACCCATGAAATGGCTTGATGTATTCTAGACTACTGAAAGAAAACCACTTCAAAGATTTTGTGAAAGTTTTAGTG
TTGTCTGAAATGCAAGAGGGAAGGTGATTGGTAGTGAGTTAAAGAAAAAGAGAGGAAAAGAGAGTAGTTTTGTC
TTCAAGTAAATGTCTGGTTGTGCCAGACATTTACAAGTGTGAAAGGAGATAGGAGAAGCTCAACTTGAGGGCG
TGTAAGTAAAGTTAGTAAGGCTCGAGGGGACGTGGACTTATTTGCCTTGGTTTGCAATACCTGCAATAATGAGTT
TGAAAAGAAACAATGAAATGTGTTAAAAATTTGACCATATTAGATAAAATTTGGTGGATTTAGTCATAAGATGGA
AAAAGACTGGTGAATCTTTTATTACAAAATGTTTCTGTTAAAAATGGGATCATCATCTTTGAAAGGGGGGAGGAGG
AGTAAAGCCCGATTATAATGGTGATCAATTCAAGTCAGTGTGACTATTCTGTGAAATATATTGGCCAGTGGA
AATGATAATCAGAAAAGACTGTAAATAGATCCATCCAAATGATTTCTCTGTACAAATGAATGATACTATTAAAAA
AAAAAAAAAA

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FIGURE 155

MVAHDETGGLLP IKRTIRVLDVNNQSFREQEEPSNKRVRPLARVTS LANLISPVRNGAVRRFGQTIQSFTLRGDH
RSPASAQKFSSRSTVPTPAKRRSSALWSEMLDITMKESLTTREIRRQEAIYEMSRGEQDLIEDLKLARKAYHDPM
LKLSIMSEEEELTHIFGDLD SYIPLHEDLLTRIGEATKPDGTVEQIGHILVSWLPRLNAYRGYCSNQLAAKALLDQ
KKQDPRVQDFLQRCLESPFSRKLDLWSFLDIPRSRLVKYPLLLKEILKHTPKHEHPDVQLLEDAILIIQGVLS DIN
LKKGESECQYYIDKLEYLDEKQ RDPRIEASKVLLCHGELRSKSGHKLYIFLFQDILVLTRPVTRNERHSYQVYRQ
PIPVQELVLEDLQDGDVRMGGSF RGAFSNSEKAKNIFRIRFHDPSPAQSHTLQANDVFHKQQWFNCIRAAIAPFQ
SAGSPPELQGLPELHEECEGNHPSARKLTAQRRASTVSSVTQVEVDENAYRCGSGMQMAEDSKSLKTHQTQPGIR
RARDKALSGGKRKETLV

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FIGURE 156

AGAGGCTTCCCTGGCTGGTGCCTGAGCCCGGGCGTCCCTCGCCCCCGCCCTCCCCGCATCCCTCTCCTCCCTCGC
GCCTGGCCCTGTGGCTCTTCCCTCCCTCCCTCCTTCCCCCCCCCCCCACCCCTCGCCCGCTGCCTCCCTCGGCCCCA
GCCAGCTGTGCCGGCGTTTGTGGCTGCCCTGCGCCCGGCCCTCCAGCCAGCCTTCTGCCGGCCCCGCGCGCATC

GAGGTGCCCCAGCCGGAGCCCGCGCCAGGCTCGGCTCTCAGTCCAGCAGGCGTGTGCGGTGGCGCCCAGCGTCCG
GGCCACCTCCCGGGCCTCCTGCTGGGATCTCATGGCCTCCTGGGGTCCCCGGTGCGGGCGGGCGCTTCCCTCGCCG
GTCACCACCCTCACCCAGACCATGCACGACCTCGCCGGGCTCGGCAGCCGCAGCCGCTGACGCACCTATCCCTG
TCTCGACGGGCATCCGAATCCTCCCTGTCGTCTGAATCCTCCGAATCTTCTGATGCAGGTCTCTGCATGGATTCC
CCCAGCCCTATGGACCCCCACATGGCGGAGCAGACGTTTGAACAGGCCATCCAGGCAGCCAGCCGGATCATTGCA
AACGAGCAGTTTGCCATCAGACGCTTCCAGTCTATGCCGGTGAGGCTGCTGGGCCACAGCCCCGTGCTTCGGAAC
ATCACCAACTCCCAGGCGCCCCGACGGCCGGAGGAAGAGCGAGGCGGGCAGTGGAGCTGCCAGCAGCTCTGGGGAA
GACAAGGAGAATGTGCGCTTCTGGAAGGCCGGGGTGGGAGCTCTCCGGGAAGAGGAGGGGGCATGCTGGGGTGGT
TCCCTGGCATGTGAGGACCCTCCTCTCCCATCTTGGCTGCAGGATGGATTGTCTTCAAGATGCCATGGAAGCCC
ACACATCCCAGCTCCACCCATGCTCTGGCAGAGTGGGCCAGCCGCAGGGAAGCCTTTGCCAGAGACCCAGCTCG
GCCCCGACCTGATGTGTCTCAGTCCTGACCGGAAGATGGAAGTGGAGGAGCTCAGCCCCCTGGCCCTAGGTGCG
TTCTCTCTGACCCCTGCAGAGGGGGATACTGAGGAAGATGATGGATTGTGGACATCCTAGAGAGTGACTTAAAG
GATGATGATGCAGTTCCCCAGGCAITGGAGAGTCTCATTAGTGCCCCACTGGTCAAGACCTTGGAAGAGGAAGAG
GAAAAGGACCTCGTCATGTACAGCAAGTGCCAGCGGCTCTTCCGCTCTCCGTCCATGCCCTGCAGCGTGATCCGG
CCCATCCTCAAGAGGCTGGAGCGGCCCCAGGACAGGGACACGCCCCGTGCAGAATAAGCGGAGGCGGAGCGTGACC
CCTCCTGAGGAGCAGCAGGAGGCTGAGGAACCTAAAGCCCGCGTCTCCGCTCAAAATCACTGTGTACGATGAG
ATCGAGAACCTCCTGGACAGTGACCACCGAGAGCTGATTGGAGATTACTCTAAGGCCTTCCCTCTACAGACAGTA
GACGGAAGACCAAGACCTCAAGTACATCTCACCAGAAACGATGGTGGCCCTATTGACGGGCAAGTTCAGCAAC
ATCGTGGATAAGTTTGTGATTGTAGACTGCAGATACCCCTATGAATATGAAGGCGGGCACATCAAGACTGCGGTG
AACTTGCCCCCTGGAACGCGACGCCGAGAGCTTCCCTACTGAAGAGCCCCATCGCGCCCTGTAGCCTGGACAAGAGA
GTCATCCTCATTTTCCACTGTGAATTCTCATCTGAGCGTGGGCCCCGCATGTGCCGTTTCATCAGGGAACGAGAC
CGTGCTGTCAACGACTACCCAGCCTCTACTACCCTGAGATGTATATCCTGAAAGGCGGCTACAAGGAGTTCTTC
CCTCAGCACCCGAACCTTCTGTGAACCCAGGACTACCGGCCCATGAACCACGAGGCCTTCAAGGATGAGCTAAAG
ACCTTCCGCCTCAAGACTCGCAGCTGGGCTGGGGAGCGGAGCCGGCGGGAGCTCTGTAGCCGGCTGCAGGACCAG
TGAGGGGCGCTGCGCCAGTCCCTGCTACCTCCCTTGCCCTTCGAGGCCTGAAGCCAGCTGCCCTATGGGCCTGCCGG
GCTGAGGGCCTGCTGGAGGCCTCAGGTGCTGTCCATGGGAAGATGGTGTGGTGTCTGCTGCTGTCTGCCCCAGCC
CAGATTCCCCCTGTGTCTATCCCATCATTTTCCATATCCTGGTGCCCCCACCCTGGAAGAGCCCAGTCTGTTGAG
TTAGTTAAGTTGGGTTAATACCAGCTTAAAGGCAGTATTTTGTGTCTCCAGGAGCTTCTGTTTCCCTTGTTAGG
GTTAACCCCTTCATCTTCCCTGTGCTCCTGAAACGCTCCTTTGTGTGTGTGTGTCAGCTGAGGCTGGGGAGAGCCGTGGT
CCCTGAGGATGGGTGAGAGCTAACTCCTTCCCTGGCCTGAGAGTCAGCTCTCTGCCCTGTGTACTTCCCGGGCCA
GGGCTGCCCCCTAATCTCTGTAGGAACCGTGGTATGTCTGCCATGTTGCCCTTTCTCTTTTCCCTTTCTGTCTC
CACCATACGAGCACCTCCAGCCTGAACAGAAGCTCTTACTCTTTCTATTTTCACTGTGTGCTTGGTCT
GTTTGACTTTACGCCCCTCTCAGGACACTTCCGTAGACTGTTTAGGTTCCCTGTCAAATATCAGTTACCCACTC
GGTCCCAGTTTTGTTGCCCCAGAAAGGGATGTTATTATCCTTGGGGGCTCCCAGGGCAAGGGTTAAGGCCTGAAT
CATGAGCCTGTGGAAGCCCCAGCCCTACTGCTGTGAACCTGGGGCCTGACTGCTCAGAACTTGCTGCTGTCTT
GTTGCGGATGGATGGAAGGTTGGATGGATGGGTGGATGGCCGTGGATGGCCGTGGATGCGCAGTGCCTTGCATAC
CCAAACCAGGTGGGAGCGTTTTGTTGAGCATGACACCTGCAGCAGGAATATATGTGTGCCTATTTGTGTGGACAA
AAATATTTACACTTAGGGTTTGGAGCTATTCAAGAGGAAATGTACAGAAAGCAGCTAAACCAAGGACTGAGCACC
CTCTGGATTCTGAATCTCAAGATGGGGGAGGGCTGTGCTTGAAGGCCCTGCTGAGTCATCTGTTAGGGCCTTGG
TTCAATAAAGCACTGAGCAAGTTGAGAAAAA

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FIGURE 157

MEVPQPEPAPGSALSPAGVCGGAQRPGHLPGLLLGSHGLLGSPVRAAASSPVTTLTQTMHDLA GLGSR SRLTHLS
LSRRASESSLSESSESSDAGLCMDSPSPMDPHMAEQTFEQAIQAASRIIRNEQFAIRRFQSM PVRL LGHSPVLR
NITNSQAPDGRRKSEAGSGAASSSGEDKENVRFWKAGVGALREEEGACWGGSLACEDPPLPSWLQDGFVFKMPWK
PTHPSSTHALAEWASRREAFQRPSSAPDLMCLSPDRKMEVEELSPLALGRFSLTPAEGDTEEDDGFVDILESDL
KDDDAVPPGMESLISAPLVKLEKEEEKDLVMYSKCQRLFRSPSMPCSVIRPILKR LERPQDRDTPVQNKRRRSV
TPPEEQEAE EPKARVLRSKSLCHDEIENLLSDHRELIGDYSKAFLLQTVDGKHQDLKYISPETMVALLTGKFS
NIVDKFVIVDCRYPY EYEGGHIKTAVNLPLERDAESFLLKSPIAPCSLDKRVILIFHCEFS SERGPRMCRFIRER
DRAVNDYPSLYYPEMYILKGGYKEFFPQH PNFCEPQDYRPMNHEAFKDELKTFR LKTRSWAGERSRRELCSRLQD
Q

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FIGURE 158A

CTGCGGCCGCTGGTTTCTTGCCCTTAAGGAGCCCATTGCCTTTCCCGCTGAAGTCTAGATGTTGACATGTAATAA
AGCGGGCAGCAGGATGTTGGTGGATGCGGCCAACTCCAATGGGCCTTTCCAGCCCGTGGTCTTCTCCATATTCCG
AGATGTTCTCTGCTGATCAAGAGAAGCTTTTTATCCAGAAGTTACGTCAAGTGTGCGTCTCTTTGACTTTGT
TTCTGATCCACTAAGTGACCTAAAGTGGAAGGAAGTAAACGAGCTGCTTTAAGTGAAATGGTAGAATATATCAC
CCATAATCGGAATGTGATCACAGAGCCTATTACCCAGAAGTAGTCCATATGTTTGAGTTAACATGTTTCGAAC
ATTACCACCTTCTCCAATCTACGGGAGCGGAATTTGACCCGGAGGAAGATGAACCAACGTTAGAAGCAGCCTG
GCCTCATCTACAGCTTGTATTGAATTTTCTTAAGATTTTAGAGTCTCCAGATTTCCAACCTAATATAGCGAA
GAAATATATTGATCAGAAGTTTGTATTGCAGCTTTTAGAGCTCTTTGACAGTGAAGATCCTCGGGAGAGAGATT
TCTTAAACCACCTTACAGAACTATGGGAAATTCCTAGGCTTGAGAGCTTACATCAGAAAACAGATAAATAA
TATATTTTATAGGTTTATTTATGAAACAGAGCATCATAATGGCATAGCAGAGTTACTGGAAATATTGGGAAGTAT
AATTAATGGATTTGCCTTACCCTAAAAGAAGAGCACAAGATTTCTTATTGAAGGTGTTACTACCTTGCACAA
AGTGAAATCTCTGAGTGTCTACCATCCCCAGCTGGCATACTGTGTAGTGCAGTTTTTAGAAAAGGACAGCACCCT
CACGGAACCAAGTGGTGTATGGCACTTCTCAAATACTGGCCAAAGACTCACAGTCCAAAAGAAGTAATGTTCTTAA
CGAATTAGAAGAGATTTTAGATGTCAATGAACCATCAGAATTTGTGAAGATCATGGAACCCCTCTCCGGCAGTT
GGCCAAATGTGTCTCCAGCCCACACTTCCAGGTGGCAGAGCGAGCTCTCTATTACTGGAATAATGAATACATCAT
GAGTTTAATCAGTGACAACGCAGCGAAGATTCTGCCCATCATGTTTCTTCTTGTACCGCAACTCAAAGACCCA
TTGGAACAAGACAATACATGGCTTGATATACAACGCCCTGAAGCTCTTCATGGAGATGAACCAAAAGCTATTGGA
TGACTGTACACAACAGTTCAAAGCAGAGAACTAAAAGAGAAGCTAAAAATGAAAGAACGGGAAGAAGCATGGGT
TAAATAGAAAATCTAGCCAAAGCCAATCCCCAGTACACAGTGTATAGTCAAGCCAGCACCATGAGCATTCCGGT
TGCAATGGAGACAGATGGGCTTTATTTGAAGATGTGCAGATGCTGAGAAAGACAGTGAAGGACGAGGCTCATCA
GGCACAGAAAGATCCGAAGAAGGACCGTCTCTTGCACTCCGCAAGTCCGAGCTGCCTCAGGACCCCCACACCAA
GAAAGCCTTGGAAGCTCACTGCAGGGCCGATGAGCTGGCCTCCCAGGACGGCCGCTAGCCTCCGGGGCGCCGCGT
CGGGGCCGGGCCCCGCGAGTTCTTTTCCGGATTCTGTAGAAAATACATACTTCTGTGCCATACCAATCAGTTACA
CTCAAAGCTTTCTTGACCCCGTTCCGTAGGCAATAACGTGCGTCCGCCTCAGCGCGAGATTAGGAGTTCAAACA
ATGGTGACTTCCCAGAGCCCGCTGGCAGAGCCGCGGGTTGACGACGGTGTCTCGCAGTGTGCGCGCCACCCAG
CGTAGTCCAAGTCAGACTATTTACAAAGTCAGAGCGATAGGAAAGCACCTTGCCCTTCATCTTCATGTTCTCCC
AAATGGAAGTTAGGATCTTTTAAACATAGGTGGTTCTGTGATAACATCAGTGTTTTCCAAATCAAAGGAACGCTTT
AAAAATAGGACCTATTTTTTAAGACTTTACAGCCTTTGAAATGGTTTCCACGTGATTGTTACGCCAGCAGTTCT
TTTGTGTTGTTTTCAATCTCAGTGAATGGCTCTTTGCTTTTCAGATTCTCACGCAACGTACTGGGCAAATGACAA
TCCTCAGCCGCTGGTATTTTCTAAGGGGTCTCTTCACTTTGATGAGTGACATGAACACCGTGTCTCTTCTCTTG
TGTTGACCTAAAGCCATATTTCCAAGTCTGTGGTACTCCAGGATTCCAGGAGTAAGCCTGTAGAAGAGATTTATT
TTAAAAGAGATTGCTCTGAAATTTATCTTAAAAGAGCTTGCTCTGTCTACCTTGACAGAAATTGGAGTTTTAAAA
TTATGTGTTAATATTTTTTATTGAGATTTTCGTTTCCGTCAACTTAAACATTGTTGCCCTTCAACAAGGCTCTTG
AATTAATAAAATTATAGTCTCTAAGAATTCCACATTTTATGGAAGTTAGAGCAAAATCATTTTGAGTTAAGCCA
GTTCTTAGCCTAATGCAAACTGCAGCGCCTTAAAGCATAAAGTAACACAACAGCATTGCACGGGGCCGGCACTGC
CGCTGCCTTCACTGAAGGCTGCAGTGTCTGTTCTGAGAGCTTGAGGAGGCACCAGCGAGGATGACGTTTAGTGGA
GCTCTTTCTGTTGAAAAGAGCTCACGTTATCAACACCTTGTAAGGAAAATACAGTGTCTGAGTTTTATCGGTCT
TCATATGCTGCTATATATTCACAGAGTTTCTTGATGTACTGAGCTTTTGTGTTTAGATGGAATAGCACAAAGGAG
AAAAATCTTTAACTTAGTGCTTTGTCTATTCTTTATTTCTCTCAGGGTGGCCAGTATTTTGACTTATTTATCCT
GCTTGAAAGCTACTTGAGATGTGTACTGCTATTCTAAACACGTGATCTAGTTTCTTTCATCTCTGGCATAAGATT
ATATACTTAATGTTAAGTGTCTTGAGGCATAAAAGACAAAATGTGGCTTATTTTAGGATCTGTTTTTTCATCGA
GGTCTCGGGTATCCTTTCAAAGATAGTGAGAAGCAGACACTGCTCCTTGTCAGCTCTGGTACCTCTGCCCACT
GCTGTCACTTCAAGCCACTGGCAATGCTTCTGTCTCGTGTCTTGAGGAAAAATCACCTGGGGGGAGGGGACTTC
TTGTGGTAAGAGCAAGTGCAGGTATGAAATGCGAAGATTGCCCCAGCTAAAAGTGGACAAGTCCGCTTTGTGAGA
TGAATACTTCTGAGAACTTGACAAGTATCTCTCCATTTTACCATTATGAAAACATCATTAACAAAAACAGTT
TAGATGCCTTCTCCTTTTGGAGGAAAAAGGGTGTCTTTTATTGTATAAAGCAGCGCTTATGTATTTTGATATAC
CATTGTTTGAAGTTCCGCTTTTAGCTGATAGATTCTCAAATATCCTTGATTTTGGATGTTTCTAGTATGTTTGTGAG
AGAGGTTTCTGGGAAGACTCTCTTTTTGCCCTCGGGAAAAAGCAAAATATCAATGTTTGGGTGACTGTGTAAAGC

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FIGURE 158B

TCAGTGTGTAAGAACATCTTTTTGTCTAGGTTTTCTTTCTGCTCTTTATTGAAGACAAACACTCACCAAAAAGAA
AAATAAAAGTTTTTCAGAGAACTAATTTCTTTGGCAAGAGTATTACTTAATATTTTGGCCTCCTAAAGTTTCCC
TAGTTAGTACTCGGACTCCTGTGCTAATTGTCAGCTTACATATCATTGTATAGAGACTGTTTATTCTGTACCAAA
CTGATTTCAAAGTACTACATTGAAAATAAACCGGTGACTGTTTTCTTCATAAAGTTCTGCGTTTGGCATCTTC
ACTCTTCCAAAATGTATCTGTACATCAGAAATGTCACCTATTCCAAGTGTCTTTTAGTGTGGCCTTTAGTATGG
CTTCCTTTTAATATTGTACATACATTGTATCTTTGTTTTATGGTAATAAGTAATAAAAATGTAGACTTCAAAAAA
AAAAGCGGCCGCAG

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FIGURE 159

MVVDAANSNGPFPQPVLLHIRDVPPADQEKLFIQKLRQCCVLFDFVSDPLSDLKWKEVKRAALSEMVEYITHNRN
VITEPIYPEVVHMFVNMFRITLPPSSNPTGAEFDPEEDEPTLEAAWPHLQLVYEFFLRFLESPDFQPNIAKKYID
QKFVLQLELFDSEDPREDFLKTTLHRIYGKFLGLRAYIRKQINNIFYRFIYETEHNGIAELLEILGSIINGF
ALPLKEEHKIFLLKVLLPLHKVKSLSVYHPQLAYCVVQFLEKDSTLTEPVVMALLKYWPKTHSPKEVMFLNELEE
ILDVIEPSEFVKIMEPLFRQLAKCVSSPHFQVAERALYYWNNNEYIMSLISDNAAKILPIMFPSLYRNSKTHWNKT
IHGLIYNALKLFMEMNQKLFDDCTQQFKA EKLEKLMKERE EAWVKIENLAKANPQYTVYSQASTMSIPVAMET
DGPLFEDVQMLRKTIVKDEAHQAQKDPKKDRPLALRKSELPQDPHTKKALEAHCRADELASQDGR

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FIGURE 160

CCGGAGGAGTCCGAGAGGAAGCGGAGGCGCGAGCTGGAGGCGGCGGCTCCCGTCGGCCTCCGGCAGGACTGAGCG
CTGGGAGGCCGGAAGGCGGGCGCGCACGGCGGAGAGGCGGGCGGGAGGCCGAGCATATTAATGAAAAGTGCCAT
AAACTGAAAAACCAAACATGAGGGTAGCAGGTGCTGCAAAGTTGGTGGTAGCTGTGGCAGTGTTTTACTGACAT
TTTATGTTATTTCTCAAGTATTTGAAATAAAAATGGATGCAAGTTTAGGAAATCTATTTGCAAGATCAGCATTGG
ACACAGCTGCACGTTCTACAAAGCCTCCCAGATATAAGTGTGGGATCTCAAAGCTTGCCCTGAGAAGCATTTTG
CTTTTAAATGGCAAGTGGAGCAGCCAACGTGGTGGGACCCAAAATCTGCCTGGAAGATAATGTTTTAATGAGTG
GTGTTAAGAATAATGTTGGAAGAGGGATCAATGTTGCCTTGGCAAATGGAAAAACAGGAGAAGTATTAGACACTA
AATATTTTGACATGTGGGGAGGAGATGTGGCACCATTATTAGTCTTCTGAAGGCCATACAAGATGGAACAATAG
TTTTAATGGGAACATACGATGATGGAGCAACCAAACCTCAATGATGAGGCACGGCGGCTCATTGCTGATTTGGGGA
GCACATCTATTACTAATCTTGGTTTTAGAGACAACCTGGGTCTTCTGTGGTGGGAAGGGCATTAAAGACAAAAGCC
CTTTTGAACAGCACATAAAGAACAATAAGGATACAAACAAATATGAAGGATGGCCTGAAGTTGTAGAAATGGAAG
GATGCATCCCCCAGAAGCAAGACTAATGGAAATGTGGAGAGAATTGAAGAAAGCGCACTTTCACCTCTTAATGGGA
GAGCTATAAATGGCAGAGCTATGTGTAAATATTTAAGAGCATGCAGCCATCTTGGTGTGTGCATGAGTATTGTC
TCTTTTGATATCAGGATTATTTATTGCTAACGTAAATAGATAGCATTGTAAATAATCATCACAATGATCAAATCA
CTGAACCATGTCTCCGCACATTTCCCTAAAAGTACAATGTTTAGACTGCTATGGTAATACATATTTTAAATTCTA
AAAGCATACACAATGTGTAACCTGAATGGTTTGTGAAAAATATATTGATATATATACTAGTTGCTATGAAAATATC
ATGGAATAATAGGGATTTTAGGGTGGATACTTTATTTTCTTTTATGTTTCTATATGTTGCGTTGTGATGACATTA
TCTTTTAAATTA AAAAGAGATTTGGCTAGTTGTGTGTGTAATGTTACTTTACAGTCCGACTCTCCTGATGTACCT
CTTTTCATGATCTTTTCTTTCCTTCCCAAGAACTGAGGAATGTTTAATATGAAAACATACATCGGATATGTGA
AAAGCACAAACAAAATCTTAATGTACACAGTAAAAAAGTAAATATATAAATGTAGATGGCATTTAGGACCACAGC
TTGCTGGATTTGTGTTAGCTATGGGAATAAATTGATTTTGTATAAGCTATTTAGAGTGAGGCTGGAGGTGGCAGC
TTCACAGAACTGGAGAACCAGGCCAAGTCCCCTCCCCAACCTAATTAGGTCATTCAGGACAGCTAAGTCAGTATA
TTTAGAGCAATACTAGCATACGTTTTTCTTAATTGTTATCAGCATTGACCAAGTGGTTTGAAGGAGGCATGCTT
TAATATCACAATAATTTTGATTTGTAAACCAAGAAATTAATCCTGTGTTTATCTAACTTCATAATAGCAATTATT
GCCCCAAGCTATAGTGGCATATTTACAAAAGTTCTTATTACTGGGCGGACTGATAACATTTAAAAAATAATTGTG
TTTGACCCCAAAATGACTTTATACCCAATTCTACATAAAAAATATAGAAGATCTATCTTTTTTTTGTACCTTCAGAT
GTTCACTAAATAACTCAGTTTTTAAGCAGAAGTTTTTCAGGGCATTAAATATATGTTGTGTATGAAGTATCTCAA
CTGGAACATAAAATTTAGTGATCAAACCTGCCATTACAGTGTAAGGCAGCACTTAAATTTCGAACCTAAAGTTTAG
ATGCATTGTATAAAAAAACCTAAAAGCAGTATCTGTTATTTAGCTGTAAACCAAGTTGGAAGCTATTCGGATAAT
TTCTTAAATATTGATGAACTTTGGAGTACTGTTTCTTCTTCAAACCTGAATGTAATTAATTCATGAATAAATGCA
CCTTATATGTTTAAACAATCTTTGTATACTTTTGGGATTTTTTGGTGCTTATATGCTAAATCACATTCAGCATGTG
TATTTTGACATTTAAATACTTCCCTCAATTCTGTAAATTA AAAAGAAATAGTTATTTTACAGTTCCAGGGATTGTG
AAATAAATGTTGCAGTTTTTTTAAATAATGAAATAAATACTCTTGGTTTTTGCTTTGTGAAAAAAAAAAAAAAAAA

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FIGURE 161

MRVAGAAKLVVAVAVFLLTFYVISQVFEIKMDASLG NLFARSALDTAARSTKPPRYKCGISKACPEKHFAFKMAS
GAANVVGPKICLEDNVLMMSGVKNNVGRGINVALANGKTGEVLDTKYFDMWGGDVAPFIEFLKAIQDGTIVLMGT
YDDGATKLNDEARRLIADLGSTSITNLGFRDNWVFCGGKGIKTKSPFEQHIKNNKDTNKYEGWPEVVEMEGCIPQK
QD

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FIGURE 162

CCCAGGCGCAGCCAATGGGAAGGGTCGGAGGCATGGCACAGCCAATGGGAAGGGCCGGGGCACCAAAGCCAATGG
GAAGGGCCGGGAGCGCGCGGGAGATTAAAGGCTGCTGGAGTGAGGGGTCGCCGTGCACCCTGTCCCAG
CCGTCTGTCTGGCTGCTCGCTCTGCTTCGCTGCGCCTCCACTATGCTCTCCCTCCGTGTCCCGCTCGCGCCCA
TCACGGACCCGAGCAGCTGCAGCTCTCGCCGCTGAAGGGGCTCAGCTTGGTCGACAAGGAGAACACGCCGCCGG
CCCTGAGCGGGACCCGCGTCTGGCCAGCAAGACCGCGAGGAGGATCTTCCAGGAGCCCACGGAGCCGAAAACTA
AAGCAGCTGCCCCGGCGTGGAGGATGAGCCGCTGCTGAGAGAAAACCCCGCCGCTTTGTCTATCTTCCCCATCG
AGTACCATGATATCTGGCAGATGTATAAGAAGGCAGAGGCTTCCTTTTGGACCGCCGAGGAGGTTGACCTCTCCA
AGGACATTGAGCACTGGGAATCCCTGAAACCCGAGGAGAGATATTTTATATCCCATGTTCTGGCTTTCTTTGCAG
CAAGCGATGGCATAGTAAATGAAAACCTTGGTGGAGCGATTTAGCCAAGAAGTTCAGATTACAGAAGCCCGCTGTT
TCTATGGCTTCCAAATTGCCATGGAAAACATACATTCTGAAATGTATAGTCTTCTTATTGACACTTACATAAAAG
ATCCCAAAGAAAGGGAATTTCTCTTCAATGCCATTGAAACGATGCCTTGTGTCAAGAAGAAGGCAGACTGGGCCT
TGCGCTGGATTGGGGACAAAGAGGCTACCTATGGTGAACGTGTTGTAGCCTTTGCTGCAGTGAAGGCATTTTCT
TTTCCGTTCTTTTGGCTCGATATTCTGGCTCAAGAAACGAGGACTGATGCCTGGCCTCACATTTTCTAATGAAC
TTATTAGCAGAGATGAGGGTTTACACTGTGATTTTGGCTGCTGATGTTCAAACACCTGGTACACAAACCATCGG
AGGAGAGAGTAAGAGAAATAATTATCAATGCTGTTCCGATAGAACAGGAGTTCCTCACTGAGGCCTTGCTGTGA
AGCTCATTGGGATGAATTGCACTCTAATGAAGCAATACATTGAGTTTGTGGCAGACAGACTTATGCTGGAACCTGG
GTTTTAGCAAGGTTTTAGAGTAGAGAACCCATTTGACTTTATGGAGAATATTTCACTGGAAGGAAAGACTAACT
TCTTTGAGAAGAGAGTAGGCGAGTATCAGAGGATGGGAGTGATGTCAAGTCCAACAGAGAATTCTTTTACCTTGG
ATGCTGACTTCTAAATGAAGATGTGCCCTTACTTGGCTGATTTTTTTTTTTTCCATCTCATAAGAAAAATCA
GCTGAAGTGTTACCAACTAGCCACACCATGAATTGTCCGTAATGTTCAATTAACAGCATCTTTAAACTGTGTAGC
TACCTCACACCAGTCTGTCTGTTTATAGTGCTGGTAGTATCACCTTTTGCCAGAAGGCCTGGCTGGCTGTGAC
TTACCATAGCAGTGACAATGGCAGTCTTGGCTTTAAAGTGAGGGGTGACCCTTTAGTGAGCTTAGCACAGCGGGA
TTAAACAGTCTTTAAACCAGCACAGCCAGTTAAAGATGCAGCCTCACTGCTTCAACGCAGATTTTAATGTTTAC
TTAAATATAAACCTGGCACTTTACAAACAAATAAACATTGTTTTGTACTCACGGCGGCGATAATAGCTTGATTTA
TTTGGTTTTCTACACCAATACTTCTCTGACCCTAATGGGAGCCAATTCACAATTCATAAGTGAATAAAGTA
AGTTAACTTGTGTAGACTAAGCATGTAATTTTAAAGTTTTATTTTAAATGAATTAATAATTTTGTAAACCACTT
TAAAGTCAGTCTGTGTATACCTAGATATTAGTCAGTTGGTGCCAGATAGAAGACAGGTTGTGTTTTTATCCTGT
GGCTTGTGTAGTGCTCTGGGATTCTCTGCCCCCTCTGAGTAGAGTGTTGTGGGATAAAGGAATCTCTCAGGGCAA
GGAGCTTCTTAAGTTAAATCACTAGAAATTTAGGGGTGATCTGGGCCTTCATATGTGTGAGAAGCCGTTTCATTT
TATTTCTCACTGTATTTTCTCAACGTCTGGTTGATGAGAAAAAATTTCTGAAGAGTTTTCATATGTGGGAGCTA
AGGTAGTATTGTAAATTTCAAGTCATCCTTAAACAAAATGATCCACCTAAGATCTTGCCCTGTTAAGTGGTGA
AATCAACTAGAGGTGGTTCCTACAAGTTGTTTATTCTAGTTTTGTTGGTGTAAAGTAGGTTGTGTGAGTTAATTC
ATTTATATTTACTATGTCTGTTAAATCAGAAATTTTTTATTATCTATGTTCTTCTAGATTTTACCTGTAGTTTCA
ACTTCAGTCACCCAGTGTCTTATTCTGGCATTGTCTAAATCTGAGCATTGTCTAGGGGGATCTTAAACTTTAGTA
GGAAACCATGAGCTGTTAATACAGTTTCCATTCAAATATTAATTTCAGAATGAAACATAATTTTTTTTTTTTTTT
TGAGATGGAGTCTCGCTCTGTTGCCAGGCTGGAGTGCAGTGGCGCGATTTTGGCTCACTGTAACCTCCATCTCC
TGGGTTCAAGCAATTCTCCTGTCTCAGCCTCCCTAGTAGCTGGGACTGCAGGTATGTGCTACCACACCTGGCTAA
TTTTTGTATTTTTAGTAGAGATGGAGTTTACCATATTGGTCAGGCTGGTCTTGAACCTCCTGACCTCAGGTGATC
CACCCACCTCGGCCTCCCAAAGTGCTGGGGATTGCAGGCGTGATAAACAAATATTCTTAATAGGGCTACTTTGAA
TTAATCTGCCTTTATGTTTGGGAGAAGAAAGCTGAGACATTGCATGAAAGATGATGAGAGATAAATGTTGATCTT
TTGGCCCCATTGTTAATTGTATTAGTATTTGAACGTCGTCCTGTTTATTGTTAGTTTTCTTCATCATTTATTG
TATAGACAATTTTTAAATCTCTGTAATATGATACATTTTCTATCTTTTAAAGTTATTGTTACCTAAAGTTAATCC
AGATTATATGGTCCTTATATGTGTACAACATTTAAATGAAAGGCTTTGTCTTGCAATTGTGAGGTACAGGCGGAAG
TTGGAATCAGGTTTTAGGATTCTGTCTCTCATTAGCTGAATAATGTGAGGATTAACCTCTGCCAGCTCAGACCAT
TTCTAATCAGTTGAAAGGGAAACAAGTATTTAGTCTCAAATTTGAATAATGCACAAGTCTTAAGTGATTAAAA
TAAACTGTCTTATGTC

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FIGURE 163

MLSLRVPLAPITDPQQLQLSPLKGLSLVDKENTPPALSGTRVLASKTARRIFQEPTEPKTKAAAPGVEDEPLLRE
NPRRFVIFPIEYHDIWQMYKKAEEASFWTAEVDLSKDIQHWESLKPEERYFISHVLAFFAASDGI V NENLVERFS
QEVQITEARCFYGFQIAMENIHSEMYSLIDITYIKDPKEREFLFNAIETMPCVKKKADWALRWIGDKEATYGERV
VAFAAVEGIFFSGSFASIFWLKKRGLMPGLTFSNELISRDEGLHCDFA CLMFKHLVHKPSEERVREIIINAVRIE
QEFLTEALPVKLIGMNCTLMKQYIEFVADRLMLELGF SKVFRVENPFDFMENISLEGKTNFFEKRVGEYQRMGVM
SSPTENSFTLDADF

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FIGURE 164

GAATTCGGGCGGTCTCTCGGAGACACGCGGCGGTGTCCTGTGTTGGCCATGGCCGACTACCTGATTAGTGGGGGCA
CGTCCTACGTGCCAGACGACGGACTCACAGCACAGCAGCTCTTCAACTGCGGAGACGGCCTCACCTACAATGACT
TTCTCATTCTCCCTGGGTACATCGACTTCACTGCAGACCAGGTGGACCTGACTTCTGCTCTGACCAAGAAAATCA
CTCTTAAGACCCCACTGGTTTCTCTCCCATGGACACAGTCACAGAGGCTGGGATGGCCATAGCAATGGCGCTTA
CAGGCGGTATTGGCTTCATCCACCACAACCTGTACACCTGAATTCCAGGCCAATGAAGTTCGGAAAGTGAAGAAAT
ATGAACAGGGATTCAATCACAGACCCTGTGGTCCTCAGCCCCAAGGATCGCGTGCGGGATGTTTTTGAGGCCAAGG
CCCGGCATGGTTTTCTGCGGTATCCCAATCACAGACACAGGCCGGATGGGGAGCCGCTTGGTGGGCATCATCTCCT
CCAGGGACATTGATTTTCTCAAAGAGGAGGAACATGACTGTTTCTTGGAAGAGATAATGACAAAGAGGGAAGACT
TGGTGGTAGCCCCCGCAGCATCACACTGAAGGAGGCAAATGAAATTCTGCAGCGCAGCAAGAAGGGAAAGTTGC
CCATTGTAAATGAAGATGATGAGCTTGTGGCCATCATTGCCCCGACAGACCTGAAGAAGAATCGGGACTACCCAC
TAGCCTCCAAAGATGCCAAGAAACAGCTGCTGTGTGGGGCAGCCATTGGCACTCATGAGGATGACAAGTATAGGC
TGGACTTGCTCGCCCAGGCTGGTGTGGATGTAGTGGTTTTGGACTCTTCCCAGGGAAATTCCATCTTCCAGATCA
ATATGATCAAGTACATCAAAGACAAATACCCTAATCTCCAAGTCATTGGAGGCAATGTGGTCACTGCTGCCCAGG
CCAAGAACCTCATTGATGCAGGTGTGGATGCCCTGCGGGTGGGCATGGGAAGTGGCTCCATCTGCATTACGCAGG
AAGTGCTGGCCTGTGGGCGGCCCAAGCAACAGCAGTGTACAAGGTGTCAGAGTATGCACGGCGCTTTGGTGTTC
CGGTCATTGCTGATGGAGGAATCCAAATGTGGGTCAATATTGCGAAAGCCTTGGCCCTTGGGGCCTCCACAGTCA
TGATGGGCTCTCTCCTGGCTGCCACCACTGAGGCCCTGGTGAATACTTCTTTTCCGATGGGATCCGGCTAAAGA
AATATCGCGGTATGGGTTCTCTCGATGCCATGGACAAGCACCTCAGCAGCCAGAACAGATATTTTCACTGAAGCTG
ACAAAATCAAAGTGGCCCAGGGAGTGTCTGGTGTGTGCAGGACAAAGGGTCAATCCACAAATTTGTCCCTTACC
TGATTGCTGGCATCCAACACTCATGCCAGGACATTGGTGCCAAGAGCTTGACCCAAGTCCGAGCCATGATGTACT
CTGGGGAGCTTAAGTTTGAGAAGAGAACGTCTCAGCCCAGGTGGAAGGTGGCGTCCATAGCCTCCATTCTGTATG
AGAAGCGGCTTTTCTGAAAAGGGATCCAGCACACCTCCTCGGTTTTTTTTTCAATAAAAGTTTAGAAAGACCCGA
ATTC

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FIGURE 165

MADY LISGGTSYVPDDGLTAQQLFNCGDGLTYNDFLILPGYIDFTADQVDLTSALTKKITLKTPLVSSPMDTVTE
AGMAIAMALTGGIGFIHHNCTPEFQANEVRKVKKYEQGFITDPVVLSPKDRVRDVFEAKARHGFCGIPITDTGRM
GSRLVGISSRDIDFLKEEEHDCFL EEIMTKREDLVVAPRSITLKEANEILQRSKKGKLP IVNEDDELVAIIART
DLKKNRDYPLASKDAKKQLLCGAAIGTHEDDKYRLDLLAQAGVDVVLDSSQGNSIFQINMIKYIKDKYPNLQVI
GGNVVTAAQAKNLIDAGVDALRVGMGSGSICITQEV LACGRPQATAVYKVSEYARREFGVPVIADGGIQNVGHI AK
ALALGASTVMMGSLLAATTEAPGEYFFSDGIRLKKYRGMGSLDAMDKHLSSQNRYFSEADKIKVAQGVSGAVQDK
GSIHKFVPYLIAGIQHSCQDIGAKSLTQVRAMYSGELKF EKRTSSAQVEGGVHSLHSYEKRLF

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FIGURE 166

AGAGCGATCATGTCGCACAAACAAATTTACTATTTCGGACAAATACGACGACGAGGAGTTTGAGTATCGACATGTC
ATGCTGCCCCAAGGACATAGCCAAGCTGGTCCCTAAAACCCATCTGATGTCTGAATCTGAATGGAGGAATCTTGGC
GTTCAGCAGAGTCAGGGATGGGTCCATTATATGATCCATGAACCAGAACCTCACATCTTGCTGTTCCGGCGCCCA
CTACCCAAGAAACCAAAGAAATGAAGCTGGCAAGCTACTTTTCAGCCTCAAGCTTTACACAGCTGTCCTTACTTC
CTAACATCTTTCTGATAACATTATTATGTTGCCTTCTTGTTTCTCACTTTGATATTTAAAAGATGTTCAATACAC
TGTTTGAATGTGCTGGTAACCTGCTTTGCTTCTTGAGTAGAGCCACCACCACCATAGCCCAGCCAGATGAGTGCTC
TGTGGACCCACAGCCTAAGCTGAGTGTGACCCAGAAGCCACGATGTGCTCTGTATCCAGAACACACTTGGCAGA
TGGAGGAAGCATCTGAGTTTGAGACCATGGCTGTTACAGGGATCATGTAACTTGCTGTTTTTGTGTTTTTCTGCC
GGGTGTTGTATGTGTGGTGACTTGCGGATTTATGTTTCAGTGTACTGGAACTTTCCATTTTATTCAAGAAATCT
GTTTATGTTAAAAGCCTTGATTAAAGAGGAAGTTTTTATAAT

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FIGURE 167

MSHKQIYYSDKYDDEEFYRHVMLPKDIAKLVPKTHLMSESEWRNLGVQQSQGWVHYMIHEPEPHILLFRRPLPK
KPKK

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FIGURE 168

GCGGCGCTCGCGCCAAGGGACGTGTTTCTGCGCTCGCGTGGTCAATGGAGGCGCTGCCGCTGCTAGCCGCGACAAC
TCCGGACCACGGCCGCCACCGAAGGCTGCTTCTGCTGCCGCTACTGCTGTTCCCTGCTGCCGGCTGGAGCTGTGCA
GGGCTGGGAGACAGAGGAGAGGCCCCGACTCGCGAAGAGGAGTGCCACTTCTACGCGGGTGGACAAGTGTACCC
GGGAGAGGCATCCCGGGTATCGGTGCGCGACCACTCCCTGCACCTAAGCAAAGCGAAGATTTCCAAGCCAGCGCC
CTACTGGGAAGGAACAGCTGTGATCGATGGAGAATTTAAGGAGCTGAAGTTAACTGATTATCGTGGGAAATACTT
GGTTTTCTTCTTCTACCCACTTGATTTACATTTGTGTGTCCAACGAAATTATCGCTTTTGGCGACAGACTTGA
AGAATTCAGATCTATAAATACTGAAGTGGTAGCATGCTCTGTTGATTCACAGTTTACCCATTTGGCCTGGATTAA
TACCCCTCGAAGACAAGGAGGACTTGGGCCAATAAGGATTCCACTTCTTTCAGATTTGACCCATCAGATCTCAAA
GGACTATGGTGTATACCTAGAGGACTCAGGCCACACTCTTAGAGGTCTCTTCATTATTGATGACAAAGGAATCCT
AAGACAAATTACTCTGAATGATCTTCCTGTGGGTAGATCAGTGGATGAGACACTACGTTTGGTTCAAGCATTCCA
GTACACTGACAAACACGGAGAAGTCTGCCCTGCTGGCTGGAAACCTGGTAGTGAAACAATAATCCCAGATCCAGC
TGGAAAGCTGAAGTATTTGATAAACTGAATTGAGAAATACTTCTTCAAGTTATGATGCTTGAAAGTTCTCAATA
AAGTTCACGGTTTCATTACCA

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FIGURE 169

MEALPLLAATTPDHGRHRLLLLPLLLFLLPAGAVQGWETEERPRTRREECHFYAGGQVYPGEASRVSVADHSLH
LSKAKISKAPYWEGTAVIDGEFKELKLTDIRGKYLVFFFYPLDFTFVCPTETIAFGDRLEEFRSINTEVVACSV
DSQFTHLAWINTPRRQGGLGPIRIPLLSDLTHQISKDYGVYLED SGHTLRGLFIIDDKGILRQITLNDLPVGRSV
DETLRLVQAFQYTDKHGEVCPAGWKPGSETIIPDPAGKLKYFDKLN

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FIGURE 170

GGAAAAAAGCGACTTGTGGCGGTGCGAGCGTGGCGCAGGCGAATCCTCGGCCTAAGCAAATATGACCTCGCGGC
GGCAGCGGAGCCGGGCGCCGCGCAGCCAGCACCTGGAGGTCCGCGACGAGGTGGCCGAGAAGTGCCAGAACTGTT
CCTGGACTTCTTGGAGGAGTTTCAGAGCAGCGATGGAGAAATTAATACTTGCAATTAGCAGAGGAACTGATTCTG
TCCTGAGAGAAACACATTGGTTGTGAGTTTTGTGGACCTGGAACAATTAACCAGCAACTTTCCACCACCATTCA
AGAGGAGTTCTATAGAGTTTACCCTTACCTGTGTGCGGGCCTTGAAAACATTTCGTCAAAGACCGTAAAGAGATCCC
TCTTGCCAAGGATTTTTATGTTGCATTCCAAGACCTGCCTACCAGACACAAGATTCGAGAGCTCACCTCATCCAG
AATTGGTTTGTCTCACTCGCATCAGTGGGCAGGTGGTGC GGACTCACCCAGTTCACCCAGAGCTTGTGAGCGGAAC
TTTTCTGTGCTTGGACTGTGAGACAGTGATCAGGGATGTAGAACAGCAGTTCAAATACACACAGCCAAACATCTG
CCGAAATCCAGTTTGTGCCAACAGGAGGAGATTCTTACTGGATACAAATAAATCAAGATTTGTTGATTTTCAAAA
GGTTCGTATTCAAGAGACCCAAGCTGAGCTTCCTCGAGGGAGTATCCCCCGCAGTTTAGAAGTAATTTTAAGGGC
TGAAGCTGTGGAATCAGCTCAAGCTGGTGACAAGTGTGACTTTACAGGGACACTGATTGTTGTGCCTGACGTCTC
CAAGCTTAGCACACCAGGAGCACGTGCAGAACTAATTCCCGTGTGAGTGGTGTGATGGATATGAGACAGAAGG
CATTCGAGGACTCCGGGGCCCTTGGTGTTAGGGACCTTTCTTATAGGCTGGTCTTTCTTGCTGTGTTGCGCC
AACCAACCCAAGGTTTGGGGGGAAAGAGCTCAGAGATGAGGAACAGACAGCTGAGAGCATTAAAGAACCAATGAC
TGTGAAAGAAATGGGAGAAAGTGTGTTGAGATGAGTCAAGATAAAAATCTATACCACAATCTTTGTACCAGCCTGTT
CCCTACTATACATGGCAATGATGAAGTAAAACGGGGTGTCTGTGCTGATGCTCTTTGGTGGCGTTCCAAAGACAAC
AGGAGAAGGGACCTCTCTTCGAGGGGACATAAATGTTTGCATTGTTGGTGACCCAAGTACAGCTAAGAGCCAATT
TCTCAAGCACGTGGAGGAGTTTCAGCCCCAGAGCTGTCTACACCAGTGGTAAAGCGTCCAGTGTCTGCTGCTTAAC
AGCAGCTGTTGTGAGAGATGAAGAATCTCATGAGTTTGTCAATTGAGGCTGGAGCTTTGATGTTGGCTGATAATGG
TGTGTGTTGTATTGATGAATTTGATAAGATGGACGTGCGGGATCAAGTTGCTATTTCATGAAGCTATGGAACAGCA
GACCATATCCATCACTAAAGCAGGAGTGAAGGCTACTCTGAACGCCCGGACGTCCATTTTGGCAGCAGCAAACCC
AATCAGTGGACACTATGACAGATCAAAATCATTGAAACAGAATATAAATTTGTCAGCTCCCATCATGTCCCGATT
CGATCTCTTCTTTATCCTTGTGGATGAATGTAATGAGGTTACAGATTATGCCATTGCCAGGCGCATAGTAGATTT
GCATTCAAGAATTGAGGAATCAATTGATCGTGTCTATTCCCTCGATGATATCAGAAGATATCTTCTCTTTGCAAG
ACAGTTTAAACCCAAGATTTCCAAAGAGTCAGAGGACTTCATTGTGGAGCAATATAAACATCTCCGCCAGAGAGA
TGGTTCTGGAGTGACCAAGTCTTCATGGAGGATTACAGTGCGACAGCTTGAGAGCATGATTGCTCTCTCTGAAGC
TATGGCTCGGATGCACTGCTGTGATGAGGTCCAACCTAAACATGTGAAGGAAGCTTTCCGGTTACTGAATAAATC
AATCATCCGTGTGGAACACCTGATGTCAATCTAGATCAAGAGGAAGAGATCCAGATGGAGGTAGATGAGGGTGC
TGGTGGCATCAATGGTCATGCTGACAGCCCTGCTCCTGTGAACGGGATCAATGGCTACAATGAAGACATAAATCA
AGAGTCTGCTCCCAAAGCCTCCTTAAGGCTGGGCTTCTCTGAGTACTGCCGAATCTCTAACCTTATTGTGCTTCA
CCTCAGAAAGGTGGAAGAAGAAGAGGACGAGTCAGCATTAAAGAGGAGCGAGCTTGTTAACTGGTACTTGAAGGA
AATCGAATCAGAGATAGACTCTGAAGAAGAACTTATAAATAAAAAAAGAATCATAGAGAAAGTTATTTCATCGACT
CACACACTATGATCATGTTCTAATTGAGCTCACCCAGGCTGGATTGAAAGGCTCCACAGAGGGAAAGTGAGAGCTA
TGAAGAAGATCCCTACTTGGTAGTTAACCCTAACTACTTGCTCGAAGATTGAGATAGTGAAAGTAACTGACCAGA
GCTGAGGAAGTGTGGCACAGCACCTCGTGGCCTGGAGCCTGGCTGGAGCTCTGCTAGGGACAGAAGTGTCTG
AAGTGATGCTTCCAGGATTTGTTTTTCAGAAACAAGAATTGAGTTGATGGTCTATGTGTACATTTCATCACAGGT
TTCATACCAACACAGGCTTCAGCACCTTCCTTTGGTGTGTTTCTGTCCAGTGAAGTTGGAACCAATAATGTGT
AGTCTCTATAACCAATACCTTTGTTTTTCATGTGTAAGAAAAGGCCATTACTTTTAAGGTATGTGCTGTCTTATT
GAGCAAATAACTTTTTTTCAATTGCCAGCTACTGCTTTTATTTCATCAAATAAAATAACTTGTCTG

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FIGURE 171

MDLAAAAEPGAGSQHLEVRDEVAEKCKLFLDFLEEFQSSDGEIKYLQLAEELIRPERNTLVVSFVDLEQFNQQL
STTIQEEFYRVYPYLCRALKTFVKDRKEIPLAKDFYVAFQDLPTRHKIRELTSSRIGLLTRISGQVVRTHPVHPE
LVSGTFLCLDCQTVIRDVEQQFKYTQPNICRNPVCANRRRFLLDTNKSRFVDFQKVRIQETQAELPRGSIPRSLE
VILRAEAVESAQAGDKCDFGTGLIVVPDVSKLSTPGARAETNSRVSGVDGYETEGIRGLRALGVRDLSYRLVFLA
CCVAPTNPFRFGGKELRDEEQTAESIKNQMTVKEWEKVFEMSQDKNLYHNLCTSLFPTIHGNDEVKRGVLLMLFGG
VPKTTGEGTSLRGDINVCIVGDPSTAKSQFLKHVEEFSPRAVYTSKGASSAAGLTAAVVRDEESHEFVIEAGALM
LADNGVCCIDEFDKMDVRDQVAIHEAMEQQTISITKAGVKATLNARTSILAAANPISGHYDRSKSLKQNINLSAP
IMSRFDLFFILVDECNEVTDYAIARRIVDLHSRIEESIDRVYSLDDIRRYLLFARQFKPKISKESEDFIVEQYKH
LRQRDGSGVTKSSWRITVRQLESMIRLSEAMARMHCCDEVQPKHVKEAFRLLNKSIIRVETPDVNLDQEEETQME
VDEGAGGINGHADSPAPVNGINGYNEDINQESAPKASRLRGFSEYCRISNLIVLHLRKVEEEEDSALKRSELVN
WYLKEIESEIDSEEELINKKRIIEKVIHRLTHYDHVLIELTQAGLKGSTEGSESYEEDPYLVVNPNYLLED

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FIGURE 172

CTGGTCCCGAGCACGAGCTGTGAGGGGATTCACTTGTGTGCGGAACCTCCTCGGAACCATGCGCGTCCCTTTCCCTT
GCACCTGTTAACATCTTTAAGGCAGGAGCTGATGAAGAGAGAGCAGAGACAGCTCGTCTGACTTCTTTTATTGGT
GCCATCGCCATTGGAGACTTGGTAAAGAGCACCTTGGGACCCAAAGGCATGGACAAAATTCTTCTAAGCAGTGGA
CGAGATGCCTCTCTTATGGTAACCAATGATGGTGCCACTATTCTAAAAACATTGGTGTTGACAATCCAGCAGCT
AAAGTTTTAGTTGATATGTCAAGGGTTCAAGATGATGAAGTTGGTGATGGCACTACCTCTGTTACCGTTTTAGCA
GCAGAATTATTAAGGGAAGCAGAATCTTTAATTGCAAAAAGATTTCATCCACAGACCATCATAGCGGGTTGGAGA
GAAGCCACGAAGGCTGCAAGAGAGGCGCTGTTGAGTTCTGCAGTTGATCATGGTTCCGATGAAGTTAAATTCGGT
CAAGATTTAATGAATATTGCGGGCACAACATTATCCTCAAACTTCTTACTCATCACAAGACCACCTTTACAAAG
TTAGCTGTAGAAGCAGTTCTCAGACTGAAAGGCTCTGGCAACCTGGAGGCAATTCATATTATCAAGAAGCTAGGA
GGAAGTTTGGCAGATTTCCTATTTAGATGAAGGCTTCCTGTTGGATAAAAAAATTGGAGTAAATCAACCAAAACGA
ATTGAAAATGCTAAAATTCTTATTGCAATACTGGTATGGATACAGACAAAATAAAGATATTTGGTTCGCCGGGT
AGAGTTGACTCTACAGCAAAGGTTGCAGAAATAGAACATGCGGAAAAGGAAAAAATGAAGGAGAAAGTTGAACGT
ATTCTTAAGCATGGAATAAATTGCTTTATTAACAGGCAATTAATTTATAATTATCCTGAACAGCTCTTTGGTGCT
GCTGGTGTCATGGCTATTGAGCATGCAGATTTTGAGGTGTGGAACGCCTAGCTCTTGTCACAGGTGGTGAAATT
GCCTCTACCTTTGATCACCCAGAACTGGTGAAGCTTGGAAGTTGCAAACTTATCGAGGAAGTCATGATTGGAGAA
GACAACTCATTCACTTTTCTGGGGTTGCCCTTGGTGAGGCTTGTACCATTGTTTTGCGTGGTGCCACTCAACAA
ATTTTAGATGAAGCAGAAAGATCATTGCATGATGCTCTTTGTGTTCTTGCGCAAACTGTAAAGGACTCTAGAACA
GTTTATGGAGGAGGCTGTTCTGAGATGTTGATGGCTCATGCTGTGACACAGCTTGCCAATAGAACACCAGGCAAA
GAAGCTGTTGCAATGGAGTCTTATGCTAAAGCACTGAGAAAGTTGCCAACCATCATAGCTGACAATGCAGGCTAT
GACAGTGCAGACCTGGTGGCACAGCTCAGGGCTGCTCACAGTGAAGGCAATACCACTGCTGGATTGGATATGAGG
GAAGGCACCATTGGAGATATGGCTATCCTGGGTATAACAGAAAGTTTTCAAGTGAAGCGACAGGTTCTTCTGAGT
GCAGCTGAAGCAGCAGAGGTGATTCTGCGTGTGGACAACATCATCAAAGCGGCACCCAGGAAACGTGTCCCTGAT
CACCACCCCTGTTAAGCATTCCCACGTGCTGTCGATCTTTGGACCAGTTTCTAGCAAAGTTGTGTTTGAAAGATA
CTCTATTAAAGAAGACTGTGGAATCTGTTTATCGGTGCCATTATATCCTTAAGTTTGGATATTTAGCTGACCTT
CGCTTTAACATAGGTCTAATTTATTGCCGTGTCATTTTCATACAAATCAGTTGATTTAAAGGAGTTTCAATTCG
CATACTGGGCATTAAAAATAAAAAATTTGAACAATGAAAGGAAAAAAGGAGAAAAA

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FIGURE 173

MASLSLAPVNIFKAGADEERAETARLTSFIGAIAIGDLVKSTLGPKGMDKILLSSGRDASLMVTNDGATILKNIG
VDNPAAKVLVDMSRVQDDEVGDGTTSTVTLAAELLREAESLIAKKIHPQTIIAGWREATKAAREALLSSAVDHGS
DEVKFRQDLMNIAGTTLSKLLTHHKDHFTKLAVEAVLRLKSGNLEAIHIIKKLGGSLADSYLDEGFLLDKKIG
VNQPKRIENAKILIAN TGMDTDKIKIFGSRVRVDSTAKVAEIEHAEKEKMKEKVERILKHGINCFINRQLIYNYP
EQLFGAAGVMAIEHADFAGVERLALVTGGEIASTFDHPELVKLGSKLIEEVMIGEDKLIHFSGVALGEACTIVL
RGATQQILDEAERSLHDALCVLAQTVKDSRTVYGGGCSEMLMAHAVTQLANRTPGKEAVAMESYAKALRMLPTII
ADNAGYDSADLVAQLRAAHSEGNTTAGLDMREGTIGDMAILGITESFQVKRQVLLSAAEAAEVILRVDNIIKAAP
RKRVPDHHPC

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FIGURE 174

GCCTGAGTGAGTCTCTGGCGTCCCAAATTGCCTGTTTTTCTCGCAGGCTCTATTCCGTTTCGCTGGTTCGCCACCT
CAGGGGAACGATGGCCATGGAGTCCACAGCCACTGCCGCCGTCGCCGCGGACGTGGTTTCTGCCGACAAAATTGA
AGATGTCCCTGCTCCTTCTACATCTGCAGATAAAGTGGAGAGTCTGGATGTGGATAGTGAAGCTAAGAACTATT
GGGTTTAGGACAGAAACATCTGGTGATGGGGGATATTCCAGCAGCTGTCAATGCATTCCAGGAAGCAGCTAGTCT
TTTAGGTAAGAAGTATGGAGAGACAGCTAATGAGTGTGGAGAAGCCTTCTTTTTCTATGGGAAATCACTTCTGGA
GTTGGCAAGAATGGAGAATGGTGTGTTGGGAAACGCCTTGAAGGTGTGCATGTGGAAGAGGAAGAAGGAGAAAA
AACAGAAGATGAATCTCTGGTAGAAAAATAATGATAACATAGATGAGGAAGCAAGGGAAGAGTTGAGAGAACAGGT
TTATGACGCCATGGGAGAAAAAGAAGCAAAAAACAGAAGACAAGTCTTTGGCAAAGCCTGAAACTGATAA
AGAACAGGACAGTGAAATGGAGAAGGGTGGAAAGAGAAGATATGGATATAAGTAAATCTGCAGAGGAGCCACAGGA
AAAAGTTGACTTGAAGTCTAGATTGGTTAACTGAAACCTCTGAAGAGGCAAAAGGAGGAGCAGCACCAGAAGGACC
GAATGAAGCTGAGGTCACTTCTGGGAAGCCAGAACAGGAAGTACCAGATGCTGAGGAAGAAAAATCAGTTTCTGG
AACTGATGTCCAAGAAGAGTGCAGAGAAAAAGGAGGTGAGGAGAAGCAGGGAGAGGTAATTGTGAGCATAGAGGA
GAAGCCAAAAGAAGTTTTCAGAAGAGCAGCCTGTGGTGACTCTAGAAAAGCAGGGCACTGCAGTGGAGGTAGAAGC
AGAGTCTTTAGACCCGACAGTCAAGCCAGTGGATGTGGGTGGGGACGAGCCAGAGGAGAAGGTAGTTACCTCTGA
AAACGAGGCAGGAAAGGCGGTTCTTGAACAACCTGGTAGGTCAAGAAGTACCACCTGCTGAAGAGTCACCAGAGGT
GCAAACAGAGGCTGCAGAGGCCTCAGCTGTAGAGGCTGGATCAGAAGTCTCTGAAAAGCCTGGGCAGGAGGCTCC
AGTTCTCCCTAAGGATGGTGCAGTCAATGGACCGTCAGTTGTAGGAGATCAGACTCCTATTGAACCACAGACTTC
TATAGAAAGACTGACAGAAACAAAAGATGGCTCAGGACTAGAGGAGAAGGTGAGGGCAAAGCTGGTTCCCTAGTCA
GGAGGAGACTAAGCTGTCTGTAGAAGAGTCTGAGGCAGCTGGAGATGGGGTTGATACCAAGGTAGCCCAGGGAGC
TACTGAGAAATCACCTGAAGACAAAGTTCAGATAGCTGCTAATGAAGAGACACAAGAGAGAGAAGAACAGATGAA
AGAGGGTGAAGAACTGAAGGCTCGGAAGAGGATGATAAAGAAAATGATAAGACTGAAGAAATGCCAAATGATTC
AGTCCTTGAAAACAAGTCTCTTCAAGAAAATGAGGAGGAGGAGATTGGGAACCTAGAGCTTGCTGGGATATGCT
GGATTTAGCAAAGATCATTTTTTAAAAGGCAAGAAACAAAAGAAGCACAGCTTTATGCTGCCCAGGCACATCTTAA
ACTCGGAGAAGTTAGTGTGTAATCTGAAAACCTATGTGCAAGCTGTGGAGGAGTTCCAGTCTGCTTAACCTGCA
GGAACAGTACCTGGAAGCCACGACCGTCTGCTTGCAAGAGACCCACTACCAGCTGGGCTTGGCTTATGGGTACAA
CTCTCAGTATGATGAGGCAGTGGCACAGTTCAGCAAATCTATTGAAGTCATTGAGAACAGAAATGGCTGTACTAAA
CGAGCAGGTGAAGGAGGCTGAAGGATCGTCTGAATACAAGAAAGAAATTGAGGAACTAAAGGAACTGCTACCCGA
AATTAGAGAGAAGATAGAAGATGCAAAGGAGTCTCAGCGTAGTGGGAATGTAGCTGAACTGGCTCTGAAAGCTAC
TCTGGTGGAGAGTTCTACTTCAGGTTTCACTCCTGGTGGAGGAGGCTCTTCAGTCTCCATGATTGCCAGTAGAAA
GCCAACAGACGGTGCTTCTCATCAAATTTGTGTGACTGATATTTCCACCTTGTCAGAAAGAAGAGGAAACCAGA
GGAAGAGAGTCCCCGGAAGATGATGCAAAGAAAAGCCAAACAAGAGCCGAGGTGAACGGAGGCAGTGGGGATGC
TGTCCCGAGTGGAAATGAAGTTTCGGAACCATGGAGGAGGAGGCTGAGAATCAGCTGAAACGCGGAGCAGCAGT
GGAGGGGACACTGGAGGCTGGAGCTACAGTTGAAAGCACTGCATGTTAAGAGGGGGCACAGCCTCCTCCCAAGGG
AAAGTGTTTTTGTATATAATGTATTTTTTCACTTTTGGAGGATTCTTTTTGTATAACTTCAATAAAGATTGTAAG
CAAAAAAAAAA

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FIGURE 175

MAMESTATAA VAADVVSADKIEDVPAPSTSADKVESLDVDSEAKKLLGLGQKHLVMGDIPAAVNAFQEAASLLGK
KYGETANECGEAFFFYGKSLLELARMENGLGNALEGVHVVEEEEGEKTEDESLVENNDNIDEEAREELREQVYDA
MGEKEEAKKTEDKSLAKPETDKEQDSEMEKGGREDMDISKSAEEPQEKVDLTLDWLTETSEEAKGGAPEGPNEA
EVTSGKPEQEVPDAAEEKSVSGTDVQEECREKGGQEKQGEVIVSIEEKPKEVSEEQPVVTLEKQGTAVEVEAESL
DPTVKPVDVGGDEPEEKVVTSENEAGKAVLEQLVGQEVPPAEESPEVQTEAAEASAVEAGSEVSEKPGQEAPVLP
KDGAVNGPSVVG DQTP IEPQTSIERLTETKDGSGLEEKVRAKLVP SQEETKLSVEESEAAGDGVDTKVAQGATEK
SPEDKVQIAANEETQEREEQMKEGEETEGSEEDDKENDKTEEMPND SVLENKSLQENEEEEIGNLELAWDMLDLA
KIIFKRQETKEAQLYAAQHLKLGEVSVESENYVQAVEEFQSCNLQEQYLEAHDRLLAETHYQLGLAYGYNSQY
DEAVAQFSKSIEVIENRMAVLNEQVKEAEGSSEYKKEIEELKELLPEIREKIEDAKESQORSGNVAELALKATLVE
SSTSGFTPGGGGSSVSMIASRKPTDGASSSNCVTDISHLVRRKKRKPEEESPRKDDAKKAKQEPEVNGGSGDAVPS
GNEVSENMEEEAENQLKRGAAVEGTLEAGATVESTAC

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FIGURE 176

GACTCCTAGGGGCTTGCAGACCTAGTGGGAGAGAAAGAACATCGCAGCAGCCAGGCAGAACCCAGGACAGGTGAGG
TGCAGGCTGGCTTTTCTCTCGCAGCGCGGTGTGGAGTCCGTGCTGCCTCAGGGCTTTTCGGAGCCTGGATCCTC
AAGGAACAAGTAGACCTGGCCGCGGGGAGTGGGGAGGGAAGGGGTGTCTATTGGGCAACAGGGCGGCAAAGCCCT
GAATAAAGGGGCGCAGGGCAGGCGCAAGTGCAGAGCCTTCGTTTGCCAAGTCGCCTCCAGACCGCAGACATGAAA
CTTGTCTTCTCGTCCTGCTGTTCTCGGGGCCCTCGGACTGTGTCTGGCTGGCCGTAGGAGAAGGAGTGTTCAG
TGGTGCGCCGTATCCCAACCCGAGGCCACAAAATGCTTCCAATGGCAAAGGAATATGAGAAAAGTGCCTGGCCCT
CCTGTCTAGCTGCATAAAGAGAGACTCCCCATCCAGTGTATCCAGGCCATTGCGGAAAACAGGGCCGATGCTGTG
ACCCCTTGATGGTGGTTTTCATATACGAGGCAGGCCTGGCCCCCTACAACTGCGACCTGTAGCGGCGGAAGTCTAC
GGGACCGAAAGACAGCCACGAACCTACTATTATGCCGTGGCTGTGGTGAAGAAGGGCGGCAGCTTTCAGCTGAAC
GAACTGCAAGGTCTGAAGTCTGCCACACAGGCCTTCGCAGGACCGCTGGATGGAATGTCCCTACAGGGGACACTT
CGTCCATTCTTGAATTGGACGGGTCCACCTGAGCCCATGAGGCAGCTGTGGCCAGGTTCTTCTCAGCCAGCTGT
GTTCCCGGTGCAGATAAAGGACAGTTCCCCAACCTGTGTGCGCTGTGTGCGGGGACAGGGGAAAAACAAATGTGCC
TTCTCCTCCCAGGAACCGTACTTCAGCTACTCTGGTGCCTTCAAGTGTCTGAGAGACGGGGCTGGAGACGTGGCT
TTTATCAGAGAGAGCACAGTGTGAGGACCTGTCAGACGAGGCTGAAAGGGACGAGTATGAGTTACTCTGCCCCA
GACAACACTCGGAAGCCAGTGGACAAGTTCAAAGACTGCCATCTGGCCCGGGTCCCTTCTCATGCCGTTGTGGCA
CGAAGTGTGAATGGCAAGGAGGATGCCATCTGGAATCTTCTCCGCCAGGCACAGGAAAAGTTTGAAAAGGACAAG
TCACCGAAATTCAGCTCTTTGGCTCCCTAGTGGGCAGAAAGATCTGCTGTTCAAGGACTCTGCCATTGGGTTT
TCGAGGGTGGCCCCGAGGATAGATTCTGGGCTGTACCTTGGCTCCGGCTACTTCACTGCCATCCAGAACTTGAGG
AAAAGTGAGGAGGAAGTGGCTGCCCGGCGTGC CGGGTCTGTGGTGTGCGGTGGGCGAGCAGGAGCTGCGCAAG
TGTAACCAAGTGGAGTGGCTTGAGCGAAGGCAGCGTGACCTGCTCCTCGGCCTCCACCACAGAGGACTGCATCGCC
CTGGTGCTGAAAGGAGAAGCTGATGCCATGAGTTTGGATGGAGGATATGTGTACACTGCATGCAATGTGTTTG
GTGCCTGTCTGGCAGAGAACTACAAATCCCAACAAAGCAGTGACCCTGATCCTAACTGTGTGGATAGACCTGTG
GAAGGATATCTTGCTGTGGCGGTGGTTAGGAGATCAGACACTAGCCTTACCTGGAACCTCTGTGAAAGGCAAGAAG
TCCTGCCACACCGCCGTGGACAGGACTGCAGGCTGGAATATCCCCATGGGCCTGCTCTTCAACCAGACGGGCTCC
TGCAAATTTGATGAATATTTTCAAGTCAAAGCTGTGCCCCCTGGGTCTGACCCGAGATCTAATCTCTGTGCTCTGTGT
ATTGGCGACGAGCAGGGTGAGAATAAGTGCCTGCCCAACAGCAACGAGAGATACTACGGCTACACTGGGGCTTTC
CGGTGCCTGGCTGAGAATGCTGGAGACGTTGCATTTGTGAAAGATGTCACTGTCTTGCAGAACACTGATGGAAAT
AACAATGAGGCATGGGCTAAGGATTTGAAGCTGGCAGACTTTGCGCTGCTGTGCCTCGATGGCAAACGGAAGCCT
GTGACTGAGGCTAGAAGCTGCCATCTTGCCATGGCCCCGAATCATGCCGTGGTGTCTCGGATGGATAAGGTGGAA
CGCCTGAAACAGGTGCTGCTCCACCAACAGGCTAAATTTGGGAGAAATGGATCTGACTGCCCGGACAAGTTTTGC
TTATTCCAGTCTGAAACCAAAAACCTTCTGTTCAATGACAACACTGAGTGTCTGGCCAGACTCCATGGCAAAAACA
ACATATGAAAAATATTTGGGACCACAGTATGTGCGAGGCATTACTAATCTGAAAAAGTGTCAACCTCCCCCTC
CTGGAAGCCTGTGAATTCCTCAGGAAGTAAACCGAAGAAGATGGCCAGCTCCCCAAGAAAGCCTCAGCCATT
ACTGCCCCCAGCTCTTCTCCCCAGGTGTGTTGGGGCCTTGGCTCCCTGCTGAAGGTGGGGATTGCCATCCATC
TGCTTACAATTCCTGCTGTGCTCTTAGCAAGAAGTAAATGAGAAATTTTGTGATATTCAAAAAAA

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FIGURE 177

MKLVFLVLLFLGALGLCLAGRRRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQAI AENRAD
AVTLDGGFIYEAGLAPYKLRPVAAEVYGTERQPRTHYYAVAVVKKGGSFQLNELQGLKSCHTGLRRTAGWNVPTG
TLRPFLNWTGPPEPIEA AAVARFFSASCVP GADKGQFPNLCRLCAGTGENKCAFSSQEPYFSYSGAFKCLRDGAGD
VAFIRESTVFEDLSDEAERDEYELLCPDNTRKPVDFKDCHLARVPSHAVVARSVNGKEDAIWNLLRQAQEKFGK
DKSPKFQLFGSPSGQKDLLFKDSAIGFSRVPPRIDSGLYLGSGYFTAIQNLRKSEEEVAARRARVVWCAVGEQEL
RKNQWSGLSEGSVTCSSASTTEDCIALVLKGEADAMSLDGGYVYTACKCGLVPVLAENYKSQQSSDPDPNCVDR
PVEGYLAVAVVRRSDTSLTWNSVKGKKSCHTAVDRTAGWNIPMGLLFNQTGSKFDEYFSQSCAPGSDPRS NLCA
LCIGDEQGENKCV PNSNERYYGYTGAFRCLAENAGDVAFVKDVTVLQNTDGNNNEAWAKDLKLADFALLCLDGKR
KPVTEARSCHLAMAPNHAVVSRMDKVERLKQVLLHQQAKFGRNGSDCPDKFLFQSETKNLLENDNTECLARLHG
KTTYEKYLGPQYVAGITNLKKCSTSP LLEACEFLRK

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FIGURE 178A

GCCCCGAGTGCAATCGCGGGAAGCCAGGGTTTCCAGCTAGGACACAGCAGGTCTGTATCCGGGTCTGGGACACTGC
CTGGCAGAGGCTGCGAGCATGAGGGGCCCTGGGGCTGGAAATTGCGCTGGACCGTCGCCTTGCTCCTCGCCGCGGCG
GGGACTGCAGTGGGCGACAGATGTGAAAGAAACGAGTTCCAGTGCCAAGACGGGAAATGCATCTCCTACAAGTGG
GTCTGCGATGGCAGCGCTGAGTGCCAGGATGGCTCTGATGAGTCCCAGGAGACGTGCTTGTCTGTACCTGCAAA
TCCGGGGACTTCAGCTGTGGGGGCCGTGTCAACCGCTGCATTCCCTCAGTTCTGGAGGTGCGATGGCCAAGTGGAC
TGCGACAACGGCTCAGACGAGCAAGGCTGTCCCCCAAGACGTGCTCCCAGGACGAGTTTCGTGCCACGATGGG
AAGTGCATCTCTCGGCAGTTTCGTCTGTGACTCAGACCGGGACTGCTTGAGCGGCTCAGACGAGGCCTCCTGCCCG
GTGCTCACCTGTGGTCCCAGCTTCCAGTGCAACAGCTCCACCTGCATCCCCAGCTGTGGGCCTGCGACAAC
GACCCCGACTGCGAAGATGGCTCGGATGAGTGGCCGACGCGTGTAGGGGTCTTTACGTGTTCCAAGGGGACAGT
AGCCCCGTGCTCGGCCTTCAGATTCCACTGCCTAAGTGGCGAGTGCATCCACTCCAGCTGGCGCTGTGATGGTGGC
CCCGACTGCAAGGACAAATCTGACGAGGAAAACCTGCGCTGTGGCCACCTGTGCGCCTGACGAATTCAGTGCTCT
GATGGAACTGCATCCATGGCAGCCGGCAGTGTGACCGGGAATATGACTGCAAGGACATGAGCGATGAAGTTGGC
TGCGTTAATGTGACACTCTGCGAGGGACCCAACAAGTTCAAGTGTACAGCGGCGAATGCATCACCTGGACAAA
GTCTGCAACATGGCTAGAGACTGCCGGGACTGGTCAGATGAACCCATCAAAGAGTGGCGGACCAACGAATGCTTG
GACAACAACGGCGGCTGTTCCACGTCTGCAATGACCTTAAGATCGGCTACGAGTGCCTGTGCCCCGACGGCTTC
CAGCTGGTGGCCAGCGAAGATGCGAAGATATCGATGAGTGTGAGGATCCCGACACCTGCAGCCAGCTCTGCGTG
AACCTGGAGGGTGGCTACAAGTGCCAGTGTGAGGAAGGCTTCCAGCTGGACCCCAACGAAGGCCTGCAAGGCT
GTGGGCTCCATCGCCTACCTCTTCTTACCAACCGGCACGAGGTGAGGAAGATGACGCTGGACCGGAGCGAGTAC
ACCAGCCTCATCCCCAACCTGAGGAACGTGGTCGCTCTGGACACGGAGGTGGCCAGCAATAGAATCTACTGGTCT
GACCTGTCCCAGAGAATGATCTGCAGCACCCAGCTTGACAGAGCCACGGCGTCTCTTCCTATGACACCGTCATC
AGCAGGGACATCCAGGCCCCGACGGGCTGGCTGTGGACTGGATCCACAGCAACATCTACTGGACCGACTCTGTC
CTGGGCACTGTCTCTGTTGCGGATACCAAGGGCGTGAAGAGGAAAACGTTATTTCAGGGAGAACGGCTCCAAGCCA
AGGGCCATCGTGGTGGATCCTGTTTCATGGCTTCATGTACTGGACTGACTGGGGAACCTCCCGCCAAGATCAAGAAA
GGGGGCTGAATGGTGTGGACATCTACTCGCTGGTGACTGAAAACATTAGTGGCCCAATGGCATCACCTTAGAT
CTCTCAGTGGCCGCTCTACTGGGTTGACTCCAAACTTCACTCCATCTCAAGCATCGATGTCAATGGGGGCAAC
CGGAAGACCATCTTGGAGGATGAAAAGAGGCTGGCCCCACCCCTTCTCCTTGGCCGTCTTTGAGGACAAAGTATTT
TGGACAGATATCATCAACGAAGCCATTTTTCAGTGCCAACCGCCTCACAGGTTCCGATGTCAACTTGTGGCTGAA
AACCTACTGTCCCAGAGGATATGGTCTCTTCCACAACCTCACCCAGCCAAGAGGAGTGAAGTGGTGTGAGAGG
ACCACCTGAGCAATGGCGGCTGCCAGTATCTGTGCTCCCTGCCCCGAGATCAACCCCACTCGCCCCAGTTT
ACCTGCGCCTGCCCCGACGGCATGCTGCTGGCCAGGACATGAGGAGCTGCCTCACAGAGGCTGAGGCTGCAGTG
GCCACCCAGGAGACATCCACCGTCAGGCTAAAGGTGAGTCCACAGCCGTAAGGACACAGCACACAACACCCGG
CCTGTTCCCGACACCTCCCGGCTGCCTGGGGCCACCCCTGGGCTCACCACGGTGGAGATAGTGACAATGTCTCAC
CAAGCTCTGGGCGACGTTGCTGGCAGAGGAAATGAGAAGAAGCCAGTAGCGTGAGGGCTCTGTCCATTGTCTCTC
CCCATCGTGCTCCTCGTCTTCTTTCCTTGGCTGGGGGTCTTCTTCTATGGAAGAACTGGCGGCTTAAGAATCAAC
AGCATCAACTTTGACAACCCGCTCTATCAGAAGACCACAGAGGATGAGGTCCACATTTGCCACAACAGGACGGC
TACAGCTACCCCTCGAGACAGATGGTCAGTCTGGAGGATGACGTGGCGTGAACATCTGCCTGGAGTCCCGCCCCCT
GCCAGAACCCTTCTGAGACCTCGCCGGCCTTGTTTTATTCAAAGACAGAGAAGACCAAGCATTGCTGCCAG
AGCTTTGTTTTATATATTTTATTCATCTGGGAGGCAGAACAGGCTTCGGACAGTGGCCATGCAATGGCTTGGGTTG
GGATTTTGGTTTCTTCTTCTTCTGTGAAGGATAAGAGAAAACAGGCCGGGGGACCAGGATGACACCTCCATTTC
TCTCCAGGAAGTTTTGAGTTTCTCTCCACCGTGACACAATCTCAAACATGGAAGATGAAAGGGCAGGGGATGTC
AGGCCAGAGAAGCAAGTGGCTTTCAACACACAACAGCAGATGGCACCAACGGGACCCCTGGCCCTGCCTCATC
CACCAATCTCTAAGCCAAACCCCTAAACTCAGGAGTCAACGTGTTTACCTCTTCTATGCAAGCCTTGCTAGACAG
CCAGGTTAGCCTTTGCCCTGTACCCCCGAATCATGACCCACCCAGTGTCTTTCGAGGTGGGTTTGTACCTTCCT
TAAGCCAGGAAAGGGATTTCATGGCGTCGGAATGATCTGGCTGAATCCGTGGTGGCACCGAGACCAAACTCATTC
ACCAAATGATGCCACTTCCCAGAGGCAGAGCCTGAGTCACCGGTACCCCTTAATATTTATTAAGTGCCTGAGACA
CCCGGTTACCTTGGCGGTGAGGACACGTGGCCTGCACCCAGGTGTGGCTGTGAGGACACCAGCCTGGTGCCCATC
CTCCCGACCCCTACCACTTCCATTCCCGTGGTCTCCTTGCACTTTCTCAGTTCAGAGTTGTACACTGTGTACAT
TTGGCATTGTGTTATTATTTTGCAGTGTCTTCTGTGCTGTGTTGGGATGGGATCCCAGGCCAGGGAAAGCCC

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FIGURE 178B

GTGTCAATGAATGCCGGGGACAGAGAGGGGCAGGTTGACCGGGACTTCAAAGCCGTGATCGTGAATATCGAGAAC
TGCCATTGTCGTCTTTATGTCCGCCCACCTAGTGCTTCCACTTCTATGCAAATGCCTCCAAGCCATTCACTTCCC
CAATCTTGTGCGTTGATGGGTATGTGTTTAAAACATGCACGGTGAGGCCGGGCGCAGTGGCCTCACGCCTGTAATC
CCAGCACTTTGGGAGGCCGAGGCGGGTGGATCATGAGGTCAGGAGATCGAGACCATCCTGGCTAACAAAGGTGAAA
CCCCGTCTCTACTAAAAATACAAAAAATTAGCCGGGCGCGGTGGTGGGCACCTGTAGTCCCAGCTACTCGGGAGG
CTGAGGCAGGAGAATGGTGTGAACCCGGGAAGCGGAGCTTGCAGTGAGCCGAGATTGCGCCACTGCAGTCCGCAG
TCTGGCCTGGGCGACAGAGCGAGACTCCGTCTCAAAAAAACAAAAAACCATGCATGGTGCATCAGC
AGCCCATGGCCTCTGGCCAGGCATGGCGAGGCTGAGGTGGGAGGATGGTTTGAGCTCAGGCATTTGAGGCTGTCG
TGAGCTATGATTATGCCACTGCTTTCCAGCCTGGGCAACATAGTAAGACCCCATCTCTTAAAAAATGAATTTGGC
CAGACACAGGTGCCTCACGCCTGTAATCCCAGCACTTTGGGAGGCTGAGCTGGATCACTTGAGTTCAGGAGTTGG
AGACCAGGCCTGAGCAACAAAGCGAGATCCCATCTCTACAAAAACCAAAAAGTTAAAAATCAGCTGGGTATGGTG
GCACGTGCCTGTGATCCCAGCTACTTTGGGAGGCTGAGGCAGGAGGATCGCCTGAGCCAGGAGGTGGAGGTTGCA
GTGAGCCATGATCGAGCCACTGCACTCCAGCCTGGGCAACAGATGAAGACCCTATTTTCAGAAATACAACTATAAA
AAAAATAAATAAATCCTCCAGTCTGGATCGTTTGACGGGACTTCAGGTTCTTTCTGAAATCGCCGTGTTACTGTT
GCACTGATGTCCGGAGAGACAGTGACAGCCTCCGTCAGACTCCCGCGTGAAGATGTCACAAGGGATTGGCAATTG
TCCCCAGGGACAAAACACTGTGTCCCCCAGTGCAGGGAACCGTGATAAGCCTTTCTGGTTTCGGAGCACGTAA
ATGCGTCCCTGTACAGATAGTGGGGATTTTTTGTATGTTTGCACTTTGTATATTGGTTGAACTGTTATCACTT
ATATATATATATACACACATATATATAAAATCTATTTATTTTGCAAACCCTGGTTGCTGTATTTGTTCACTGAC
TATTTCTCGGGGCCCTGTGTAGGGGGTTATTGCCTCTGAAATGCCTCTTCTTTATGTACAAAGATTATTTGCACGA
ACTGGACTGTGTGCAACGCTTTTTGGGAGAATGATGTCCCGTTGTATGTATGAGTGGCTTCTGGGAGATGGGTG
TCACTTTTTAAACCACTGTATAGAAGGTTTTTGTAGCCTGAATGTCTTACTGTGATCAATTAAATTTCTTAAATG

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FIGURE 179

MGFWGWLRTVALLLAAAGTAVGDR CERNEFQCQDGKCI SYKWVCDGSAECQDGSDESQETCLSVTCKSGDFSC
GGRVNR CIPQFWRC DGQVDCDNGSDEQGCP PKTCSQDEF RCHDGKCI SRQFVCDSDRDCLDGSDEASCPVLTGCP
ASFQCNSSTCIPQLWACDNDPDCEDGSDEWPQRCRGLYVFQGDSSPCSAFEFHCLSGECIHSSWRCDGGPDCKDK
SDEENCAVATCRPDEFQCS DGNCIHGSRQCDREYDCKDMSDEVGCVNVTLC EGP NKFKCHSGECITL DKVCNMAR
DCRDWSDEPIKECGTNECLDNNGGC SHVCNDLKIGYECLCPDGFQLV AQRRCEIDECQDPDTCSQLCVNLEGGY
KCQCEE GFQLDPHTKACKAVGSIAYLFFTNRHEVRKMTLDRSEYTS LIPNLRNVVALDTEVASNRIYWS DLSQRM
ICSTQLDRAHGVSSYDTVISRDIQAPDGLAVDWIHSNIYWTD SVLGT VSVADTKGVKRKTLFRENGSKPRAIVVD
PVHGFMYWTDWGTPAKIKKGGLNGVDIYSLVTENIQWPNGITL DLLSGRLYWVDSKLHSISSIDVNGGNRKTILE
DEKRLAHPFSLAVFEDKVFWTDIINEAIFSANRLTGSDVNLLAENLLSPEDMVL FHNLTQPRGVNWCERTTLSNG
GCQYLCLPAPQINPHSPKFTCACPDGM LLARDMRSCLTEAEAAVATQETSTVRLKVSSTAVRTQHTTTTRPVPDTS
RLPGATPGLTTVEIVTMSHQALGDVAGRGNEKKPSSVRALSIVLP I VLLVFLCLGVFLLWKNWRLKNINSINF DN
PVYQKTTEDEVHICHNQDGYSPSRQMVSLEDDVA

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FIGURE 180

AAGCGATGGCTGGGCCCGCTGGATCTCCAAGGTCTCTCGGCTGCTGGGGGCATTCCACAACCCAAAACAGGTGA
 CCAGAGGTTTTTACTGGTGGTGTTCAGACAGTAACTTTAAATTCAGGAGATGGTATTGGCCCAGAAATTTTCAAGCTG
 CAGTTATGAAGATTTTTTGATGCTGCCAAAGCACCTATTAGTGGGAGGAGCGGAACGTCACTGCCATTCAAGGAC
 CTGGAGGAAAGTGGATGATCCCTTCAGAGGCTAAAGAGTCCATGGATAAGAACAAGATGGGCTTGAAAGGCCCTT
 TGAAGACCCCAATAGCAGCCGGTCACCCATCTATGAATTTACTGCTGCGCAAAACATTTGACCTTTACGCGAATG
 TCCGACCATGTGTCTCTATCGAAGGCTATAAAACCCCTTACACCGATGTAAATATTGTGACCATTTCAGAGAACA
 CAGAAGGAGAATACAGTGAATTGAGCATGTGATTGTTGATGGAGTCGTGCAGAGTATCAAGCTCATACCGAGG
 GGGCGAGCAAGCGCATTGCTGAGTTTGCTTTGAGTATGCCCGGAACAACCACCGGAGCAACGTACGGCGGTGC
 ACAAGCCAACATCATGCGGATGTCAGATGGGCTTTTTCTACAAAATGCAGGGAAGTTGCAGAAAGCTGTAAAG
 ATATTAAATTTAATGAGATGTACCTTGATACAGTATGTTTGAATATGGTACAAGATCCTTCCCAATTTGATGTTT
 TTGTTATGCCAAATTTGTATGGAGACATCCTTAGTGACTTGTGTGCAGGATTGATCGGAGGTCTCGGTGTGACAC
 CAAGTGGCAACATTGGAGCCAATGGGGTTGCAATTTTTGAGTCGGTTTCATGGGACGGCTCCAGACATTGCAGGCA
 AGGACATGGCGAATCCACAGCCCTCCTGCTCAGTGCCGTGATGATGCTGCGCCACATGGGACTTTTTGACCATG
 CTGCAAGAATTGAGGCTGCGTGTTTTGCTACAATTAAGGACGGAAAGAGCTTGACAAAAGATTGGGAGGCAATG
 CAAAATGCTCAGACTTCACAGAGGAAATCTGTGCGCGAGTAAAAGATTTAGATTAAACACTTCTACAACCTGGCATT
 TACATCAGTCACTCTAAATGGACACCACATGAACCTCTGTTTAGAATACCTACGTATGTATGCATTGGTTTGCTT
 GTTTCTTGACAGTACATTTTTAGATCTGGCCTTTTCTTAACAAAATCTGTGCAAAAGATGCAGGTGGATGTCCCT
 AGGTCTGTTTTCAAAGAAGCTTTTTCCAAGTGCTTGTTTTATTTATTAAGTGTCTACCTGGTAAATGTTTTTTTTG
 TAAACTCTGAGTGGACTGTATCATTGCTATTCTAAACCATTTTACACTTAAGTTAAAATAGTTTCTCTTCAGCT
 GTAAATAACAGGATACAGAATTAACAAGAGAAAAATGTCTAACTTTTTAAGAAAAACCTTATTTTCTTCGGTTTTT
 GAAAAACATAATGGAAATAAAACAGGATATTGACATAATAGCACAAAATGACACTCTTCTAAAACATAAATGGGCA
 CAAGAGAATTTTCTGGGAAAGTTACATCAAAAAGAGTGAATGTGGTATATTTCTAAATGATATGGAAAAATAGA
 GACAGATTTGTCCTTTACAGAAATTACTGAGTGTGAATAAAAACTTCAGATCCAAGAAATATATAATGAGAGATA
 TAATTTTTGTTAATAAGACAAAGGTAATATATTGGATACAAAGACACAAATGTATTGTGTGTTCAATTATTTTGT
 TGTCTTGAGATTTAATATTCTTTCCAAGAGCTTTTAATGAAGCAGAGAGCTAGTACTTCATTTTCACTGGATACA
 TTTTCAGCATCATGAGTTGTACAGCCTCTGAGCCCTGATCTGAAGCCAGAAGGGCTGAGTGTATTGTAACTT
 ATTCTTGCAITGTTGCTGTCTGGGAATGGACCACACTACAGCAGGTAGTTCTGGGGCGATACTGCCGAAAGGCC
 GAACACATGTATTTTGGCTGCAATTGAGGAACTTGGGATGCTATTAATTTTGATTTTCAGCAACTGCCCTTCTC
 CTATCCCAAAGCACCATTACTGCCCTCTGCCTCAGCAGTACCAGTATAAGATGACATTCCAAAGACTGGAGGCA
 ACTCAGCCTGAGTTAATTCACAAAATTATGCCATGCTGGGGCTTGAGCTTGAGCTTGGGCTTAGGCTTGGGCTCA
 GCTTTTGACCCTCAGGCATCTCCTTTTCTTCTGCTTCTCCTTCTCCTCTGCTGCAGCATGATTTTCTT
 AATCTTCAGACACTCACTATTTTTCATGAACAGTTACCCTCTGTCCCCACAACCAAAGACAACCTCATGGCCTCCTT
 TGGCCCTTGTGTAACATTGCAAACCTGTGGCTTTGCAAAATGTACCCAGGTCAAGGGGATTTTTTTTTTTTTTA
 GCAATGATATCCCTGTCTGGGTCACTTTTTAAGCTTGTAACCGCCCCCCCCAGACTTATAATCTTAAATGTATTTT
 CCTTTGTTAAGCTGCTGCTTCCTCTGTTTCATTGGATTGTGCCAGTTATCAGTGGCTCTTGGGTTCAAAGTAAT
 AAA

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FIGURE 181

MAGPAWISKVSRLLGAFHNPKQVTRGFTGGVQTVTLIPGDGIGPEISAAMKIFDAAKAPIQWEERNVTAIQGPG
GKWMIPSEAKESMDKNKMGLKGPLKTPIAAGHPSMNLLLRKTFDLYANVRPCVSIIEGYKTPYTDVNIVTIRENTE
GEYSGIEHVIVDGVVQSIKLITEGASKRIAEFAFEYARNNHRSNVTAVHKANIMRMSDGLFLQKCREVAESCKDI
KFNEMYLDTVCLNMVQDPSQFDVLVMPNLYGDILSDLCAGLIGGLGVTPSGNIGANGVAIFESVHGTAPDIAGKD
MANPTALLLSAVMMLRHMGLFDHAARIEAACFATIKDGKSLTKDLGGNAKCSDFTEEICRRVKDLD

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FIGURE 182A

CAAGTGCCGTCGCCGCGCCCCCTTCCCCCTCCCGCCTCCCGGGCCCCCTCCCCGGAACCGGCGGTTCGAGCTACGGT
CGCGGACGAGTGGAACCGAGACTGCCCCGCGGAGCCGCGGTATGAGCGCCCCCTCGCCACCCCGTGTCCAGGCC
CGGCCTTTCTGACAAGAGCTAGACTTCGGGCTCCTTGAGGATATTAGTTTTGTATGTTTGAATATCCTCTCACC
ATGTTTCAGCATAAAGTACCAATCTTAATGATTATCCTCAACAAGACAGGTGTGAGAGGGTTGCTGTTGCATTGCA
ATCATGGTGCAAAAATACCAGTCCCCAGTGAGAGTGACAAATACCCCTTTGAATTAATTATGGCTGCCTATGAA
AGGAGGTTCCCTACATGTCTTTGATTCCGATGTTTCGTGGGCAGTGACACTGTGAGTGAATTCAAGAGCGAAGAT
GGGGCTATTTCATGTTCATTGAAAGGCGCTGCAAGCTGGATGTAGATGCACCCAGACTGCTGAAGAAGATTGCAGGA
GTTGATTATGTTTATTTTGTCCAGAAAACTCACTGAATTCTCGGGAACGTACTTTGCACATTGAGGCTTATAAT
GAAACGTTTTCCAATCGGGTCATCATTAATGAGCATTGCTGTACACCGTTTACCCTGAAAATGAAGATTGGACC
TGTTTTGAACAGTCTGCAAGTTTAGATATTAATCTTTCTTTGGTTTTGAAAGTACAGTGAAAAAATTGCAATG
AAACAATATACCAGCAACATTAAAAAAGGAAAGGAAATCATCGAATACTACCTTCGCCAATTAGAAGAAGAAGGC
ATAACCTTTGTGCCCCGTTGGAGTCCGCCCTTCCATCACGCCCTCTTCAGAGACATCTTCATCATCTCCAAGAAA
CAAGCAGCGTCCATGGCCGTGCTCATCCCAGAAGCTGCCCTCAAGGAGGGGCTGAGTGGTGATGCCCTCAGCAGC
CCCAGTGACCTGAGCCCGTGGTGGGCACCCCTGACGACAACTAGATGCCGACCACATCAAGAGATACCTGGGGC
GATTTGACTCCGCTGCAGGAGAGCTGCCTCATTAGACTTCGCCAGTGGCTCCAGGAGACCCACAAGGGCAAAATT
CCAAAAGATGAGCATATTCTTCGGTTTCTCCGTGCACGGGATTTTAATATTGACAAAGCCAGAGAGATCATGTGT
CAGTCTTTGACGTGGAGAAAGCAGCATCAGGTAGACTACATTCTTGAAACCTGGACCCCTCCTCAGGTCTTTCAG
GATTACTACGCGGGAGGCTGGCATCATCACGACAAAGATGGCGGGCCCCCTCTACGTGCTCAGGCTGGGGCAGATG
GACACCAAAGGCTTGGTGAGAGCGCTCGGGGAGGAAGCCCTGCTGAGATACGTTCTCTCCGTAATGAAGAACGG
CTAAGGCGATGCGAAGAGAATACAAAAGTCTTTGGTCGGCTATCAGCTCATGGACCTGCCTGGTGGACTTGGAA
GGGCTGAACATGCGCCACTTGTGGAGACCTGGTGTGAAAGCGCTGCTGCGGATCATCGAGGTGGTGGAGGCCAAC
TACCCTGAGACACTGGGCCGCCCTTCTCATCTCGGGCGCCAGGGTATTTCTGTGCTCTGGACGCTGGTGTAGT
CCGTTTCATTGATGACAACACCAGAAGGAAGTTCTCATTTATGCAGGAAATGACTACCAGGGTCTTGAGGCCCTG
CTGGATTACATCGACAAAGAGATTATTCAGATTTCTGAGTGGGGAGTGATGTGCGAAGTGCCAGAGGGTGGGA
CTGGTCCCCAAATCTCTGTACCGGACTGCAGAGGAGCTGGAGAACGAAGACCTGAAGCTCTGGACTGAGACCATC
TACCAGTCTGCAAGCGTCTTCAAAGGAGCCCCACATGAGATTCTCATTAGATTGTGGATGCCTCGTCAGTCATC
ACTTGGGATTTTCGACGTGTGCAAAGGGGACATTGTGTTTAACATCTATCACTCCAAGAGGTGCCCCACAACCACC
AAAAAGGACTCCCTGGGAGCCACAGCATCACTCTCCGGGTGGGAACAATGTGCAGCTCATAGACAAAGTCTGG
CAGCTGGGCCGCGACTACAGCATGGTGGAGTCGCCTCTGATCTGCAAAGAAGGAGAAAGCGTGCAGGGTTCCCAT
GTGACCAGGTGGCCGGGCTTCTACATCCTGCAGTGGAAAATCCACAGCATGCCTGCGTGCGCCGCCAGCAGCCTT
CCCCGGGTGGACGACGTGCTTGCGTCCCTGCAGGTCTCTTCGCACAAGTGTAAGTGATGTACTACACCGAGGTG
ATCGGCTCGGAGGATTTAGAGGTTCCATGACGAGCCTGGAGTCCAGCCACAGCGGCTTCTCCCAGCTGAGTGCC
GCCACCACCTCCTCAGCCAGTCCCACTCCAGCTCCATGATCTCCAGTGTGCGCGCTGCCTGCACCTAGTGT
GCAGAGGGGACGGCCGCCCTCCTCGGACAGCAGCTGCACCCGCCACCCAGCGGCGACATTGTACAGACTCCTC
TCACCTCTAGATAGCAAATAGCTCTCAGATGGTAAACGTAGTCGTTTGATCCCAAACCTACCTTGGCAGGTAGTT
TTAACTCTGATCCTAACTTAACTCAATAGCCATAGATTTTGTATACGTTGTGCACAAAATCCAACCAGAGCGCAA
GGGCTCTCTTGAAAGAAAAGTAGTTTCTGTACCAATTAAGGATTGACGTGGTCTCAGATATTGATGCAAAAAAT
TTTTCCAACGAACCTCCGATTGTCCATTAGTGAATGAATTCTGTGACATCCTCCAGAGATGGCCCCCTCCTCACC
TGGGACCGGAAGCTGCCAGCTCGCTTCCCCAAGCTGCCTCATGGCCCGCACGCCGCTCACGGCCCCCATGCTTC
CCGCCAGTCAAGATGGTCTGTGGACTTAGGGCCAGCCCTTGAGGTCTTATCCTCTGAGGATTAGAGGTTGCTT
GCGGAGTACCTTGTCCCAGGGCCAGACACACCCACACCCACTGTCTGCAGTGGGGCCGGGGCTCAGGAGGG
GCTCTCAGGGACTCCTGGTGAATCCAGGAAAATGCTGCCATCGTTAAACATTACTTTCTCTTTCTCTTTTCAA
ATCTTTTTGATACTTTTTAGAGCAGGATTTTTCTGTATGTGAACCTGGGTGGGGGGTCTTCCCGTTTCTTCC
GTGCGTCGCCCCCTCTCACCTGCAGTCAGCTCCCAGCCAGTGTAGGCCATCTCCTCTGTGCCCTCTGGAGGCTCA
TTGTCTCAGAGCCAGACAGTTCCAGCCACTAGGAGGCCGTCTTGAACCAGCAAGTCGCATTTGCCACTTGACA
CTGTCCATGGGGTTTTATTAGTAGCTAAGCAGCAGCTCTCGCATCCACTTCAGGGTGGCGTGTGGCATGTAGGAG
TCTGTCTCTTTGTACATGGGAATTGTGGACTCATGCGTGTGTGTGTGTGCATGTGCTGTGTGTGTGCATGTGTG
CATGACGGTGGGGGTGCTGGGGGGACGGGGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGT

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FIGURE 182B

AAATCAGAATATGGGATTTGTTTGCCTTTTACATTTTGTGTTAATTCCTGATTTTAAAGCCTGCTCTATCTGGTAC
AGGCCCTTATTTTTTTCAGCTTTTTATGGGAAAAGCAGGTTATTTGAGAATCTGTCCAGAAGTTGCATAGGGGATG
GCCTCCACGATAAGGACATGCAACACGTGTTTCTGTGTGCAGCAGAGGCCGTGTTTTTCATGCCAAACCCACGC
GGCTGTCAACTGTGTGCGTGGTAGGCATGGAGATCCTGGTTGTGCCGTCTCAGCTCCGCTCTGAAGGCACTGTGT
GGGTGCTGCGTGACTGGAGAGCTGTGTGGAGGCCATGTGTGCCCCGTGCAGGGATCAGGAGGGCGGGGGAGGGAC
CGAGCAGCCCTCTTGCCCGGTCGGGTACGCCCTAGTGGCTGCCTGCACACTGTAGACGTCCCAGGGCCTGTGCTG
TGATCACCTGCCTTTGGACCACATTTGTGTTTGCTCTTAGAGATCGAGCTCCTCAGTGGTACCTGAAGCCTTTGC
TTCCGGAAAGCGCGGTAGGGTTTCGTAGGTAGGGCTAGTAGGTAGGGTTAGTAGGTAGGGCTAGTAGGTAGGGCTA
GTAGGTAGGGTTAGTAGGTAGGGTTCGTAGGTAGGGCTGGTAGGTAGGGTTAGTAGGTAGGGCTAGTAGGTAGGG
TTCGTAGGTAGGGCTAGTAGGTAGGGTTAGTAGGTAGGGCTAGTAGGTAGGGCTAGTAGGTAGGGTTAGTAGGT
GGGTTTCGTAGGTAGGGCTGGTAGGTAGGGTTAGTAGGTAGGGCTAGTAGGTAGGGTTTCGTAGGTAGGGCTAGTAG
GTAGGGTTAGTAGGTAGGGCTAGTAGGTAGGGCTAGTAGGTAGGGTTAGTAGGTAGGGTTTCGTAGGTAGGGCTGG
TAGGTAGGGTTAGTAGGTAGGGCTAGTAGGTAGGGCTAGTAGGTAGGGCTAGTAGGTAGGGTTAGTAGGTAGGGC
TAGTAGGTAGGGCTAGTAGGTAGGGTTAGTAGGTAGGGTTTCGTAGGTAGGGCTGGTAGGTAGGGTTAGTAGGTAG
GGCTAGTAGGTAGGGCTAGTAGGTAGGGCTAGTAGGTAGGGCTAGTAGGTAGGGCTAGTAGGTAGGGCTAGTAGG
TAGGGCTAGTAGGTAGGGTTTCGTAGGTAGGGTTTCGTAGGTAGGGTTTCGTAGGTAGGGTTAGTAGCGCGTCTGTGC
TGCTTCCACCTGGTGCTTCCTGTTCCCAAATCACAAAGGGCCTGAAGGTGGTCCCTGCTTTCTCTTTCTCTTTCTC
TGTGTCTCAGATGGCGATTTTGCTGACAGCTGCCAAGAAAATGCTTCACTCAACAGTCCTCATGTGCCCAGAGAT
GTTTATAGAAGTGTGTTGAATTGCAGCCATCCCCTGCCCCCTCCCAGGCTGAAGATCTGTTCTTTTTAAGTTGATT
CGGGAGTGGCATTCTTTTATACCCAAAGACTGTAGTGCATCTTGAAGAGCTCAAAGCACATGACCGCACAAATGC
TTACAGGGTTTCTCCCGAGTAATCCAATCTCACTCCCCTTGTAAGGGAATTCTGGGGCAGCTATGGTTTGAGTA
TGCAGTTTGCATCGTGTTTCTACCTTTAGTACCTTGCCACTCTTTTAAAACGCTGCTGTCATTTCCCATTTCTTA
GTACTAATGATTCTTTGATTCTCCCTCTATTATGTCTTAATTCACCTTTCCCTTAAATTTGTTATTTGCATATC
AAATTCGTAAATGTTTTGTAAACATATTACCTCACTTGGTAATACAATACTGATAGTCTTTAAAAGATTTTTTT
ATTGTTATCAATAATAAATGTGAACATTTTAAAG

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FIGURE 183

MVQKYQSPVRVYKYPFELIMAAYERRFPTCPLIPMFVGS DTVSEFKSEDGAIHVIERRCKLDVDAPRLKKIAGV
DYVYFVQKNSLNSRERTLHIEAYNETFSNRVIINEHCCYTVHPENEDWTCFEQSASLDIKSFFGFESTVEKIAMK
QYTSNIKKGKEII EYYLRQLEEEGITFVPRWSPPSITPSSETSSSSSSKKQAASMAVVIPEAALKEGLSGDALSSP
SAPEPVVGTPDDKLDADHIKRYLGDLTPLQESCLIRLRQWLQETHKGKIPKDEHILRFLRARDFNIDKAREIMCQ
SLTWRKQH QVDYILETWTPPQVLQDY YAGGWHHHDKDGRPLYVLRLGQMDTKGLVRALGEEALLRYVLSVNEERL
RRCEENTKVFGRPIS SWTCLVDLEGLNMRHLWRPGVKALLRIIEVVEANYPETLGRL LILRAPRVFPVLWTLVSP
FIDDNTRRKFLIYAGNDYQGPGGLLDYIDKEIIPDFLSGECMCEVPEGGLVPKSLYRTAEEL ENEDLKLWTETIY
QSASVFKGAPHEILI QIVDASSVITWDFDVCKGDIVFNIYHSKRSPQPPKKDSLGAHSITSPGGNNVQLIDK VWQ
LGRDYSMVESPLICKEGESVQGSHVTRWPGFYILQWKFHSM PACAASSLPRVDDVLASLQVSSHCKCKVMYYTEVI
GSEDFRGSMTSLESSHSGFSQLSAATTSSSQSHSSSMISR

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FIGURE 184

AATTCCGCGGAATCATCGGAATCCTTCACCATGGCATCCAGCCCGGCCAGCGTCGGCGAGGCAATGATCCTCTC
ACCTCCAGCCCTGGCCGAAGCTCCCGGGCTACTGATGCCCTCACCTCCAGCCCTGGCCGTGACCTTCCACCATT
GAGGATGAGTCCGAGGGGCTCCTAGGCACAGAGGGGCCCCCTGGAGGAAGAAGAGGATGGAGAGGAGCTCATTGGA
GATGGCATGGAAAGGGACTACCGCGCCATCCAGAGCTGGACGCCATGAGGCCGAGGGACTGGCTCTGGATGAT
GAGGACGTAGAGGAGCTGACGGCCAGTCGAAGGGAGGCAGCAGACGGGCCATGCGGCACGGTGACCGGGAGCTGG
CCGGGGCTGGGCGCATGCGCCGTGGGCTCCTGTATGACAGCGATGAGGAGGACGAGGAGCGCCCTGCCCGCAAGC
GCCGCCAGTGGAGCCGGCACGGAGGACGGCGAGGAGGACGAGCAGATGATTGAGAGCATCGAGAACCCTGGAGGAT
CTCAAAGGCCACTCTGTGCGCGAGTGGGTGAGCATGGCGGGCCCCCGGCTGGAGATCCACCACCGCTTCAAGAAC
TTCTGCGCACTCACGTGACAGCCACGGCCACAACGTCTTCAAGGAGCGCATCAGCGACATGTGCAAAGAGAAC
CGTGAGAGCCTGGTGGTGAACATGAGGACTTGGCAGCCAGGGAGCACGTGCTGGCCTACTTCTGCGCTGAGGCA
CCGGCGGAGCTGCTGCAGATCTTTGATGAGGCTGCCCTGGAGGTGGTACTGGCCATGTACCCCAAGTACGACCGC
ATCACCAACCACATCCATGTCCGCATCTCCACCTGCCTCTGGTGGAGGAGCTGCGCTCGCTGAGGCAGCTGCAT
CTGAACCAGCTGATCCGCACCAGTGGGGTGGTGACCAGCTGCACTGGCGTCTGCCCCAGCTCAGCATGGTCAAG
TACAAC TGCAACAAGTGCAATTTCTGCTCTGGGTCTTTCTGCCAGTCCCAGAACAGGAGGTGAAACCAGGCTCC
TGCTCTGAGTGCCAGTCGGCCGGCCCCCTTTGAGGTCAACATGGAGGAGACCATCTATCAGAACTACCAGCGTATC
CGAATCCAGGAGAGTCCAGGCAAAGTGCGGGCTCGGCGGCTGCCCCGCTCCAAGGACGCCATTCTCCTCGCAGAT
CTGGTGGACAGCTGCAACGCAGGAGACGAGATAGAGCTGACTGGCATCTATCACAACAATATGATGGCTCCCTC
AACACTGCCAATGGCTTCCCTGTCTTTGCCACTGTCTATCCTAGCCAACCACGTGGCCAAGAAGGACAACAAGTT
GCTGTAGGGGAAC TGACCGATGAAGATGTGAAGATGATCACTAGCCTCTCCAAGGATCAGCAGATCGGAGAGAAG
ATCTTTGCCAGCATTGCTCCTTCCATCTATGGTCATGAAGACATCAAGAGAGGCCCTGCTCTGGCCCTGTTTCGGA
GGGAGCCCCAAAAACCCAGGTGGCAAGCACAAGGTACGTGGTGATATCAACGTGCTCTTGTGCGGAGACCCTGGC
ACAGCGAAGTCGCAGTTTCTCAAGTATATTGAGAAAGTGTCAGCCGAGCCATCTTCAACCTGGCCAGGGGGCG
TCGGCTGTGGCCGTACCGCGTATGTCCAGCGGCACCCTGTGTCAGCAGGGAGTGGACCTTGGAGGCTGGGGCCCTG
GTTCTGGCTGACCGAGGAGTGTGTCTCATTGATGAATTTGACAAGATGAATGACCAGGACAGAACCAGCATCCAT
GAGGCCATGGAGCAACAGAGCATCTCCATCTCGAAGGCTGGCATCGTCACTCCCTGCAGGCTCGCTGCACGGTC
ATTGCTGCCGCCAACCCCATAGGAGGGCGCTACGACCCCTCGCTGACTTTCTCTGAGAACGTGGACCTCACAGAG
CCCATCATCTCACGCTTTGACATCCTGTGTGTGGTGAGGGACACCGTGGACCCAGTCCAGGACGAGATGCTGGCC
CGCTTCGTGGTGGGCGACCCAGTCAGACACCACCCAGCAACAAGGAGGAGGAGGGGCTGGCCAATGGCAGCGCT
GCTGAGCCCGCCATGCCCAACACGTATGGCGTGGAGCCCCTGCCCCAGGAGGTCTTGAAGAAGTACATCATCTAC
GCCAAGGAGAGGGTCCACCCGAAGCTCAACCAGATGGACCAGGACAAGGTGGCCAAGATGTACAGTGACCTGAGG
AAAGAATCTATGGCGACAGGCAGCATCCCCATTACGGTGCGGCACATCGAGTCCATGAGTCATGGCGGAGGCCCA
CGCGCGCATCCATCTGCGGGACTATGTGATCGAAGACGACGTCAACATGGCCATCCGCGTGATGCTGGAGAGCTT
CATAGACACACAGAAGTTCAGCGTCATCGCAGCATGCGCAAGACTTTTGCCCGCTACCTTTTATTCCGGCGTGAC
AACAATGAGCTGTTGCTCTTCATACTGAAGCAGTTAGTGGCAGAGCAGGTGACATATCAGCGCAACCGCTTTGGG
GCCCAGCAGGACACTATTGAGGTCCCTGAGAAGGACTTGGTGGATAAGGCTCGTCAGATCAACATCCACAACCTC
TCTGCATTTTATGACAGTGAGCTCTTCAGGATGAACAAGTTCAGCCACGACCTGAAAAGGAAAATGATCCTGCAG
CAGTTCTGAGGCCCTATGCCATCCATAAGGATTCTTGGGATTCTGGTTTGGGGTGGTCAGTGCCCTCTGTGCTT
TATGGACACAAAAACAGAGCACTTGATGAACTCGGGGTACTAGGGTCAGGGCTTATAGCAGSATGTCTGGCTGCA
CCTGGCATGACTGTTTGTCTTCCAAGCCTGCTTTGTGCTTCTCACCTTTGGGTGGGATGCCTTGCCAGTGTGTC
TTACTTGGTTGCTGAACATCTTGCCACCTCCGAGTGCTTTGTCTCCACTCAGTACCTTGGATCAGAGCTGCTGAG
TTCAGGATGCCTGCGTGTGGTTTAGGTGTTAGCCTTCTTACATGGATGTCAGGAGAGCTGCTGCCCTCTTGGCGT
GAGTTGCGTATTACAGGCTGCTTTTGCTCGCTTTGGCCAGAGAGCTGGTTGAAGATGTTTGTAAATCGTTTTTCAGTC
TCCTGCAGGTTTCTGTGCCCTGTGGTGGAAAGAGGCACGACAGTGCCAGCGCAGCGTTCTGGGCTCCTCAGTCGC
AGGGGTGGGATGTGAGTCATGCGGATTATCCACTCGCCACAGTTATCAGCTGCCATTGCTCCCTGTCTGTTTCCC
CACTCTCTTATTGTGCATTCCGTTTGGTTTCTGTAGTTTTAATTTTAAATAAAGTTGAATAAAATATAAAAAA
AAAA

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FIGURE 185

MASSPAQRRRGNDPLTSSPGRSSRRTDALTSSPGRDLPPFEDESEGLLGTEGPLEEEEDGEELIGDGMERDYRAI
PELDAYEAEGALDDEDVEELTASRREAADGPCGTVTGSWPGLGACAVGSCMTAMRRTRSALPASAASGAGTEDG
EEDEQMIESIENLEDLKGHSVREWVSMAGPRLEIHHRFKNFLRTHVDSHGHNVFKERISDMCKENRESLVVNYED
LAAREHVLAYFLPEAPAEELLQIFDEAALEVVLAMYPKYDRITNHIHVRI SHLPLVEELRSLRQLHLNQLIRTSGV
VTSTGVLPQLSMVKYNCNKCNEVLGPFQSQSQNEVKPGSCPECQSAGPFVNMEETIYQNYQRIRIQESPGKVA
ARRLPKSKDAILLADLVDSCNAGDEIELTGIYHNNYDGSNTANGFPVFATVILANHVAKKDNKVAVGELTDEDV
KMITSLSKDQQIGEKIFASIAPSIYGHEDIKRGPALALFGGEPKNPGGKHKVRGDINVLLCGDPGTAKSQFLKYI
EKVSSRAIFTTGQASAVAVTAYVQRHPVSREWLEAGALVLADRGVCLIDEFDKMNDQDRTSIHEAMEQQSISI
SKAGIVTSLQARCTVIAAANPIGGRYDPSLTFSENVDLTEPIISRFDILCVVRDTPVQDEMLARFVVGSHVRH
HPSNKEEEGLANGSAAEPAMPNTYGVEPLPQEVLLKYYIYAKERVHPKLNQMDQDKVAKMYSDLRKESMATGSIP
ITVRHIESMSHGGGPRAHPSAGLCDRRRRQHGHPRDAGELHRHTEVQRHRSMRKTFFARYLSFRDNNELLFFILK
QLVAEQVTYQRNRFGAQQDTIEVPEKDLVDKARQINIHNLFAFYDSELFMRMKNF SHDLKRKMILOQF

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FIGURE 186A

TGAATTCGTGAGAGACTTGAGGGAGGCGCTGCGACTGACAAGCGGCTCTGCCCGGGACCTTCTCGCTTTCATCTA
GCGCTGCACTCAATGGAGGGGCGGGCACCGCAGTGCTTAATGCTGTCTTAACTAGTGTAGGAAAACGGCTCAACC
CACCGCTGCCGAAATGAAGTATAAGAATCTTATGGCAAGGGCCTTATATGACAATGTCCAGAGTGTGCCGAGGA
ACTGGCCTTTCGCAAGGGAGACATCCTGACCGTCATAGAGCAGAACACAGGGGGACTGGAAGGATGGTGGCTGTG
CTCGTTACACGGTCGGCAAGGCATTGTCCCAGGCAACCGGGTGAAGCTTCTGATTGGTCCCATGCAGGAGACTGC
CTCCAGTCACGAGCAGCCTGCCTCTGGACTGATGCAGCAGACCTTTGGCCAACAGAAGCTCTATCAAGTGCCAAA
CCCACAGGCTGCTCCCCGAGACACCATCTACCAAGTGCCACCTTCCTACCAAATCAGGGAATTTACCAAGTCCC
CACTGGCCACGGCACCCAAGAACAAGAGGTATATCAGGTGCCACCATCAGTGCAGAGAAGCATTGGGGGAACCGAG
TGGGCCCCACGTGGGTAAAAAGGTGATAACCCCCGTGAGGACAGGCCATGGCTACGTATACGAGTACCCATCCAG
ATACCAAAGGATGTCTATGATATCCCTCCTTCTCATACCCTCAAGGGGTATACGACATCCCTCCCTCATCAGC
AAAAGGCCCTGTGTTTTTCAAGTTCAGTGGGAGAGATAAAACCTCAAGGGGTGTATGACATCCCGCCTACAAAAGG
GGTATATGCCATTCCGCCCTCTGCTTGCCGGGATGAAGCAGGGCTTAGGGAAAAAGACTATGACTTCCCCCTCC
CATGAGACAAGCTGGAAGGCCGGACCTCAGACCGGAGGGGTTTATGACATTCTCCAACCTGCACCAAGCCAGC
AGGGAAGGACCTTCATGTAAATACAACCTGTGACATTCCAGGAGCTGCAGAACCGGTGGCTCGAAGGCACCAGAG
CCTGTCCCCGAATCACCCACCCCGCAACTCGGACAGTCAGTGGGCTCTCAGAACGACGCATATGATGTCCCCG
AGGCGTTCAGTTTCTTGAGCCACCAGCAGAAACAGTGAGAAAGCAAACCCCAAGAAAGGGATGGTGTATTATGA
TGTCCCTCTGCATAACCCGCCAGATGCTAAAGGCTCTCGGGACTTGGTGGATGGGATCAACCGATTGTCTTCTC
CAGTACAGGCAGCACCCGGAGTAACATGTCCACGTCTTCCACCTCTCCAAGGAGTCTCACTGTACGCTCCCC
AGCTCAGGACAAAAGGCTCTTCTTGATCCAGACACAGCTATTGAGAGACTTCAGCGGCTCCAGCAGGCCCTTGA
GATGGGTGTCTCCAGCCTAATGGCACTGGTCACTACCGACTGGCGGTGTACGGATATATGGAAAGACACATCAA
TGAAATACGCACAGCAGTGGACAAGGTGGAGCTGTTCTGAAGGAGTACCTCCACTTTGTCAAGGGAGCTGTTGC
AAATGCTGCCTGCCTCCCGGAACCTCATCCTCCACAACAAGATGAAGCGGGAGCTGCAACGAGTCAAGACTCCCA
CCAGATCCTGAGTCAAACCAGCCATGACTTAAATGAGTGCAGCTGGTCCCTGAATATCTTGGCCATCAACAAGCC
CCAGAACAAGTGTGACGATCTGGACCGGTTTGTGATGGTGGCAAAGACGGTGCCCGATGACGCCAAGCAGCTCAC
CACAACCATCAACACCAACGCAGAGGCCCTCTTCAGACCCGGCCCTGGCAGCTTGCATCTGAAGAATGGGCCGGA
GAGCATCATGAACTCAACGGAGTACCCACACGGTGGCTCCAGGGACAGCTGCTGCATCCTGGTGACCACAAGGC
CCAGGCCCAACAAGGCACTGCCCCAGGCCTGAGCAAGGAGCAGGCCCTGACTGTAGCAGCAGTGATGGTTC
TGAGAGGAGCTGGATGGATGACTACGATTACGTCCACCTACAGGGTAAGGAGGAGTTTGAGAGGCAACAGAAAGA
GCTATTGGAAAAAGAGAATATCATGAAACAGAACAAGATGCAGCTGGAACATCATCAGCTGAGCCAGTTCCAGCT
GTTGGAACAAGAGATTACAAAGCCCGTGGAGAATGACATCTCGAAGTGGAAGCCCTCTCAGAGCCTACCCACCAC
AAACAGTGGCGTGAGTGCTCAGGATCGGCAGTTGCTGTGCTTCTACTATGACCAATGTGAGACCCATTTTCAATTC
CCTTCTCAACGCCATTGACGCCTCTTCAGTTGTGTGCTCAGCTCAGCCAGCCCCCGCAATCTTCGTGGCACACAG
CAAGTTTGTATCCTCAGTGCACACAACTGGTGTTCATTGGAGACACGCTGACACGGCAGGTGACTGCCAGGA
CATTTCGCAACAAAGTCATGAACTCCAGCAACCAGCTCTGCGAGCAGCTCAAGACTATAGTCATGGCAACCAAGAT
GGCCGCCCTCCATTACCCAGCACCACGGCCCTGCAGGAAATGGTGCACCAAGTGACAGACCTTTCTAGAAATGC
CCAGCTGTTCAAGCGCTCTTTGCTGGAGATGGCAACGTTCTGAGAAGAAAAAAGAGGAAGGGGACTGCGTTAA
CGGTTACTAAGGAAAACTGGAATACTGTCTGGTTTTTGTAAATGTTATCTATTTTTGTAGATAATTTTATATAA
AAATGAAATATTTTAACATTTTATGGGTACAGCAACTTTAGAAATTCAGGGAGCTGGAGAGGGAAATCTTTTTT
TCCCCCTGAGTGTTCTTATGTATACAGAAAGTATCTGAGACATAAACTGTACAGAAAACCTTGTCCACGTCCTT
TTGTATGCCCATGTATTCATGTTTTTGTGTGTAGATGTTTGTCTGATGCATTTCAATAAAAAACCATGAAT
TACGAAGCACCTTAGTAAGCACCTTCTAATGCTGCATTTTTTTTGTGTGTTGTTAAAAACATCCAGCTGGTTATAA
TATTGTTCTCCACGTCCTTGTGATGATTCTGAGCCTGGCACTGGGAATCTGGGAAGCATAGTTTATTTGCAAGTG
TTCACCTTCAAATCATGAGGCATAGCATGACTTATTCTTGTGTTTGAAGAACTCTTTCAAAGTACCATCTTAA
ACACATGATGGCCAAGTGCCACAAAGCCCTCTTGCGGAGACATTTACGAATATATATGTGGATCCAAGTCTCGAT
AGTTAGGCGTTGGAGGGAAGAGAGACCAGAGAGTTTAGAGGCCAGGACCACAGTTAGGATTGGGTTGTTTCAATA
CTGAGAGACAGCTACAATAAAAGGAGAGCAATTGCCTCCCTGGGGCTGTTCAATCTTCTGCATTTGTGAGTGGTT
CAGTCATGAGGTTTTTCCAAAAGATGTTTTTAGAGTTGTAAAACCATATTTGCAGCAAAGATTTACAAAGGCGTA
TCAGACTATGATTGTTACCAAAAATAGGGGAATGTTTTGATCCGCCAGTTGCAAGTAGAGGCCTTTCTGACTCTT

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FIGURE 186B

AATATTCACTTTGGTGCTACTACCCCCATTACCTGAGGAACTGGCCAGGTCCTTGATCATGGAACTATAGAGCTA
CCAGACATATCCTGCTCTCTAAGGGAATTTATTGCTATCTTGACCTTCTTTAAAACTCAAAAAACATATGCAGA
CCTGACACTCAAGAGTGGCTAGCTACACAGAGTCCATCTAATTTTGGCAACTTCCCCCCCCGAATTC

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FIGURE 187

MKYKNLMARALYDNVPECAEELAFRKGDI LTVIEQNTGGLEGWWLCSLHGRQGIVPGNRVKLLIGPMQETASSHE
QPASGLMQQTFGQQKLYQVPNPQAAPRDTIYQVPPSYQNQGIYQVPTGHGTQEQEVYQVPPSVQRSIGGTSGPHV
GKKVITPVRTGHGYVYEYPSRYQKDVYDIPPSHTTQGVYDIPPSAKGPVFSVPVGEIKPQGVYDIPPTKGVYAI
PPSACRDEAGLREKDYDFPPPMRQAGRPDLRPEGVYDIPPTCTKPAGKDLHVKNCDIPGAAEPVARRHQSLSPN
HPPFQLGQSVGSQNDAYDVPRGVQFLEPPAETSEKANPQERDGVYDVPLHNPPDAKGSRDLDGINRLSFSSTGS
TRSNMSTSSSTSSKESLSASPAQDKRLFLDPDTAIERLQRLQQALEMGVSSLMALVTTDWRCYGYMERHINEIRT
AVDKVELFLKEYLHFVKGAVANAACLP ELILHNKMKRELQ RVEDSHQILSQTS HDLNECSWSL NILAINKPQNK C
DDLDRFVMVAKTVPDDAKQLTTTINTNAEALFRPGPSLHLKNGPESIMNSTEYPHGGSQGQLLHPGDHKAQAHN
KALPPGLSKEQAPDCSSSDGSEERSWMDDYDYVHLQGKEEFERQQKELLEKENIMKQNMQLEHHQLSQFQLEQE
ITKPVENDISKWKPSQSLPTTNSGVSAQDRQLLCFYDQCETHFISLLNAIDALFSCVSSAQPPRIFVAHSKFVI
LSAHLVFIGDTLTRQVTAQDIRNKVMNSSNQLCEQLKTIVMATKMAALHYPSTTALQEMVHQVTDLSRNAQLFK
RSLLEMATF

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FIGURE 188

CGCAGGGACCGTGCTCCGCCGTCTCCGCCGCATCTTCCACCCTCGCCGCCGCCGAGCTCCCCGCGCTCGTGCCA
CCGCCGCCCGCTCCACCCTCAGCGCCACCGCCATGCGGGAGATCGTGACCTGCAGGCCGCCAGTGCGGCAACC
AGATCGGGGCCAAGTTTTGGGAGGTTATCAGTGACGAACATGGCATCGACCCACAGGCACATACCATGGGGACA
GTGACCTGCAACTGGAGAGGATCAACGTGTACTACAACGAGGCCACAGGAGGAAATTATGTCCCCAGAGCGGTGC
TGGTGGACCTGGAACCCGGCACCATGGACTCTGTCCGTTCTGGCCCTTCGGTCAGATCTTTCGGCCGGACAACT
TCGTGTTTTGGCCAATCCGGAGCCGGCAACAACCTGGGCAAAGGGGCACTACACGGAGGGCGCAGAGCTGGTGGACG
CTGTCTGGACGTAGTCCGGAAGGAGGCCGAGAGCTGCGACTGCCTTCAGGGCTTCCAGCTGACCCACTCGCTGG
GGGTGGCACGGGGTCCGGAATGGGCACGCTGCTCATCAGTAAGATCCGCGAGGAGTCCCAGACCGCATCATGA
ACACCTTCAGCGTGGTGCCCTCGCCCAAAGTGTCAGACACGGTGGTGGAGCCCTACAACGCCACGCTGTCTGTGC
ACCAGCTGGTGGAGAATACGGATGAGACCTACTGCATCGACAACGAGGCACTCTACGACATCTGTTTCCGCAACC
TCAAGCTGACCACCCCCACCTACGGGGACCTCAACCACCTGGTGTGCGCCACCATGAGCGGGGTACCACCTGCC
TGCGCTTCCGGGCCAGCTGAACGCCGACCTGCGCAAGCTGGCCGTCAACATGGTTCCCTTTCCTCGCCTGCACT
TCTTCATGCCCCGCTTCGCACCCCTGACCAGCCGGGGCAGCCAGCAGTACCGGGCCCTGACGGTGCCCCGAGCTCA
CCCAGCAGATGTTTCGATGCCAAGAACATGATGGCGGCGTGCGACCCGCGCCACGGCCGCTACCTGACCGTGGCCG
CCGTGTTCCGGGGCCGCATGTCCATGAAGGAGGTGGACGAGCAGATGCTGAGCGTGCAGAGCAAGAACAGCAGCT
ACTTCGTGGAGTGGATCCCCAACAACGTGAAGACGGCCGTGTGCGACATCCCGCCCCGCGGCCTGAAGATGGCCG
CGACCTTCATCGGCAACAGCACGGCCATCCAGGAGCTGTTCAAGCGCATCTCCGAGCAGTTCACGGCCATGTTCC
GGCGCAAGGCCTTCTTGCACTGGTACACGGGCGAGGGCATGGACGAGATGGAGTTCACCGAGGCCGAGAGCAACA
TGAATGACCTGGTATCTGAGTACCAGCAGTACCAGGACGCCACGGCCGAGGAGGGCGAGTTCGAGGAGGAGGCGG
AGGAGGAGGTGGCCTAGGCTGCTCCCATCGCTTCCCACCTGTCCCCTCGAGGCTTCTGACCTTTGATCCGCTAGG
CCCCCATCTCTGAACCCTAGAGCCCCGCTTTCCCTCCAAGGCTGACTCCCCGCTGACCCTAACAATACCTTTGG
AGCTCGCTTTACCTCTGGCTACTTCATCTCCGACCCTGGCTCCCCCTTTGAGCCCTAATTTATCTTTAACCCCTT
GAGCTCTTCCAACCTTGACATTCCCAGGAGGAGCCCCGCTTCAACCCCTTCTGACTCTGGAAACCGCACCTTTAAC
TTTGACAGACCTTCCTTCACCCCTGACTTCTGCTTACCTTTGACCTCTGCCCCCATGAATCCCATTTTACCTCT
AGACCTATAAGTTCTGGTTTATGTTTGACCCCTCCCTCTGAGCTGCACTTCACCGCTGACCTTGCTCACCTTTA
ACCCCCACCTGAGCCCCAGCTCCTACCTCTGACCCCACTTCTCTTTGATCTCTGAATCCCCTCTGACTCCAAC
TTCTCTTTCACCTCTATGAGTCCCATTTTACTTCTACACCTGCAAGTCCTGGTTTATATTGGACCCCTCCCTCC
GAGCTGCAGTTCACCTTTGACCTTGCTCACCTTTACCCCCACCCCCACAGCGTCAGCTCCTACCTCTGACC
CCAGCTTCTCTCTGATTCCCACAGGCCCATGCATCTCCCTGCCTCACTCCCCTCAGCCCTGCCGACCTTAGC
TTATCTGGGAGAGAAACAAGGCCTGGTGCCTGTGAGGAAGAGAGGTACCCCTACCCTCCCTCCCCGCTTCCCTG
CCTACCCCTCAATAAATAAATTAATTGTTGTTCATGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 189

MREIVHLQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGSDQLQLERINVYYNEATGGNYVPRAVLVDLEPGTMDS
VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDAVL DVVRKEAESCDCLQGFQLTHSLGGTGSGMGT
LISKIREEFDPDRIMNTFSVVPSPKVSDTVVEPYNATLSVHQLVENTDETYCIDNEALYDICFRTLKLTPTYGDL
NHLVSATMSGVTTCLRFPQQLNADLRKLAVNMVFPRLHFFMPGFAPLTSRGSQQYRALTVPELTQQMFDAKNMM
AACDPRHGRYLTVA AVFRGRMSMKEVDEQMLSVQSKNSSYFVEWIPNNVKTAVCDIPPRGLKMAATFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVSEYQQYQDATAEEGEFEEEEEEVA

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FIGURE 190

GGCACGAGGGAGAACTAGTCTCGATTTTTTTTTTTTTTTTTTTCTTTGTTTTGTTTTCTGTATAAAAAAGGAC
CCCAAATATAAAGGTAGGGAAAGGGACAAGAGGGAACATACCCCTTAGTGTAGAGAAATGGGAAGGAGAAGGAGA
AGCCTCAAAAGGAGAGGTGGGAGGGGAATGTCATTAAGGCAGCAAAGTAATCTCTGTAGAAAGATGGAGGAGGAC
CCTCCATAGCCTCAGAGATAAAGGCAAAGATTGCCCTCTCAGTGTCCAGAAGGGAAATGGCAGCTTTTCTTCCTT
CCATGGCAGCCACTCCATTGCTCACTCCGGATTACCTTCATCCTTATGTAGATAAGAGTGCTGCAGAGCTCGAAA
GGCAGAGATTGCTTGTGTGGGTAAAGTCAGCATTTCAGCAGCAGCTGTGCTCCCGACTCCTCCATCTCAGG
TACCACCGACTGCACTGGGCGGGGCCCTCTGGGGGGAAAGGCTCCACGGGGCAGGGATACATCTCGAGGCCAGTC
ATCCTCTGGAGGCAGCCCAATCAGGTCAAAGATTTGCCCAACTGGTCGGCTTCAGAGTTTCCACAGAAGAGAGG
CTTTCGACGAAACATCTCTGCAAAGATACAGCCAACACTCCACATGTCCACAGGTGTTGCATATGTGGACTGCAG
AAGAACTTCGGGAGCTCGGTACCAGAGTGTAACAACCACGGGTGTAAGTGCCATCTGGTAGCTGTAGATTCTGGC
CAGGCCAAAGTCAGCCAGCTTGACTGTTCCACCACTTGTCCACAGAATGTTCTCTGGCTTCAGATCTCGGTGAAC
GATGCAATTGGCATGAAGGAAATCTAGGCCTCTTAGAAACTGGCGCATCAGATCCTTGATCGTTTCGGCTGGCAA
GCCTGGTGGGGTGCCTTGTCCAGATATGTCTTAGGTCTGGTCTACATGCTCAAACACCAGGGTTACCTTGAT
CTCCCGGTCAGTTCGGGATGTGGCACAGACGTCCATCAGCCGGACAACATTGGGATGCTCAAAAGCCTCCAGTCG
CCTCAGTAAAGCCACCTCACGAAGTGTGCTGATGGGAAGGCCTCCTCCACCTCCTCCTCATTGGGGACTCTCAC
ACTCTTGAGGGCCACAAAGTGGCCACTGTGGGGATCACGGGCCTTGTACACTGTCCCATAGGCACCGACACCAAT
TTCAGCCACTGGCTCATATCGAGAGGTAGCCATTCTCAGATCAAGGGAGACCCTCACGCCAGCCCGGGGTGCTGT
GGGGGCGGCCCGTTATCGGGCCCCGGAGCCGGTTCTACGGCCCCATACACCCGAGCTCGGTCCGGAGCAG

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FIGURE 191

MSTGVAYVDCRRTSGARYQSVTTTGVSAIW

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FIGURE 192

AGCTGAGGTGTGAGCAGCTGCCGAAGTCAGTTCTTGTGGAGCCGGAGCTGGGCGCGGATTGCGCCGAGGCACCGA
GGCACTCAGAGGAGGTGAGAGAGCGGCGGCAGACAACAGGGGACCCCGGGCCGCGGCCAGAGCCGAGCCAAGC
GTGCCCCGCGTGTGTCCCTGCGTGTCCGCGAGGATGCGTGTTGCGGGGTGTGTGCTGCGTTACAGGTGTTTCTGC
GGCAGGCGCCATGTCAGAACC GGCTGGGGATGTCCGTCAGAACCCATGCGGCAGCAAGGCCTGCCGCCGCCTCTT
CGGCCCAGTGGACAGCGAGCAGCTGAGCCGCGACTGTGATGCGCTAATGGCGGGCTGCATCCAGGAGGCCCGTGA
GCGATGGAACCTTCGACTTTGTACCCGAGACACCACTGGAGGGTGACTTCGCCTGGGAGCGTGTGCGGGGCCTTGG
CCTGCCCAAGCTCTACCTTCCACGGGGCCCCGGCGAGGCCGGGATGAGTTGGGAGGAGGCAGGCGGCCTGGCAC
CTCACCTGCTCTGCTGCAGGGGACAGCAGAGGAAGACCATGTGGACCTGTCACTGTCTTGTACCCTTGTGCCTCG
CTCAGGGGAGCAGGCTGAAGGGTCCCCAGGTGGACCTGGAGACTCTCAGGGTCGAAAACGGCGGCAGACCAGCAT
GACAGATTTCTACCACTCCAAACGCCGGCTGATCTTCTCCAAGAGGAAGCCCTTAATCCGCCACAGGAAGCCTGC
AGTCTTGAAGCGCGAGGGCCCTCAAAGGCCCGCTCTACATCTTCTGCCCTTAGTCTCAGTTTGTGTGTCTTAATTA
TTATTTGTGTTTTAATTTAAACACCTCCTCATGTACATAACCTGGCCGCCCCCTGCCCCCCAGCCTCTGGCATTGA
GAATTATTTAAACAAAAACTAGGCGGTTGAATGAGAGGTTCTTAAGAGTGCTGGGCATTTTTATTTTATGAAATA
CTATTTAAAGCCTCCTCATCCCGTGTTCTCCTTTTCTCTCTCCCGGAGGTTGGGTGGGCCGGCTTCATGCCAGC
TACTTCTCTCTCCCACTTGTCCGCTGGGTGGTACCCTCTGGAGGGGTGTGGCTCCTTCCCATCGCTGTACAGG
CGGTTATGAAATTCACCCCTTTTCTGGACACTCAGACCTGAATTCTTTTTCATTTGAGAAGTAAACAGATGGCA
CTTTGAAGGGGCCCTCACCGAGTGGGGGCATCATCAAAAACCTTTGGAGTCCCTCACCTCCTTAAGGTTGGGCAG
GGTGACCTGAAGTGAGCACAGCCTAGGGCTGAGCTGGGGACCTGGTACCCTCCTGGCTCTTGATACCCCCTCT
GTCTTGTGAAGGCAGGGGGAAGGTGGGGTCTGGAGCAGACCACCCGCTGCCCTCATGGCCCTCTGACCTGC
ACTGGGGAGCCCGTCTCAGTGTTGAGCCTTTTCCCTCTTTGGCTCCCTGTACCTTTTGAGGAGCCCCAGCTACC
CTTCTTCTCCAGCTGGGCTCTGCAATTCCCCTCTGCTGCTGTCCCTCCCCCTTGTCTTTCCCTTCAGTACCCTC
TCAGCTCCAGGTGGCTCTGAGGTGCCTGTCCCACCCCAACCCCACTCAATGGACTGGAAGGGGAAGGGACACA
CAAGAAGAAGGGCACCCCTAGTTCTACCTCAGGCAGCTCAAGCAGCGACCGCCCCCTCCTCTAGCTGTGGGGTGA
GGGTCCCATGTGGTGGCACAGGCCCTTGGAGTGGGGTTATCTCTGTGTTAGGGGTATATGATGGGGGAGTAGAT
CTTTCTAGGAGGGAGACACTGGCCCTCAAATCGTCCAGCGACCTTCTCATCCACCCCATCCCTCCCCAGTTCA
TTGCACTTTGATTAGCAGCGGAACAAGGAGTCAGACATTTTAAGATGGTGGCAGTAGAGGCTATGGACAGGGCAT
GCCACGTGGGCTCATATGGGGCTGGGAGTAGTTGTCTTTTCTGGCACTAACGTTGAGCCCCTGGAGGCACTGAAG
TGCTTAGTGTACTTGGAGTATTGGGGTCTGACCCCAAACACCTTCCAGCTCCTGTAACTACTGGCCTGGACTGT
TTTCTCTCGGCTCCCCATGTGTCTTGGTTCCCGTTTCTCCACCTAGACTGTAAACCTCTCGAGGGCAGGGACCAC
ACCCTGTACTGTTCTGTGTCTTTCACAGCTCCTCCACAATGCTGAATATACAGCAGGTGCTCAATAAATGATTCT
TTAGTGACTTTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 193

MSEPAGDVQRNPGSKACRRLFGPVDSEQLSRDCDALMAGCIQEARERWNFDFVTETPLEGDFAWERVRLGLPK
LYLPTGPRRGRDELGGGRRPGTSPALLQGTAEEDHVDLSLSCTLVPRSGEQAEGSPGGPGDSQGRKRRQTSMTDF'
YHSKRRLIFSKRKP

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FIGURE 194

GTGGAACCTCGATATTGGTGGTGTCCATCGTGGGCAGCGGACTAATAAAGGCC**ATGGCGCC**CAGCAGAAATCCTGA
ACGGGAAGGAGATCTCCGCGCAAATAAGGGCGAGACTGAAAAATCAAGTCACTCAGTTGAAGGAGCAAGTACCTG
GTTTCACACCACGCCTGGCAATATTACAGGTTGGCAACAGAGATGATTCCAATCTTTATATAAATGTGAAGCTGA
AGGCTGCTGAAGAGATTGGGATCAAAGCCACTCACATTAAGTTACCAAGAACAACCACAGAATCTGAGGTGATGA
AGTACATTACATCTTTGAATGAAGACTCTACTGTACATGGGTTCTTAGTGCAGCTACCTTTAGATTTCAGAGAATT
CCATTAACTGAAGAAGTGATCAATGCTATTGCACCCGAGAAGGATGTGGATGGATTGACTAGCATCAATGCTG
GGAGACTTGCTAGAGGTGACCTCAATGACTGTTTCATTCTTGTACGCCTAAGGGATGCTTGGAACTCATCAAAG
AGACAGGGGTGCCGATTGCCGGAAGGCATGCTGTGGTGGTGGGCGCAGTAAAATAGTTGGGGCCCCGATGCATG
ACTTGCTTCTGTGGAACAATGCCACAGTGACCACCTGCCACTCCAAGACTGCCCATCTGGATGAGGAGGTAAATA
AAGGTGACATCCTGGTGGTTGCAACTGGTCAGCCTGAAATGGTTAAAGGGGAGTGGATCAAACCTGGGGCAATAG
TCATCGACTGTGGAATCAATTATGTCCAGATGATAAAAAACCAAATGGGAGAAAAGTTGTGGGTGATGTGGCAT
ACGACGAGGCCAAAGAGAGGGCGAGCTTCATCACTCCTGTTCTTGGCGCGTAGGGCCCATGACAGTTGCAATGC
TCATGCAGAGCACAGTAGAGAGTGCCAAGCGTTTCTTGAGAAAATTAAGCCAGGAAAGTGGATGATTCAGTATA
ACAACCTTAACCTCAAGACACCTGTTCCAAGTGACATTGATATATCACGATCTTGTAACCGAAGCCCATTGGTA
AGCTGGCTCGAGAAATTGGTCTGCTGTCTGAAGAGGTAGAATTATATGGTGAACAAAGGCCAAAGTTCTGCTGT
CAGCACTAGAACGCCTGAAGCACCGGCCTGATGGGAAATACGTGGTGGTGACTGGAATAACTCCAACACCCCTGG
GAGAAGGGAAAAGCACAACTACAATCGGGCTAGTGCAAGCCCTTGGTGCCCATCTCTACCAGAATGTCTTTGCGT
GTGTGCGACAGCCTTCTCAGGGCCCCACCTTTGGAATAAAAGGTGGCGCTGCAGGAGGCGGCTACTCCCAGGTCA
TTCCTATGGAAGAGTTTAATCTCCACCTCACAGGTGACATCCATGCCATCACTGCAGCTAATAACCTCGTTGCTG
CGGCCATTGATGCTCGGATATTTTCATGAACTGACCCAGACAGACAAGGCTCTCTTTAATCGTTTGGTGCCATCAG
TAAATGGAGTGAGAAGGTTCTCTGACATCCAAATCCGAAGGTTAAAGAGACTAGGCATTGAAAAGACTGACCCTA
CCACACTGACAGATGAAGAGATAAACAGATTTGCAAGATTGGACATTGATCCAGAAACCATAACTTGGCAAAGAG
TGTTGGATACCAATGATAGATTCTCTGAGGAAGATCACGATTGGACAGGCTCCAACGGAGAAGGGTCACACACGGA
CGGCCCAGTTTGATATCTCTGTGGCCAGTGAAATTATGGCTGTCTTGGCTCTCACCACCTTCTCTAGAAGACATGA
GAGAGAGACTGGGCAAAATGGTGGTGGCATCCAGTAAGAAAGGAGAGCCCGTCAGTGCCGAAGATCTGGGGGTGA
GTGGTGCACCTGACAGTGCTTATGAAGGACGCAATCAAGCCCAATCTCATGCAGACACTGGAGGGCACTCCAGTGT
TTGTCCATGCTGGCCCCGTTTGCCAACATCGCACATGGCAATTCTCTCATATTGCAGACCAGATCGCACTCAAGC
TTGTTGGCCCAGAAGGGTTTGTAGTGACGGAAGCAGGATTGGAGCAGACATTGGAATGGAAAAGTTTTTTAACA
TCAAATGCCGGTATTCCGGCCCTCTGCCCCACGTGGTGGTGTCTTGTGCCACTGTCTAGGGCTCTCAAGATGCACG
GGGGCGGCCCCACGGTCACTGCTGGACTGCCTCTTCCCAAGGCTTACATACAGGAGAACCTGGAGCTGGTTGAAA
AAGGCTTCAGTAACCTGAAGAAACAAATTGAAAATGCCAGAATGTTTGGAATTCAGTAGTAGTGCCGTGAATG
CATTCAAGACGGATACAGAGTCTGAGCTGGACCTCATCAGCCGCCTTTCCAGAGAACATGGGGCTTTTGATGCCG
TGAAGTGCACCTCACTGGGCAGAAGGGGGCAAGGGTGCTTAGCCCTGGCTCAGGCCGTCCAGAGAGCAGCACAAAG
CAGGAGCAGCTTCCAGCTCCTTTATGACCTCAAGCTCCAGTTGAGGATAAAATCAGGATCATTGCACAGAAGA
TCTATGGAGCAGATGACATTGAATTACTTCCCGAAGCTCAACACAAAGCTGAAGTCTACACGAAGCAGGGCTTTG
GGAATCTCCCCATCTGCATGGCTAAAACACACTTGTCTTTGTCTCACAACCCAGAGCAAAAAGGTGTCCCTACAG
GCTTCATTCTGCCATTTCGCGACATCCGCGCCAGCGTTGGGGCTGGTTTTCTGTACCCCTTAGTAGGAACGATGA
GCACAATGCCTGGACTCCCCACCGGCCCTGTTTTATGATATTGATTGGACCCTGAAACAGAACAGGTGAATG
GATTATTC**TAAAC**AGATCACCATCCATCTTCAAGAAGCTACTTTGAAAGTCTGGCCAGTGTCTATTTCAGGCCCCAC
TGGGAGTTAGGAAGTATAAGTAAGCCAAGAGAAGTCAGCCCCTGCCAGAAAGATCTGAAACTAATAGTAGGAGTT
TCCCCAGAAGTCATTTTACGCTTAATTCTCATCATGTATAAATTAACATAAATCATGCATGTCTGTTTACTTTA
GTGACGTTCCACAGAATAAAAGGAAACAAGTTTGC

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FIGURE 195

MAPAEILNGKEISAQIRARLKNQVTQLKEQVPGFTPRLAILQVGNRDDSNLYINVKLKAAEEIGIKATHIKLPRT
TTESEVMKYITSLNEDSTVHGFLVQLPLDSENSINTEEVINAIAPKDVGLTSINAGRLARGDLNDCFIPCTPK
GCLELIKETGVPIAGRHAVVGRSKIIVGAPMHDLLLWNNATVTTCHSKTAHLDEEVNKGDIIVVATGQPEMVKGE
WIKPGAIVIDCGINYVPDDKKPNGRKVVGDVAYDEAKERASFITPVPGGVGPMTVAMLMQSTVESAKRFLEKFKP
GKMMIQYNNLNLKTPVPSDIDISRSCKPKPIGKLAREIGLLSEEVELYGETKAKVLLSALERLKHDPGKYVVVT
GITPTPLGEGKSTTTIGLVQALGAHLYQNVFACVRQPSQGPTFGIKGGAAGGGYSQVIPMEEFNLHLTGDIHAIT
AANNLVAAAIDARIFHELTQTDKALFNRLVPSVNGVRRFSDIQIRRLKRLGIEKTDPTTLTDEEINRFARLDIDP
ETITWQRVLDTNDRLFRLKITIGQAPTEKGHTRTAQFDISVASEIMAVLALTTSLDMRERLGMVVASSKKGEPV
SAEDLGVSGALTIVLMKDAIKPNLMQTLEGTPVFVHAGPFANIAHGNSSIIADQIALKLVGPEGFVTEAGFGADI
GMEKFFNIKCRYSGLCPHVVVLVATVRALKMHGGGPTVTAGLPLPKAYIQENLELVEKGFNLKKQIENARMFGI
PVVVAVNAFKTDTESELDLISRLSREHGAFDAVKCTHWAEGGKGALALAAQAVQRAAQAPSSFQLLYDLKLPVEDK
IRIIAQKIYGADDIELLPEAQHKAEVYTKQGFNLPICMAKTHLSLSHNPEQKGVPTGFILPIRDIRASVGAGFL
YPLVGTMTMPGLPTRPCFYDIDLDPETEQVNGLF

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FIGURE 196

CGCGATTCTCAGGGATTGATCCGCCTCTTCAGGTAAGTTATCTTCCGGCCCCGTACCACTGTGCCACAGGCGCAG
CCCGCTTCCTCAGGTGCCCTATCCCGCGCAGAAGACCACGGCTTCACAGAGTGTTATTTAAGGGCGTGGCCAGCG
GAACATCCCCGCCCATTTCTGTGACGCACGGGGTGGCGCGCGTGGGACCCGAGGGGTGGGGCTGGGTTTAGTAGGA
GACCTGGGGCAAGGCCCCCTGTGGACGACCATCTGCCAGCTTCTCTCGTTCCGTGCGATTGGGAGGAGCGGTGGCG
ACCTCGGCCCTTCAGTGTTTCCGACGGAGTGAATGGCGGCGCGGCTGGGATGCTGCTGCTGGGCTTGCTGCAGGC
GGGTGGGTGCGGTGCTGGGCCAGGCGATGGAGAAGGTGACAGGCGGCAACCTCTTGTCATGCTGCTGATCGCCTG
CGCCTTCACCTCAGCCTGGTCTACCTGATCCGTCTGGCCGCCGGCCACCTGGTCCAGCTGCCCGCAGGGGTGAA
AAGTCCTCCATACATTTTCTCCCAATTCCATTTCCTTGGGCATGCCATAGCATTGGGAAAAGTCCAATTGAATT
TCTAGAAAAATGCATATGAGAAGTATGGACCTGTATTTAGTTTTACCATGGTAGGCAAGACATTTACTTACCTTCT
GGGGAGTGATGCTGCTGCTGCTGCTTTTTAATAGTAAAAATGAAGACCTGAATGCAGAAGATGTCTACAGTCGCCT
GACAACACCTGTGTTTGGGAAGGGAGTTGCATACGATGTGCCTAATCCAGTTTTCTTGGAGCAGAAGAAAATGTT
AAAAAGTGGCCTTAACATAGCCCACTTTAAACAGCATGTTTCTATAATTGAAAAAGAAACAAAGGAATACTTTGA
GAGTTGGGGAGAAAAGTGGAGAAAAAAATGTGTTTGAAGCTCTTTCTGAGCTCATAATTTTAACAGCTAGCCATTG
TTTGCATGGAAAGGAAATCAGAAGTCAACTCAATGAAAAGGTAGCACAGCTGTATGCAGATTGGATGGAGGTTT
CAGCCATGCAGCCTGGCTCTTACCAGTTGGCTGCCTTTGCCTAGTTTCAGACGCAGGGACAGAGCTCATCGGGA
AATCAAGGATATTTTCTATAAGGCAATCCAGAAACGCAGACAGTCTCAAGAAAAAATTGATGACATTCTCCAAAC
TTTACTAGATGCTACATACAAGGATGGGCGTCTTTGACTGATGATGAAGTAGCAGGGATGCTTATTGGATTACT
CTTGGCAGGGCAGCATACATCCTCAACTACTAGTGCTTGGATGGGCTTCTTTTTGGCCAGAGACAAAACACTTCA
AAAAAATGTTATTTAGAACAGAAAACAGTCTGTGGAGAGAATCTGCCTCCTTTAACTTATGACCAGCTCAAGGA
TCTAAATTTACTTGATCGCTGTATAAAGAAACATTAAGACTTAGACCTCCTATAATGATCATGATGAGAATGGC
CAGAACTCCTCAGACTGTGGCAGGGTATACCATTCTCCAGGACATCAGGTGTGTGTTTCTCCCACTGTCAATCA
AAGACTTAAAGACTCATGGGTAGAAGCCTGGACTTTAATCCTGATCGCTACTTACAGGATAACCCAGCATCAGG
GGAAAAGTTTGCTATGTGCCATTTGGAGCTGGGCGTCATCGTTGTATTGGGAAAAATTTTGCTATGTTCAAAT
TAAGACAATTTGGTCCACTATGCTTCGTTTATAIGAATTTGATCTCATTGATGGATACTTTCCCACTGTGAATTA
TACAACTATGATTACACCCCTGAGAACCCAGTTATCCGTTACAAACGAAGATCAAAATGAAAAAGGTTGCAAGG
AACGAATATATGTGATTATCACTGTAAGCCACAAAGGCATTGCAAGAGAATGAAGGTACAAAACAACCTCTTGTA
GTTTACTGTTTTTTTTAAGTGTGTAATTCTAAAAGCCAGTTTATGATTTAGGATTTTGTTAACTGAATGGTTCTAT
CAAATATAATAGCATTGTGACACATTTTCTAATAGTTATGATACTTATACATGTGCTTTCAGGAAGTTCCTTGGTG
AAACAATTGTTGAGGGGGGATCTAGGTAATTGGCAGATTCTAAATAATATAATTTCCAGATAGTAATTTAAGAG
TACTCATCGCTCTTGCCAAATAAGTTCAGGGTATTCAAATCTTGGACTAGTCTGCAAGGTATAAAGAATAAAAA
TCCAGTGAGATACTTGAAACCACAGTTTATTATTATTTATCTGGGCAATTATTGTGTGTGTGAGGATGGAAGG
GTAGGGAATAATCGAACATCTAAAGCCTTGAATAAGAGAATACTAATTGTTTTGGTATGATGATACTCAGAAATG
GAGATATTATAGGAAAAAGAAATCCTTTGGAATTTTAACTAAAATCACTGCATATGGGAAATTAAGAGATCCAGG
ACCATATTTGATAAGAGTTCCTAAAAATAATGTAATTATTAATGCTAAAGACTGCTCATGTATCTTGATCTAATT
ACTAAATAAATTACATATTTATTTACCTGATAAATATGTATCTAGTTCTACAAGGTCACATTTATGTGGAAGTCC
AAAGTCAAGTCCTTAGGGGATAATTTGTTTTGGGCTCAGTTGTTCCCTGCTTCTTTTTTTTTTTTTTTTTTTT
TTGAGATGGAGTCTCGCTCTGTGCCCAGGCTGGAGTGCAGTGGTGCATCTCAGCTCACTGCATCCTCTGCCTC
CCGGGTTCAAGCAATTCTCTGCCTCAGCCTCCCAAGTAGTTGGGATTACAGGCACCTGCCACCATGCCTGGCTAA
TTTTTTGATTTTTTAGTAGAGACGGGGTTTCACTATGTTGGCTAGGCTGGTCTTGAACCTCCTGAGCCTCGTGAG
TCCACCCGCCTTGGCCTCCCAAGTGCTGGGATTACAGGCATGAGCCACCGCACCTGGCCTTCCCTGCTTCTCTCT
CTAGAATCCAATTAGGGATGTTTGTACTACTCATATTGATTAAACAGTTAACAACCTTTTTTCTTTTTTAAAT
GTGAGATCAGTGAACCTCTGGTTTTAAGATAATCTGAAACAAGGTCCTTGGGAGTAATAAAATTTGGTCACATTCTG
TAAAGCACATTCTGTTTAGGAATCAACTTATCTCAAATTGTAACCTCGGGGCCTAACTATATGAGATGGCTGAAAA
AATACCACATCGTCTGTTTTCACTAGGTGATGCCAAAATATTTTGCTTTTATGTATATTACAGTCTTTTTTAAAC
ACTGGAAGACTCATGTTAACTCTAATTGTGAAGGCAGAATCTCTGCTAATTTTTTCAGATTAAAAATCTCTTTGA
AAAAAT

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FIGURE 197

MAAAAGMLLLGLLQAGGSVLGQAMEKVTGGNLLSMLLIACAFTLSLVYLIRLAAGHLVQLPAGVKSPPIYIFSPIP
FLGHAIAFGKSPIEFLENAYEKYGPVFSFTMVGKTFITYLLGSDAAALLFNSKNEDLNAEDVYSRLTTPVFGKGVA
YDVPNPVFLEQKKMLKSGLNIAHFKQHVSII EKETKEYFESWGESGEKNVFEALSELIILTASHCLHGKEIRSOL
NEKVAQLYADLDGGFSHAALLPGWLPLPSFRRRDRAHREIKDIFYKAIQKRRQSQEKIDDILQTLDDATYKDGR
PLTDDEVAGMLIGLLLAGQHTSSTTSAWMGFFLARDKTLQKKCYLEQKTVCGENLPPLTYDQLKDLNLLDRCIKE
TLRLRPPIMIMMRMARTPQTVAGYTIPPGHQVCVSPTVNQRLKDSWVERLDFNPDRLQDNPASGEKFAYVPFGA
GRHRCIGENFAYVQIKTIWSTMLRLYEFDLIDGYFPTVNYTTMIHTPENPVIRYKRRSK

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FIGURE 198

TCGGGAAGCCATAGGGCGCCTCCCAGCCCGTCTCCCCGCTCCAGTTTAGAACCTAATTCCCAATTCCCGGACCGG
GCCCAGCCCTGGGCTCTTACTGTCCGCTTTTGCTGGGACCTGTTCCACAAATGGGCGTCTTCTGCCTTGGGCCGT
GGGGGTTGGGCCGGAAGCTGCGGACGCTGGGAAGGGGCGCTGCAGCTCTTGAGCCGCCTCTGCGGGGACCACT
TGCAGGCCATCCCAGCCAAGAAGGCCCGGCTGGGCAGGAGGAGCTGGGACGCGCCCTCCTCGCCGCTGAGTG
CCGAGCAGTTGGACCGGATCCAGAGGAACAAGGCCGCGGCCCTGCTCAGACTCGCGGCCCGCAACGTGCCCGTGG
GCTTTGGAGAGAGCTGGAAGAAGCACCTCAGCGGGGAGTTCGGGAAACCGTATTTTATCAAGCTAATGGGATTG
TTGCAGAAGAAAGAAAGCATTACACTGTTTATCCACCCCCACACCAAGTCTTCACCTGGACCCAGATGTGTGACA
TAAAAGATGTGAAGTTGTCATCCTGGGACAGGATCCATATCATGGACCTAATCAAGCTCACGGGCTCTGCTTTA
GTGTTCAAAGGCCTGTTCGCCTCCGCCAGTTTGGAGAACATTTATAAAGAGTTGTCTACAGACATAGAGGATT
TTGTTTCATCCTGGCCATGGAGATTTATCTGGGTGGGCCAAGCAAGGTGTTCTCCTTCTCAACGCTGTCTCACGG
TTCGTGCCCATCAAGCCAACTCTCATAAGGAGCGAGGCTGGGAGCAGTTCACTGATGCAGTTGTGTCTGGCTAA
ATCAGAACTCGAATGGCCTTGTTTTCTTGCTCTGGGGCTCTTATGCTCAGAAGAAGGGCAGTGCCATTGATAGGA
AGCGGCACCATGTACTACAGACGGCTCATCCCTCCCCTTTGTGAGTGTATAGAGGGTTCTTTGGATGTAGACACT
TTTCAAAGACCAATGAGCTGCTGCAGAAGTCTGGCAAGAAGCCCATTGACTGGAAGGAGCTGTGATCATCAGCTG
AGGGGTGGCCTTTGAGAAGCTGCTGTTAACGTATTTGCCAGTTACGAAGTTCCTACTGAAAATTTTCTATTAATT
CTTAAGTACTCTGCATAAGGGGGAAAAGCTTCCAGAAAGCAGCCATGAACCAGGCTGTCCAGGAATGGCAGCTGT
ATCCAACCACAAACAACAAAGGCTACCCCTTTGACCAATGTCTTTCTCTGCAACATGGCTTCGGCCTAAAATATG
CAGAAGACAGATGAGGTCAAATACTCAGTTGGCTCTCTTTATCTCCCTTGCCTTTATGGTGAAACAGGGGAGATG
TGCACCTTTCAGGCACAGCCCTAGTTTGGCGCCTGCTGCTCCTTGGTTTTGCCTGGTTAGACTTTCAGTGACAGA
TGTTGGGGTGTTTTTGCTTAGAAAGGTCCCCTTGCTCAGCCTTGCCAGGGCAGGCATGCCAGTCTCTGCCAGTTC
CACTGCCCCCTTGATCTTTGAAGGAGTCCCTCAGGCCCTCGCAGCATAAGGATGTTTTGCAACTTTCCAGAACTCT
GGCCCAGAAATTAGGGCTCAATTTCTGATTGTAGTAGAGGTTAAGATTGCTGTGAGCTTTATCAGATAAGAGAC
CGAGAGAAGTAAGCTGGGTCTTGTTATTCCTTGGGTGTTGGTGGAATAAGCAGTGGAATTTGAACAAGGAAGAGG
AGAAAAGGGAAATTTGTCTTTATGGGGTGGGGTGATTTTCTCCTAGGGTTATGTCCAGTTGGGGTTTTTAAGGCA
GCACAGACTGCCAAGTACTGTTTTTTTAAACCGACTGAAATCACTTTGGGATATTTTTTCTGCAACACTGGAAA
GTTTTAGTTTTTTAAGAAGTACTCATGCAGATATATATATATATATTTTTTCCCAGTCCTTTTTTTAAGAGACGGT
CTTTATTGGGTCTGCACCTCCATCCTTGATCTTGTTAGCAATGCTGTTTTTGCTGTTAGTCGGGTTAGAGTTGGC
TCTACGCGAGGTTTGTTAATAAAAGTTTGTTAAAAGTTTAAAAAAAAAAAAAAAAAAAA

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FIGURE 199

MIGQKTLYSFFSPSPARKRHAPSPEPAVQGTGVAGVPEESGDAAAIPAKKAPAGQEEPSTPPSSPLSAEQLDRIQ
RNKAAALLRLAARNVPVGFGESEWKKHLSGEFGKPYFIKLMGFVAEERKHYTVYPPPHQVFTWTQMCDIKDVKVVI
LGQDPYHGPNQAHGLCFVQRPVPPPSLENIYKELSTDIEDFVHPGHGDLGWAKQGVLNNAVLTVRAHQANS
HKERGWQFTDAVVSQNSNGLVFLWGSYAQKKGSAIDRKRHHVLQTAHPSPLSVYRGFFGCRHFSKTNELL
QKSGKKPIDWKEL

ACCGCCGACGCAGACCCCTCTCTGCACGCCAGCCCGCCCGCACCCACCA**ATG**CCACAGTTCAGCAGCTGGAAGGA
 AGATGGCGCCTGGTGGACAGCAAAGGCTTTGATGAATACATGAAGGAGCTAGGAGTGGGAATAGCTTTGCGAAAA
 ATGGGCGCAATGGCCAAGCCAGATTGTATCATCACTTGTGATGGTAAAAACCTCACCATAAAAACTGAGAGCACT
 TTGAAAAACAACACAGTTTTTCTGTACCCTGGGAGAGAAAGTTTGAAGAAACCACAGCTGATGGCAGAAAAA**ACT**CAG
 ACTGTCGCAACTTTACAGATGGTGCATTGGTT**CAG**CATCAGGAGTGGGATGGGAAGGAAAGCACATAACAAGA
 AAATTGAAAGATGGGAAATTAGTGGTGGAGTGTGT**CAT**GAACAATGTCACCTGTACTCGGATCTATGAAAAAGTA
 GAA**TAA**AAATTCCATCATCACTTTGGACAGGAGTTAATTAAGAGAATGACCAAGCTCAGTTCAATGAGCAAATCT
 CCATACTGTTTCTTTCTTTTTTTTTTTCATTACTGTGTTCAATTATCTTTATCATAAACATTTTACATGCAGCTAT
 TTCAAAGTGTGTTGGATTAAATTAGGATCATCCCTTTGGTTAATAAAATAAATGTGTTTGTGCT

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FIGURE 201

MATVQQLEGRWRLVDSKGFDEYMKELGVGIALRKMGAMAKPDCIITCDGKNLTIKTESTLKTTQFSCTLGEKFEE
TTADGRKTQTVCNFTD GALVQH QEWDGKESTITRKLKDGLVVECMNNVTCTRIYEKVE

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FIGURE 202

GGGACTACATTTCCAGGGGGCAGAGGCAGGGGCGGGAGGGGGCGGGCCCCGGCGCTGCTCCCGCCCCCTCCCCCG
TGCTCGCGGGGAGAGGTAAACAAACCACGCGCGGGCTGCCCGCGGCACGGCGGGCGCGGCTGGCGCGGCTGGGGC
GGCAGGGGGCGGCGGAGAGCGCGCCGAGCCGCGGCCGAGCTGGCCCCGCCCGCCGCTCGCACATGTTCCGGAACGGC
GCCCGGCCGTAGCCGCCTGCGGCGCCTCCTGTGCGGCCGAGAAGGGAGTGCGGAGAGGGCGCCGGTCCGCCACCCGC
GGTCCCCATGGAGCGGGTGAAGATGATCAACGTGCAGCGTCTGCTGGAGGCTGCCGAGTTTTTTGGAGCGCCGGGA
GCGAGAGTGTGAACATGGCTACGCCTCTTCATTCCCGTCCATGCCGAGCCCCGACTGCAGCATTCAAAGCCCCC
ACGGAGGTTGAGCCGGGCACAGAAACACAGCAGCGGGAGCAGCAACACCAGCACTGCCAACAGATCTACACACAA
TGAGCTGGAAAAGAATCGACGAGCTCATCTGCGCCTTTGTTTAGAACGCTTAAAAGTTCTGATTCCACTAGGACC
AGACTGCACCCGGCACACAACACTTGGTTTTGCTCAACAAAAGCCAAAGCACACATCAAGAAACTTGAAGAAGCTGA
AAGAAAAAGCCAGCACCAGCTCGAGAATTTGGAACGAGAACAGAGATTTTTAAAGTGGCGACTGGAACAGCTGCA
GGGTCTCAGGAGATGGAACGAATACGAATGGACAGCATTGGATCAACTATTTCTTCAGATCGTTCTGATTGAGA
GCGAGAGGAGATTGAAGTGGATGTTGAAAGCACAGAGTTCTCCCATGGAGAAGTGGACAATATAAGTACCACCAG
CATCAGTGACATTGATGACCACAGCAGCCTGCGGAGTATTGGGAGTGACGAGGGTTACTCCAGTGCCAGTGTCAA
ACTTTCATTCACTTCATTAGAACCCAGCATGACATAACAGTGCAGGGCAAATATTCACTGGGCCAATTCAATACA
AACATCTCTTAAATTGGGTTTCATGATGCAGTCTCCTCTTTAAACAAAACAAAACAAAACAAAACATACTTGA
ACAAAAGGGTCAGAGGACCTGTATTTAAGCAAATACTTAGCAAAAAGTGGGGCAGAGCCTCCCAAGGAGAACAAA
TATTCAGAAATTCATATTGGAAAATCACAAATTTTAAATGGCAGCAGAAAACCTTGTGTGAAATTTTCTTGATT
GAGTTGATTGAGAAGAGGACATTGGAGATGCCATCCTCTTCTCTTTTCTAGTTTGCTCATACTACATTGAGTAG
ACACATTTAAGGATGGGGTTATGAACCCTTCCTGAGCTTTATGGTCCTAAAAGCAAATAAAAACTATTGGAATG
AAAAGACAAGAAAATCAGGTATTAATCTTGGATAGCTAATAATGAGCTATTAAAACCTCAGCCTGGGACAGTTTAT
CATGAAGCCTGTGGATGATCAATCCTTTATTATTATTTTTTTTTTTTGA AAAAAGCTCATTTTCATGCTCTGCAAA
AGGAGAGACTCCCATGAAGCCTTTTGAAGGGATCATCATGCAGCTCAACTTTCTGTTGGATTCCATGCTAAGCA
AGCTAACCTTATCCTGCATTGTTAGCACTAGGCACCCAGCTGCCACCTCTCCATCCTGCTGCCCTTAGGCCACAT
GGGAGCAGTCCATGCATGACAGCCTCTATCCTACAAGGCCTATGAGTATGGATTGGGGGGGCCAAAAGGAAAAAG
CTCCATGTGCCTCTTTGTCTGCGTGGGTGAGAAGAGTTGTGCACGCAGATTAGCAGGCCAAGGTCTGAGCCACAG
CAGCATTTTTATTTCAGATTTTGATAACTGTTTATATGTGTTGAAAACCAAATGACATCTTTTTTAAAGCTTATC
CATAAAAAAAAATAGATGCTTTTATAGTGGA AAAACACATGGGGAAAAAAATCATCTATTTTGATGCAGCATTT
GATAATGATAAAACACCTCACACCTCACTCTTTATAGTGCACAAAATGAATGAGGTCTGGGCTAGGTAGAAAAAG
GGTCAATGCTATTTTTGTTTTTAGAATCATTACCTTTTACCAGCTTTTAAACCATCTGATATCTATAGTAGACACA
CTATCATAGTTAACATAGTTAAGTTCAGCACTTGTCTCATTTTTAATGTAAAGATTTGCTTCCATTTTCCTACAGG
CAGTCTCTCTCTTCCCTCACAGTCCCACTGTGCAGGTGCTATTGTTACTCTTACGAATATTTTCAGTAATGTTATT
TTCTTCTAAGTGAAAATTTCTAGCCTGCACCTTTGATGTGATGTGTTCCCTTTGTCTTTCAAACCTCCAAGGTTCCCC
TGTGGCCCTCTCCCTTACCCTGGGAAGGCCTCTTGGAGACCTTACCCCTGGCTGTTTGGACTTTGTATACTTTAA
ATAATTTAACTACCCTTAATTACTTAAAAA AAAAAAAGCTTTATGATTTTCATAACTTATTGCTGATTTTAAAT
GGATTGTTAATTTCAGTCTGTAGTTTTATTTTATGTTTAGATAGGGCTGGGCAAGGAAAAAGAAAATAAAGACA
ACCATATTTAGCAGTGCA

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FIGURE 203

MERVKMINVQRLLEAAEFLERRERECEHGYASSFSPSPRLQHSKPPRRLSRAQKHSSGSSNTSTANRSTHNEL
EKNRRAHLRLCLERLKVLIPLPDCTRHTTLGLLNKAKAHIKKLEEAERKSQHQLLENLEREQRFLKWRLEQLQGP
QEMERIRMDSIGSTISSDRSDSEREEIEVDVESTEFSGEVDNISTTISDIDDHSSLPSIGSDEGYSSASVKLS
FTS

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FIGURE 204A

CGGTGCTGGAGAAGTTTGCCTGCGGTTTCGTGAGCGCAGGGTGCGGGCCCCGCCGGCCGCTGCGCGCCCCGCTGCC
ATGGCTTTCCGCAGGAGGACGAAAAGTTACCCGCTCTTCAGCCAGGAGTTCGTTCATCCACAACCATGCGGACATC
GGCTTCTGCCTGGTGCTCTGCGTCTCATCGGGCTTATGTTTCGAGGTCACAGCCAAGACTGCCTTTCTATTTATT
TTACCTCAGTATAACATTAGCGTGCCTACAGCAGACAGTGAGACCGTGCACTACCACTATGGCCCTAAGGACCTG
GTCACAATCTTGTTCTACATCTTCATCACCATCATCTTGCATGCTGTGGTTTCAGGAGTACATTTTAGATAAAAATC
AGCAAACGGCTTCATCTCTCCAAAGTCAAACACAGCAAGTTCAATGAATCTGGACAGCTGGTCGTCTTTTCATTTT
ACCTCGGTGATTTGGTGCTTCTACGTGGTGGTGACGGAAGGATACTTAACAAACCCAAGAAGCCTCTGGGAAGAC
TACCCGCATGTGCACCTCCCTTCCAGGTGAAGTTTTTCTACCTATGCCAGCTGGCCTACTGGCTGCACGCACCTT
CCTGAGCTATACTTCCAGAAGGTACGGAAGGAGGAAATTCCCCGCCAGCTCCAGTATATTTGCCTGTACCTGGTG
CATATAGCTGGAGCATACCTCTTAAACCTGAGCCGCCCTGGGCCTGATCTTGCTGCTGCTGCAGTACTCAACTGAG
TTCTCTTCCACACGGCTAGACTCTTCTACTTTGCAGATGAAAACAACGAGAACTGTTTCAGTGCCCTGGGCTGCT
GTTTTTGGGGTTACCCGCCTCTTCATCCTCACCCCTTGCCGTGCTGGCCATTGGCTTTGGACTGGCTCGCATGGAA
AACCAGGCATTTGATCCCGAGAAAGGGAACCTTCAACACTTTGTTTTGCAGGCTCTGCGTGCTGCTGCTGGTGTGT
GCCGCCCAGGCCTGGCTCATGTGGCGCTTCATCCACTCCCAGCTGCGGCACTGGCGGGAATACTGGAATGAGCAG
AGTGCAAAGCGGAGAGTCCAGCCACACCCAGACTACCAGCCAGGCTCATCAAGAGGGAATCTGGTTACCATGAA
AATGGAGTGGTGAAGGCAGAGAACCGGAACCTCCCCACGGACTAAGAACTCAAGTCTCCCTTAAGGCCAAAGTGCT
AAGAACAGGAATCCTCTTGGTGGGGGCCGAGCAGGGGGCAAGGAGCCCAGGCCCCCTCCCTGCCTCCTCCTTCCT
GCCTGTGATGCTCCGTCTCAAACAGCCGAAACCTGTCTTGCAATGGGGGGAGGGGGCGTTTCGCTTTCCTTCTTC
TTGGCTTCCTCTTATTCTTCCACAAACCATTTCTCAATAAAGCCAAAAATCTTCTCTTTCTCCCCCTCAGGCCAC
CTCCTGTCTCACTCCTGTCTGTGCTGGCTTTTCTGGAACGCCAGGCGCCCATGGCTGGCACCTTTCTGCTTGC
TCTGTTTCTTGCTTATGGCTGCTGCTTTTCTTTTACTTCTTATTTTACCTTATCTTGCAATTTTTCTGTCT
GATTTTTACAATGGGAGGGGAGCTAAGATTGCAGTCCGTGCTTCCGTCCCCCAGGGCCTGCCGGTCAGAAGCCT
GGGGCTGGTAGGCCCTTGGTGGTCTCATGTGGATGGGCAAGAAGAGAGCGGCCATCTCGGATCATAATCTCCTT
GGTGCTGATTAACTGACGAGATATATGATTCCAGTTCGTGATGTACCATCTTGAGGCACAGCAGCCACTGCTCGT
TGTAATGCCAAGGCATTTGGCTTTGGGACGTGACAACCTCAATCCAGAAGGATGGTGTGAACTCGGTTGGGTCCC
GTGACTCGAGCTCCTACCAGTGGCTGGCCGCGGATTGGAAGCCAGCCTGCTGTGCTCTGTGGGGAGGACATGTC
TTCCCACTGCTTAGAGCGAGAGCAGAGCAAACCTGCGCAGCAGGCACCTCCAGAAAGGTAATGGTGGCAGAACCCA
CAGTGGAGTCGACCTAGGCCTTTCTCCAGCAGTCCCAGTGCCTATTGCTTTTTTTCAGCCATTACAAAGCATTCAA
ACCAAACCAAACAGCAGTTCATATACCTGCCTGAGATAGGCTGGTCTTACCTCCAGAGCCAGCCAGCCCCGTCA
GGGGCCAAACTTACTACCTTGACTTCACTCTAGCTGCAGAAACACTAAGTCTCAAGGGCTTCAGCCCCATGCTG
GTCCCTTGGTGTTCAGGGAGGGTCACTTGGACCGCTGTTCACTGCGCCGCCCTTGTGAGTGTTCTTTGGAATTG
TCGTTTTTTGAGCACAACTACAGCATTTTAGACTGCATGAAACCATGACTGACTGAGAGTCACTCTCTGGGTAGA
TGATAGGCGCCTTTCTGGCCCCCTTCCCTCACAGATTCTTTCCCTCCCTCCACCTGAAGAGAAGGCCTCCAAGT
CCTTTTGGTGCCTTGTGAGGACTTTTAGAAGGGGCGTTTCAGCTTTAAAAAGCCGGTCCCTAATTACGGCCGGACGC
AGTAGCTTACGCCTGTTATCCAGCACCTTGGGAGGTGAGGTGGGCAGATCACCTGAGGTTAGGAGTTCAAGAC
CAGCCTGGCCAACATGGTGAAACCCCATCTCTACTAAAAATACAAAAAATTAGGTGTAGTGGCAGGCACCTGTAA
TCCCACTACTCGGGAGGCTGAGGCAGGAGAATCGCTTGAACCTAGAAGGTGGAGGTTGCAGTGAGCGGAGATTG
TACCATGGCACTCCAGCCTGGACAACAAGAGCGAAATCTGTCTAAAAAAACAAAAGTCCCAATTAAGAACCTCC
GAACCTCTGTTTTGAGGCAAAGGGGAGTAGTTCTTGGTAGGTGCAGGAATAGTAGTGTCAATTTGGAATACTGGTCA
TCTTTCTGACATCACAGTAGAAACCAAACCTTGGATTTAGATTCAAAAGGGGGGAAATGGGTCTTTTTCATCAAGG
CAACTCCCTTCTCCAAGTCACTTACATCATAGATAAATTTTAGCTTCCAGTAACTGAGGGATTTGTTTCTTAA
CGCCATTGGAGGCCTTCATCCCTCTCTACGATAAGGTTGCAGAAATGGGAAGAGCTACCCGTGGTTGCTTTTGAT
TACCTTAGGAAGTGAGACAGTGTTTTTGAAAATATGTATTTCTCCATTCTCCTCTCCTTCCCTGACACTTC
TCTGGGCTGCACAGCAGAAACGTTGGTAAAAGGGCAGTTTGGTTTCAACACAGCAGACCTGATATGGGATCCCTT
AGCCACTTTAGTCAAACAGCCCTGACAGAGTCTATAATTGAGTTTCAGGCCCCCACCTTGCTTAATAACTGAAA
TCGCATGTTTCAGCCAGCAGCCTCCTAAGCCACCTTCTCCCCCATTAGAGAACACCCATCCTAGGTGCTCTCCA
GGCTGTGTCAATTGGCAGGGCTTCACATGCAGGAGGCCTCTCTCAGGTGAGTCCAGGTTAAACTGTTGAGTTGTGG
CTTCAACAGATATGTATGGCATGCTGGGATGTGCCAGGTGCCTGCGTTGTGCCAGTTGCTGGAGAGGTAGTGTA

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FIGURE 204B

GCAGAGCAGCTGAAATCTTGCCATCAAGCAACCCCTCATTCTCATGCCTGTAGGTTTCCATTGCTCTGTCCCAGGA
CACTTGCGTGCCAGAGACGCCACAACCTTCATGTCCCTGTCTCTTGCAAGCTCCCCGTGCTGCCAGTACTTTCATGC
CTTGATGTGGTCCCACCAGCCAGTGGCTGGGGTCAGCTTAGGCTCTGCTTCCCAGTGGACGGGTGTGCTAAGG
GTTTATTTTATGTAAAAAACAACCAAAAAACCCTGAGACCATGAGTGGGGCTGGCATCTTGCCAGC
CTGGGCTTCAGGGATGTTTGGGGGGGGTGGTTAGAGGGTAGTTGTAGGGTACTTTGTACCCCCCTCCCCCTGCC
ACCCTCCCTGGCACGTTTATTTACAGCAGAGCCAAGTCTGTGGCAGGTTGACACAGACTGTGTTGCCAGAGCTG
AAATAATTCACCTTCATCCTATGAGCGTGTGGGGCTAGCTTGTCTAATTTTGGCCACTTTGGCTGTTTTCTTCA
GTTTTATGCATTCTCTCTGCCCAAAGTGCCAAAGCCATTGTGAAGGCTCTGCCAGACACCTCCAAGCTTGAGA
GCTCAGCACCATGCACCAAGAGCAGGAGAAAAAGACGTAAACCTACCCAGCAACTGTGGCCTCTCGACAGCCCTG
GCTAACTAATTACATTTGTGGGAAGCCAACAGACACAGCAGGAGGAGAGGGAGGTGGCGCTGGTGGACCAAGG
ATCTGTGCTACCCGCTCCCCCTCCTTGGAGGTGCAGTGATGATGGGAGTTATTTTTACCATCCGGGCGCTGATAGC
TGCACTATTAATAAATGTCATGTGTTCCCTTTTGAAGGTAGGGGATGGTCTGGGTGAGAGGGGAGCAGGCTGAGC
CGCGGGGGATCTGCTGTCTCCCTTTTGAGTCAGTTCTAATCCCATGTGTGTCTGGGCCACCAGACCGAAATGG
TTGCTGAGAACTTGTCTGTTTCATGTCCCAAGGCATAACTTCCCAACATTTAAGAAACCCCAATAGACACCTCTG
CCCTGGCCACGTTTACAGATCCTTCTCTTGACCGAAACCCCTGGGACCCTAAGAACCCCTGAAGCTTGGGGTGGG
TGTGTGCTTCTGGGGTCTCTTTTGGGACCTCCTTTGTGCTAGTACCCCTTCTTTTTTCTAAGCAGCTAATAAGAGGT
TGGGTGAAAGAGTGCATCTCCTCCCAGGATTCCACAACAAATTCCTATCTTCCATGGATGCTTTAATTGGAAGT
GGGTGCCGACCCCTTGTGCCTAGAAAAGGCCTTTGCTTGGGTTTCCCTTGTATGCTTCAGCCTTCCTAGTTGG
TTTTCTAGGCCTGGTGTGAGAGGTAGGGAAGTCTGCACATAACTAATTCTTTTGCTTAAGGGCCTATGGCACAA
GTGCACAACTTCAATTCTTGATGTTCTAAGCTCTCTCCTCTAACAGAGGGAGTGCTGAAAGCTTTTGTAGTCAAG
ACAATGGAGTGCTCTTCTCCCTCACTCTGCCTTCCGAGCTTATGGTTCCTTTTCTCAGGAGAGGATTTTCAGGA
TTATTGGAGGATTAGGTCAATTGTGATGACTGGAAAACCTAAATAGGATCTCTCTCCAGCTCAAGGTTGTCCCA
GTGAGGAAGACTTTACCAACTTCTCACTCTACCCCACTACTCACATGAGTGTTAGCTCCACCTTGCAAAGGCTGA
AGACCAGTTCTCCCCAGTGAAAGCTGCCTCATTCTTTTATGGAGTTCCCTGGAGTGGCAGAGCTATAAAGACGAG
CATTGGGATTTGCAGTCTCCATGTAGCCTTTTCGTGCTTGGCAACCCCTGTAGACTTTTTGTCCCAAGCAGATTGC
GTGCGTGCCTGTGTGTGAGAATAAGTGCCTTACTTTGCTGTGTGGTTTTCAACTTGTACTCCGTGGCCAGCCC
CCAGTTGCCAGGGCTCGACGGCAGCCAAGGACACCATACTCAGTATAGTTATATATAAAATGGACACGGATTGT
GACAGTTTACCCCATTTGTTTCTAACCCTGCTGCCAGGATTAGGGTCTGTGGTGTGTTCTGTTTTGTTTTTGG
TTTCTCCCTTGTGTGCTGCTTCTTCTGGCCAGCTGGGTGGCTGTGGAAGTCTGTGAGGTGGCCCAACCACAAGC
ATACCTATTAAGAGAAGCCAGAGCTTCCAGCCCCCACTTCGAAAACCTCTCCTCTGGCCCCACATAGCAAACCTCC
TTCTCCGTTATTTTCCCCACCCCAAGATTTTTTTTTAAAAGGCCCACTTGCCATAACCTCTTTTGGTCTATTTTGC
TTCCCATTCAGCCCAAAGTTTATATGATAAAGGTGTTTACTTTTACTTCCAGTCTCCAAGTGCTAACACATAAA
CACATACATGTCTGACTGTTGCAGAACTGTTTCGAGCTCCTAATTCAGTGTTACCTTGTTTTAGTCGCAGCAACCC
TCTCCCTACCCCTTGCCCGCCACGTTTTTCTCACTCTTCCGGGTGTGCAATAACTCTCCAGCCAGTGGTCC
TTTCCACAGCCTTTCTGTCCCTTAAAACACCTGCAACTGGGGGAGAAATGGGACCCATGGGAGGGGGAGTCATCA
TCCCTTACACAAGAAATAGCCACTTTCTTTTGTGTGCTATTCTTGTGATCCTGGGTGGGTTTCTGTGGCACTCTT
TTAGAACATGTAGCATCATCTTAGAGGTCTATTTTTAAAAAATGTGTTGAAGAGGAAAAAACATTCTCACGATG
GGGCTTAAGTCATTGTCCAGGAATAAGATTGGCGTGGTGGCCATGACATCACCGTCACTCTGCCTAAAAGCACTC
TAGAGCTACTTGTTACGTGGAGAGGAAGGATATTTTGCAGAACACAGCCGAGGTGGAGAGCCCTGTTACCT
GATAGGGTCTAGCTGTGACAGTAAATATAATACCGCTGTTTCTTGGGTACAGATTGAGTGTTTCATGTGATGAG
ACTGTAAACCTCATTTTTCGGTTCTCTGTTTTAAAAAACATCTGAAGGATGAACTAAGGCTGCTGGTGGCCCTGA
GCAACTGATAATGCAATGTGGACAAAGTGTCTGTTTTCTACTCTAGCCTGTTTCATATGGACCAAATTTCAACAA
GGAACCTCAAGGAAAATTTGTACCTGCCGTATTTATGCTTTTCATGTAAAAAAGGGTGGGGGGAGGGGTGTCTTTT
TGCTTTTGGTGAACCTTTTTTTCAAAATCATTTTTTCCACTGTTTCTGTCTGGTTTTAAACAAATTACAGTTTTGT
ATGGATTTTTTAAATGTACATTTTGAACAAATGATCAAAATTTTTCTGAAATAACAATAAAAGGCAGAAAATT

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FIGURE 205

MAFRRRTKSYPLFSQEFVIHNNHADIGFCLVLCVLI GLMF EVTAKTAF LFILPQYNISVPTADSETVHYHYGPKDL
VTILFYIFITII LHAVVQEYILDKISKRLHLSKV KHSKF NESGQLVVFHFTSVIWC FYVVVTEGYLTNPRSLWED
YPHVHLPFQVKFFYLCQLAYWLHALPELYFQKVRKEEIPRQLQYICLYLVHIAGAYLLNLSRLGLILLLLQYSTE
FLEHTARLFYFADENNEKLFSAWAAVFGVTRLFILT LAVLAIGFGLARMENQAFDPEKGNFNTLFCRLCVLLLV C
AAQAWLMWRFIHSQLRHWREYWNEQSAKRRVPATPRLPARLIKRESGYHENG VVKAENGTSPRTKKLKSP

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FIGURE 206

AAAACAGCCGGGGCTCCAGCGGGAGAACGATAATGCAAAGTGCTATGTTCTTGGCTGTTCAACACGACTGCAGAC
CCATGGACAAGAGCGCAGGCAGTGGCCACAAGAGCGAGGAGAAGCGAGAAAAGATGAAACGGACCCCTTTTAAAAG
ATTGGAAGACCCGTTTGAGCTACTTCTTACAAAATTCCTCTACTCCTGGGAAGCCCCAAAACCGGCAAAAAAGCA
AACAGCAAGCTTTCATCAAGCCTTCTCCTGAGGAAGCACAGCTGTGGTCAGAAGCATTGACGAGCTGCTAGCCA
GCAAAATATGGTCTTGCTGCATTACAGGGCTTTTTTAAAGTCGGAATTCTGTGAAGAAAATATTGAATTCTGGCTGG
CCTGTGAAGACTTCAAAAAACCAAATCACCCCAAAAGCTGTCTCAAAAAGCAAGGAAAATATATACTGACTTCA
TAGAAAAGGAAGCTCCAAAAGAGATAAACATAGATTTTCAAACCAAACTCTGATTGCCCAGAATATACAAGAAG
CTACAAGTGGCTGCTTTACAACCTGCCCAGAAAAGGGTATACAGCTTGATGGAGAACAACCTCTTATCCTCGTTTCT
TGGAGTCAGAATTCCTACCAGGACTTGTGTAAAAAGCCACAAATCACACAGAGCCTCATGCTACATGAAATGTAA
AAGGGAGCCCAGAAATGGAGGACATTTATTCTTTTTCTGAGGGGAAGGACTGTGACCTGCCATAAAGACTGAC
CTTGAATTCAGCCTGGGTGTTTCAAGAACATCACTCAGAACTATTGATTCAAAGTTGGGTAGTGAATCAGGAAGC
CAGTAACTGACTAGGAGAAGCTGGTATCAGAACAGCTTCCTCACTGTGTACAGAACGCAAGAAGGGAATAGGTG
GTCTGAACGTGGTGTCTCACTCTGAAAAGCAGGAATGTAAGATGATGAAAGAGACAATGTAATACTGTTGGTCCA
AAAGCATTTAAAATCAATAGATCTGGGATTATGTGGCCTTAGGTAGCTGGTTGTACATCTTCCCTAAATCGATC
CATGTTACCACATAGTAGTTTTAGTTTAGGATTCAGTAACAGTGAAGTGTTTACTATGTGCAAGGGTATTGAAGT
TCTTATGACCACAGATCATCAGTACTGTTGTCTCATGTAATGCTAAAACGAAATGGTCCGTGTTTGCATTGTTA
AAAATGATGTGTGAAATAGAATGAGTGCTATGGTGTTGAAAACGTCAGTGTCCGTTATGAGTGCCAAAAATCTGT
CTTGAAGGCAGCTACACTTTGAAGTGGTCTTTGAATACTTTAATAAAATTTATTTTGATAAATAATATTG

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FIGURE 207

MQSAMFLAVQHDCRPMDKSAGSGHKSEKREKMKRTLLKDWKTRLSYFLQNSSTPGKPKTGKKSQQAFIKPSPE
EAQLWSEAFDELLASKYGLAAFRFLKSEFCEENIEFWLACEDFKKTKSPQKLSSKARKIYTDFIEKEAPKEINI
DFQTKTLIAQNIQEATSGCFTTAQKRVYSLMENNSYPREFLESEFYQDLCKKPQITTEPHAT

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FIGURE 208

CTGCTCGCGGCCGCCACCGCCGGGCCCCGGCCGTCCCTGGCTCCCCTCCTGCCTCGAGAAGGGCAGGGCTTCTCA
GAGGCTTGCGGGGAAAAAAGAACGGAGGGAGGGATCGCGCTGAGTATAAAAGCCGGTTTTTCGGGGCTTTATCTAA
CTCGCTGTAGTAATTCCAGCGAGAGGCAGAGGGAGCGAGCGGGCGGCCGGCTAGGGTGGAAGAGCCGGGCGAGCA
GAGCTGCGCTGCGGGCGTCTTGGGAAGGGAGATCCGGAGCGAATAGGGGGCTTCGCCTCTGGCCAGCCCTCCCC
CTTGATCCCCCAGGCCAGCGGTCCGCAACCCCTTGCCGCATCCACGAACTTTGCCCATAGCAGCGGGCGGGCACT
TTGCACTGGAACCTTACAACACCCGAGCAAGGACGCGACTCTCCCGACGCGGGGAGGCTATTCTGCCATTTGGGG
ACACTTCCCCGCCGCTGCCAGGACCCGCTTCTCTGAAAGGCTCTCCTTGACAGCTGCTTAGACGCTGGATTTTTTT
CGGGTAGTGGAACCAGCAGCCTCCCGCGACGATGCCCCCTCAACGTTAGCTTCACCAACAGGAACATGACCTC
GACTACGACTCGGTGCAGCCGTATTTCTACTGCGACGAGGAGGAGAACTTCTACCAGCAGCAGCAGCAGAGCGAG
CTGCAGCCCCCGCGCGCCAGCGAGGATATCTGGAAGAAATTCGAGCTGCTGCCACCCCGCCCTGTCCCCTAGC
CGCCGCTCCGGGCTCTGCTCGCCCTCCTACGTTGCGGTACACCCCTTCTCCCTTCGGGGAGACAACGACGGCGGT
GGCGGGAGCTTCTCCACGGCCGACCAGCTGGAGATGGTGACCGAGCTGCTGGGAGGAGACATGGTGAACCAGAGT
TTCATCTGCGACCCGSACGACGAGACCTTCATCAAAAACATCATCATCCAGGACTGTATGTGGAGCGGCTTCTCG
GCCGCCCAAGCTCGTCTCAGAGAAGCTGGCCTCCTACCAGGCTGCGCGCAAAGACAGCGGCAGCCCGAACCCC
GCCCCGCGCCACAGCGTCTGCTCCACCTCCAGCTTGTAACCTGCAGGATCTGAGCGCCCGCCCTCAGAGTGCATC
GACCCCTCGGTGGTCTTCCCCTACCCTCTCAACGACAGCAGCTCGCCCAAGTCCTGCGCCTCGCAAGACTCCAGC
GCCTTCTCTCCGTCTCTCGGATTCTCTGCTCTCCTCGACGGAGTCTTCCCCGAGGGCAGCCCCGAGCCCCTGGTG
CTCCATGAGGAGACACCGCCCACCACGAGCAGCGACTCTGAGGAGGAACAAGAAGATGAGGAAGAAATCGATGTT
GTTTCTGTGGAAAAGAGGCAGGCTCCTGGCAAAAGGTCAGAGTCTGGATCACCTTCTGCTGGAGGCCACAGCAAA
CCTCCTCACAGCCCACTGGTCTCTCAAGAGGTGCCACGTCTCCACACATCAGCACAACTACGCAGCGCCTCCCTCC
ACTCGGAAGGACTATCCTGCTGCCAAGAGGGTCAAGTTGGACAGTGTGAGAGTCTGAGACAGATCAGCAACAAC
CGAAAATGCACCAGCCCCAGGTCTCGGACACCGAGGAGAATGTCAAGAGGCGAACACACAACGTCTTGAGCGC
CAGAGGAGGAACGAGCTAAAACGAGCTTTTTTGCCCTGCGTGACCAGATCCCGGAGTTGGAAAACAATGAAAAG
GCCCCAAGGTAGTTATCCTTAAAAAAGCCACAGCATAACATCCTGTCCGTCCAAGCAGAGGAGCAAAAGCTCATT
TCTGAAGAGGACTTGTTGCGGAAACGACGAGAACAGTTGAAACACAACTTGAACAGCTACGGAACCTTGTGCG
TAAGGAAGTAAGGAAAACGATTCTTCTAACAGAAATGTCTGAGCAATCACCTATGAACCTGTTTCAAATGC
ATGATCAAATGCAACCTCACACCTTGGCTGAGTCTTGAGACTGAAAGATTTAGCCATAATGTAAACTGCCTCAA
ATTGGACTTTGGGCATAAAAGAACTTTTTTATGCTTACCATCTTTTTTTTTCTTTAACAGATTTGTATTTAAGA
ATTGTTTTTAAAAAATTTTAA

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FIGURE 209

MPLNVSFNTRNYDLDDYDSVQPYFYCDEEENFYQQQQQSELOPPAPSEDIWKKFELLPTPPLSPSRRSGLCSPSYV
AVTPFSLRGDNDGGGGSFSTADQLEMVTELLGGDMVNQSFICDPDDETFIKNIIIQDCMWSGFSAAAKLVSEKLA
SYQAARKDSGSPNPARGHSVCSTSSLYLQDLSSAAASECIDPSVVFPYPLNDSSSPKSCASQDSSAFSPSSDSLLS
STESSPQGSPEPLVLHEETPPTTSSDSEEEQEDEEEIDVVSVEKRQAPGKRSESGSPSAGGHSKPPHSPLVLKRC
HVSTHQHNYAAPPSTRKDYPAAKRVKLDVSRVLRQISNNRKCTSPRSSDTEENVKRRTHNVLERQRRNELKRSFF
ALRDQIPELENNEKAPKVVLKKATAYILSVQAEEQKLISEEDLLRKRREQLKHKLEQLRNSCA

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FIGURE 210

GGCAGGCATGGGAGCCGCGCGCTCTCTCCCGGCGCCACACCTGTCTGAGCGGCGCAGCGAGCCGCGGCCCGGGC
GGGCTGCTCGGCGCGGAACAGTGCTCGGCATGGCAGGGATTCCAGGGCTCCTCTTCCTTCTCTTCTTTCTGCTCT
GTGCTGTTGGGCAAGTGAGCCCTTACAGTGCCCCCTGGAAACCCACTTGGCCTGCATACCGCCTCCCTGTCGTCT
TGCCCCAGTCTACCTCAATTTAGCCAAGCCAGACTTTGGAGCCGAAGCCAAATTAGAAGTATCTTCTTCATGTG
GACCCAGTGTCATAAGGGAACTCCACTGCCCCACTTACGAAGAGGCCAAGCAATATCTGTCTTATGAAACGCTCT
ATGCCAATGGCAGCCGCACAGAGACGCAGGTGGGCATCTACATCCTCAGCAGTAGTGGAGATGGGGCCCCAACACC
GAGACTCAGGGTCTTCAGGAAAGTCTCGAAGGAAGCGGCAGATTTATGGCTATGACAGCAGGTTTACGATTTTTG
GGAAGGACTTCCTGCTCAACTACCTTTCTCAACATCAGTGAAGTTATCCACGGGCTGCACCGGCACCCTGGTGG
CAGAGAAGCATGTCTCACAGCTGCCCCACTGCATACAGATGGAAAAACCTATGTGAAAGGAACCCAGAAGCTTC
GAGTGGGCTTCCTAAAGCCCCAAGTTTAAAGATGGTGGTTCGAGGGGCCAACGACTCCACTTCAGCCATGCCCCGAGC
AGATGAAATTTTCAGTGGATCCGGGTGAAACGCACCCATGTGCCCAAGGGTTGGATCAAGGGCAATGCCAATGACA
TCGGCATGGATTATGATTATGCCCTCCTGGAACCTCAAAAAGCCCCACAAGAGAAAATTTATGAAGATTGGGGTGA
GCCCTCCTGCTAAGCAGCTGCCAGGGGGCAGAATTCACCTTCTCTGTTATGACAATGACCGACCAGGCAATTTGG
TGTATCGCTTCTGTGACGTCAAAGACGAGACCTATGACTTGCTCTACCAGCAATGCGATGCCAGCCAGGGGCCA
GCGGGTCTGGGGTCTATGTGAGGATGTGGAAGAGACAGCAGCAGAAGTGGGAGCGAAAAATTTATTGGCATTTTTT
CAGGGCACCAAGTGGGTGGACATGAATGGTTCACAGGATTTCAACGTGGCTGTCAGAATCACTCCTCTCAAAT
ATGCCCAGATTTGCTATTGGATTAAAGGAACTACCTGGATTGTAGGGAGGGGTGACACAGTGTCCCTCCTGGC
AGCAATTAAGGGTCTTCATGTTCTTATTTTAGGAGAGGCCAAATTGTTTTTTGTCATTGGCGTGCACACGTGTGT
GTGTGTGTGTGTGTGTGTGTAAGGTGTCTTATAATCTTTTACCTATTTCTTACAATTGCAAGATGACTGGCTTTA
CTATTTGAAACTGGTTTGTGTATCATATCATATATCATTTAAGCAGTTTGAAGGCATACTTTTGCATAGAAATA
AAAAAATACTGATTTGGGGCAATGAGGAATATTTGACAATTAAGTTAATCTTCACGTTTTTGCAAACTTTGATT
TTTATTTTCATCTGAACCTGTTTCAAAGATTTATATTAAATATTTGGCATAACAAGAGATATGA

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FIGURE 211

MAGIPGLLFLLFFLLCAVGQVSPYSAPWKPTWPAYRLPVVLPQSTLNLAKPDFGAEAKLEVSSSCGPQCHKGTPL
PTYEEAKQYLSYETLYANGSRTETQVGIYILSSSGDGAQHRDSGSSGKSRRKRQIYGYDSRFSIFGKDFLLNYPF
STSVKLSTGCTGTLVAEKHVLTAAHCIHDGKTYVKGTQKLRVGFLKPKFKDGGRGANDSTSAMPEQMKEQWIRVK
RTHVPKGWIKGNANDIGMDYDYALLELKKPHKRKFMKIGVSPPAKQLPGGRIHFSGYDNDRPGNLVYRFCDVKDE
TYDLLYQQCDAQPGASGSGVYVRMWKRQQQKWERKIIGIFSGHQWDMNGSPQDFNVAVRITPLKYAQICYWIKG
NYLDCREG

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FIGURE 212A

GGGACCGACGACACGCCCCCTCTCCTCCTTTGTTCCGGGGGTGCGCGGCCGCTCTCCTGCCAGAGCTCGGGATC
TCGGCCCCGGGAGGCGGGCGCTCGGGCGCAGCCGCGAAGATGCCGTTGGAAGTACGCGAGAGCCGAGTGCAGAAG
ATCTGGGTGCCCCGTGGACCACAGGCCCTCGTTGCCAGATCCTGTGGGCCAAAGCTGACCAACTCCCCACCGTC
ATCGTCATGGTGGGCCTCCCCGCCGGGGCAAGACCTACATCTCCAAGAAGCTGACTCGCTACCTCAACTGGATT
GGCGTCCCCACAAAAGTGTTCACGTGCGGGAGTATCGCCGGGAGGCTGTGAAGCAGTACAGCTCCTACAACTTC
TTCCGCCCCGACAATGAGGAAGCCATGAAAGTCCGGAAGCAATGTGCCTTAGCTGCCTTGAGAGATGTCAAAAGC
TACCTGGCGAAAGAAGGGGGACAAATTGCGGTTTTTCGATGCCACCAATACTACTAGAGAGAGGAGACACATGATC
CTTCATTTTGCCAAAGAAAATGACTTTAAAGCGTTTTTCATCGAGTCGGTGTGCGACGACCCTACAGTTGTGGCC
TCCAATATCATGGAAGTTAAAATCTCCAGCCCGGATTACAAAGACTGCAACTCGGCAGAAGCCATGGACGACTTC
ATGAAGAGGATCAGTTGCTATGAAGCCAGCTACCAGCCCCCTCGACCCCGACAAATGCGACAGGGACTTGTGCGCTG
ATCAAGGTGATTGACGTGGGCCGGAGGTTCTTGGTGAACCGGGTGCAGGACCACATCCAGAGCCGCATCGTGTAC
TACCTGATGAACATCCACGTGCAGCCGCGTACCATCTACCTGTGCCGGCAGCGCGAGAACGAGCACAACCTCCAG
GGCCGCATCGGGGGCGACTCAGGCCTGTCCAGCCGGGGCAAGAAGTTTGCCAGTGCTCTGAGCAAGTTTCGTGGAG
GAGCAGAACCTGAAGGACCTGCGCGTGTGGACCAGCCAGCTGAAGAGCACCATCCAGACGGCCGAGGCGCTGCGG
CTGCCCTACGAGCAGTGAAGGCGCTCAATGAGATCGACGCGGGCGTCTGTGAGGAGCTGACCTACGAGGAGATC
AGGGACACCTACCCTGAGGAGTATGCGCTGCGGGAGCAGGACAAGTACTATTACCGCTACCCACCGGGGAGTCC
TACCAGGACCTGGTCCAGCGCTTGGAGCCAGTGATCATGGAGCTGGAGCGGCAGGAGAATGTGCTGGTTCATCTGC
CACCAGGCCGTCTGCGCTGCCTGCTTGCCTACTTCTTGGATAAGAGTGCAGAGGAGATGCCCTACCTGAAATGC
CCTCTTCACACCGTCTGAAACTGACGCCTGTGCTTATGGCTGCCGTGTGGAATCCATCTACCTGAACGTGGAG
TCCGTCTGCACACACCGGGAGAGGTGAGAGGATGCAAAGAAGGGACCTAACCCGCTCATGAGACGCAATAGTGTG
ACCCCGCTAGCCAGCCCCGAACCCACCAAAAAGCCTCGCATCAACAGCTTTGAGGAGCATGTGGCCTCCACCTCG
GCCGCCCTGCCAGCTGCCTGCCCCCGAGGTGCCACGCAGCTGCCTGGACAAAACATGAAAGGCTCCCGGAGC
AGCGCTGACTCCTCCAGGAAACACTGAGGCGAGACGTGTGCGTTCCATTCCATTTCATTCTGCAGCTTAGCTTG
TGCTCTGCCCTCCGCCCGAGGCAAAACGTATCCTGAGGACTTCTTCCGGAGAGGGTGGGGTGGAGCAGCGGGGA
GCCTTGGCCGAAGAGAACCATGCTTGGCACCGTCTGTGTCCCTCGGCCGCTGGACACCAGAAAGCCACGTGGGT
CCCTGGCGCTGCCTTTAGCCTGGGGGGCCCCACCTCCACTCTCTGGGTTCTTAGGAATGTCCAGCCTCGGAGAC
CTTCACAAAGCCTTGGGAGGGTGATGAGTGTGCTGCTGACAAGAGGCCGCTGGGGACACTGTCCGTTTTGTTTC
GTTTCTGTGATCTCCCGGCACGTTTGGAGCTGGGAAGACCACACTGGTGGCAGAATCCTAAAATTAAAGGAGGCA
GCCTCCTAGTTGCTGAAAGTTAAGGAATGTGTAACCTCCACGTGACTGTTTGGTGCATCTTGACCTGGGAAGA
CGCCTCATGGGAACGAACTTGGACAGGTGTTGGGTTGACCCCTCTTCTGCAGGAAGTCCCTGAGCTGAGACGCAA
AGTTGGCTGGGTGGTGGTCCGCACCTGGCTCCTGCAGGTCCACACACCTTCCAGGCCTGTGGCCTGCCTCCAAA
GATGTGCAAGGGCAGGCTGGCTGCACGGGGAGAGGGAAGTATTTTGCCGAAATATGAGAACTGGGGCCTCCTGCT
CCCAGGGAGCTCCAGGGCCCCCTCTCTCCTCCACCTGGACTTGGGGGGAAGTGAAGAACTTCTTGGAGCTGC
TGGCTTTTGCACCTTTTTGATGGCAGAAGTGTGACCTGAGAGTCCACCTTCTCTCAGGAACGTAGATGTGGG
GTGTCTTGCCCTGGGGGGCTTGAACCTCTGAAGGTGGGGAGCGGAACACCTGGCATCCTTCCCCAGCACTTGCA
TTACGGTCCCTGCTCTTCCAAGGTGGGGACAGTGGCCCAAGCAAGGCCTCACACGCAGCCACTTCTTCAAGAGCT
GCCTGCACACTGTCTTGGAGCATCTGCCTTGTGCTGGCACTCTGCCGCTGCCTTGGGAAGGTGCGTAAGAGTGG
ACTTTGTCTGGGCTTCCCTTCATGGCGTCTAGACACTTTTGTGGTGATGGAAAGCATGGGACCTGTGCTCTCAG
CCTGTTGGTTTTCTCCTCATTCCTCAAACCTGGGGTAGGTGGAACGGGGGGTCTCGTGCCAGATGAAACCATT
TGGAACCTCGGCAGCAGAGTTTGTCCAAATGACCCTTTTCAGGATGTCTCAAAGCTTGTGCCAAAGGTCACTTTT
CTTTCTGCCTTCTGCTGTGAGCCCTGAGATCCTCCTCCAGCTCAAGGGACAGGTCTGGGTGAGGGTGGGAGA
TTTAGACACCTGAAACTGGGCGTGGAGAGAAGAGCCGTTGCTGTTTGTTTTTTGGGAAGAGCTTTTAAAGAATGC
ATATTTTTTTTACCTGGTTGGAATTGAGTAGGAACTGAGGCTGTGCTTCAGGTATGGTACAATCAAGTGGGGGATT
TTCATGCTGAACCCATTCAAAGCCCTCCCCGTCCCCGATTTCCAGGCCACCTTTGGCTGGCGTCTGCTGGAGA
GGATGTCTCTGTGCAATTCCCGTGCAGCTCAGCTCGCGCAGGTTTTCTCTCTCTCCTGGATGTTGAGCTCTCAT
CAGAATATGTGGGTGGGGGGTGGACGTGCACGGGTGCATGATTGTGCTTAACTTGGTTGATTTTTTCGATTTGAC
ATGGAAGCCTGTTGCTTTGCTCTAGAGAATAGTTTTCTCGTGTCCCTTCGCACGCCTCATTTTGAACCTCATC
TCTGATGTTTGATACAGATGGGGGCTTGATAGCTGTGGTCCCCTTTCCCTTCTGACTACGTGAAAATCAATACCT

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FIGURE 212B

AAATACAGAAGCCTTGGTCTAAACACCGAGACTTTTAGTTTGCGAAGGGGCTTAGATAGGGAGAGAGGTAACATG
AATCTGGACAGGGGAGGGAGATACTATAGAAAGGAGAACACTGCATACTTTGCAAAGCCAGTGACCTCCTTTTGA
AGGGGACATTGGACGGGGGCCGGGGCGGGGGTTTCGGTTTGACTACCGTCATGAACTTTTGGCGTATACTGATTC
CTCCAACCTCTCCACCCACAAAATAACGGGGACCAATATTTTTAACTTTGCCTATTTGTTTTGGGTGAGTTTCC
CCCCTCCATTATTCTGTCTGAGACCACGGGGCAAAGCTCTTCCATTTTGAGAGAGAAGAAAACTGTTTGAACC
ACACCAATGATATTTTTCTTTGTAATACTTGAAATTTATTTTTTTATTATTTTGATAGCAGATGTGCTATTTATT
TATTTAATATATGTATAAGGAGTCCTAAACAATAGAAAGCTGTAGAAGCTGTAGAGATAGGCTTCAGTTGTTAAT
TGGTTTGGAGCCTCCTATGTGTGACTTATGACTCTCTGTGTTCTGTGTATTTGTCTGAATTAATGACCTGGGATA
TAAAGCTATGCTAGCTTTCAAACAGGAGATGCCTTCAGAAAGCTTTGTATATTTGCAGTTGCCAGACCAATAAA
ATACCTGGTTGAAATACATGGACGAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 213

MPLELTQSRVQKIWVPVDHRPSLPRSCGPKLTNSPTVIVMVGLPARGKTYISKKLTRYLNWIGVPTKVFNVGEYR
REAVKQYSSYNFFRPDNEEAMKVRKQCALAALRDVKSYLEGGQIAVFDATNTTRERRHMILHFAKENDFKAFF
IESVCDDPTVVASNIMEVKISSPDYKDCNSAEAMDDFMKRISCYEASYQPLDPDKCDRDLSLIKVIDVGRREFLVN
RVQDHIQSRIVYYLMNIHVQPRTIYLCRHGENEHNHQGRIGGDSGLSSRGKKFASALSKFVEEQNLKDLRVWTSQ
LKSTIQTAELRLPYEQWKALNEIDAGVCEELTYEEIRDTYPEEYALREQDKYYRYPTGESYQDLVQRLEPVIM
ELERQENVLVICHQAVLRCLLAYFLDKSAEEMPYLKCPHVLKLTVPVAYGCRVESIYLNVESVCTHRERSEDAK
KGPNFLMRRNSVTPLASPEPTKKPRINSFEEHVASTSAALPSCLPPEVPTQLPGQNMKGSRSSADSSRKH

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FIGURE 214

GCGCCGCGGCGCGGAGTCCCGGCTGCGGGATAGACCGAGGGCCATGGCCGCCTCTCCCGGACCCGCCGGCGTTGG
CGGCGCCGGAGCAGTCTACGGCTCCGGCTCTTCGGGCTTCGCCCTCGACTCGGGACTGGAGATCAAACTCGCTC
GGTGGAGCAGACGCTACTCCCGCTGGTTTCTCAGATCACCACGCTTATTAATCATAAAGATAATACCAAAAAGTC
TGATAAACTCTGCAAGCAATTCAGCGTGTAGGACAAGCTGTCAACTTGGCAGTTGGAAGATTTGTTAAAGTAGG
AGAAGCTATAGCCAATGAAAAGCTGGGATTTGAAAGAAGAAATAAATATTGCTTGTATTGAAGCTAAACAAGCAGG
AGAAACAATTGCAGCACTTACAGACATAACCAACTTGAACCATCTGGAATCTGATGGGCAGATCACAATTTTTAC
AGACAAAACAGGAGTGATAAAGGCTGCAAGATTACTTCTTCTTCAGTGACAAAAGTGTTGTTGCTGGCAGACCG
AGTAGTCATTAAACAGATAATAACATCAAGAAATAAGGTTCTCGCAACTATGGAAAGACTAGAGAAAGTGAATAG
CTTCAAGAGTTTGTCCAAATATTCAGTCAATTTGGAAATGAAATGGTGGAGTTTGCACATCTGAGTGGAGATAG
ACAAAATGATTTGAAAGATGAAAAGAAAAGGCCAAAAATGGCAGCAGCTAGGGCAGTTCTTGAAAAGTGTACAAT
GATGCTTCTCACAGCTTCAAAGACATGTCTGAGGCATCCTAACTGCGAATCAGCCATAAAAAACAAAGAAGGAGT
ATTTGACCGTATGAAAGTGGCATTGGATAAGGTCATTGAAATTGTGACTGACTGTAAACCGAATGGAGAGACTGA
CATTTTCATCTATCAGTATTTTTACTGGAATTAAGGAATTCAAGATGAATATTGAAGCTCTTCGGGAGAATCTTTA
TTTTCAGTCCAAAGAGAACCCTTTCTGTGACATTGGAAGTCATCTTGGAGCGTATGGAGGACTTTACTGATTCTGC
CTACACCAGCCATGAGCACAGAGAACGCATCTTGGAACTGTCAACTCAGGCGAGAATGGAAGTGCAGCAGTTAAT
TTCTGTGTGGATTCAAGCTCAAAGCAAGAAAACAAAAAGCATCGCTGAAGAACTGGAAGTCAAGTATTTTGAAAAT
CAGTCACAGTCTTAATGAAGTAAAGAAAGAACTTCATAGTACAGCGACACAGCTGGCAGCAGATCTATTAAATA
CCATGCTGATCATGTGGTTCTAAAAGCATTAAAGCTTACTGGAGTAGAAGGAAATTTAGAAGCTTTGGCTGAATA
TGCCTGTAACTCTCTGAACAGAAAGAGCAGCTTGTGAGACCTGTCGATTGTTACGACACATATCTGGGACAGA
ACCTCTGGAAATAACCTGTATACATGCAGAGGAGACATTCAGGTGACTGGCCAACAGATAATTTCTGCTGCTGA
AACATTGACATTGCATCCATCTAGTAAAATTGCTAAAGAAAACCTAGATGTATTTTGTGAAGCTTGGGAATCCCA
AATTAGTGACATGTCAACACTGCTGAGAGAAATCAATGACGTGTTTGAAGGAAGACGAGGAGAGAAGTATGGCTA
CCTTTCACTTCCAAAGCCAATGAAGAATAATGCAAACCTGAAATCATTAAAGCCAGACAAGCCTGACTCTGAGGA
GCAAGCCAAGATAGCAAAGCTTGGACTTAAAGCTGGGTTTGCTCACCTCTGACGCTGACTGCGAAATTGAGAAGTG
GGAAGATCAGGAGAATGAGATTGTTCAATATGGACGGAACATGTCCAGTATGGCCTATTCTCTGTATTTATTTAC
TAGAGGAGAGGGGCCACTGAAAAGCTTCCCAGGATTTAATTCATCAACTAGAGGTTTTTGCTGCAGAGGGTTTAAA
GCTTACTTCCAGTGTTCAGCTTTTTTCAAAACAGCTGAAAGACGATGACAAGCTTATGCTTCTCCTGGAAATAAA
CAAGCTAATTCCTCTATGCCACCAGCTCCAGACAGTAACTAAGACTTCTTTGCAGAATAAAGTATTTCTAAAGGT
TGACAAGTGTATTACGAAGACAAGATCCATGATGGCTCTCTTAGTCCAACCTCTTTCACTTTGTTATAAACTGCT
GAAGAAGCTTCAGATGGAAAATAACGGATGGGTCTCAGTTACAAATAAGGACACTATGGATAGTAAAGCTTCGAGA
AGCTTTTGGGGTCAGATCTCTGGAACATCATGTGATGAAGCTGACATTTTAAAAATCAAATGATCCTTTATCTT
TTCAGAAATTCATCAATTTTATAAAGAAAACAATATTGAAATTTTGCTCTATTTTCTGATCATGAAAGTGAATTGT
AAAGCTTTTGGACAATAAATGTCTTGGTAATTGCTAGATTCT

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FIGURE 215

MAASPGPAGVGGAGAVYGS SSGFALDSGLEIKTRSVEQTLLPLVSQITTLINHKDNTKKS DKT LQAIQRVGQAV
NLAVGRFVKVGEAIANENWDLKEEINIACIEAKQAGETIAALTDITNLNHLESDGQITIFTDKTGVIKAARLLLS
SVTKVLLLADRVVIKQIITSRNKVLATMERLEKVN SFQEFVQIFSQFGNEMVEFAHLSGDRQNDLKDEKKKAKMA
AARAVLEKCTMMLLTASKTCLRHPNCESAHKNKEGVFDRMKVALDKVIEIVTDCKPNGETDISSISIFTGIKEFK
MNI EALRENLYFQSKENLSVTLEVILERMEDFTDSAYTSHEHRERILELSTQARMELQQLISVWIQAQSKKTKSI
AEELELSILKISHSLNELKKELHSTATQLAADLLKYHADHVVLKALKLTGVEGNLEALAEYACKLSEQKEQLVET
CRLLRHISGTEPLEITCIHAEETFQVTGQQIISAAETLTLHPSSKIAKENLDVFCEAWESQISDMSTLLREINDV
FEGRRGEKYGYLSLPKPMKNNANLKS LKPD KPDSEEQAKIAKLGLKLGLLTSDADCEIEKWEDQENEIVQYGRNM
SSMAYSLYLFTRGEGPLKTSQDLIHQLEVF AA EGLKLTSSVQAFSKQLKDDDKLMLLLEINKLIPLCHQLQTVTK
TSLQNKVFLKVDKCITKTRSMALLVQLLSLCYKLLKKLQMENNGWVSVTNKDTMDSKT

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FIGURE 216

CGAGGTTCTGGGTCGTGGGGCGGAGGGAAGAGCGGGCGGGCGGGAGGCGCCGGCGCCAGACGCGGAGGGAAGGAGC
TACGAGTAGCCGCCGAGAGGCCGCGGAGCCAGCGACGACCGACCCAGCCGAGCCGCGCCGCCGCCGCCGCCA
TGGCGGCCGCCAAGGACACTCATGAGGACCATGATACTTCCACTGAGAATACAGACGAGTCCAACCATGACCCTC
AGTTTGAGCCAATAGTTTTCTCTTCCTGAGCAAGAAATTAACACTGGAAGAAGATGAAGAGGAACTTTTTTAAAA
TGCGGGCAAACTGTTCCGATTTGCCTCTGAGAACGATCTCCCAGAATGGAAGGAGCGAGGCACTGGTGACGTCA
AGCTCCTGAAGCACAAAGGAGAAAGGGGCCATCCGCCTCCTCATGCGGAGGGACAAGACCCTGAAGATCTGTGCCA
ACCACTACATCACGCCGATGATGGAGCTGAAGCCCAACGCAGGTAGCGACCGTGCCTGGGTCTGGAACACCCACG
CTGACTTCGCCGACGAGTGCCCCAAGCCAGAGCTGCTGGCCATCCGCTTCCTGAATGCTGAGAATGCACAGAAAT
TCAAACAAAGTTTGAAGAATGCAGGAAAGAGATCGAAGAGAGAGAAAAGAAAGCAGGATCAGGCAAAAATGATC
ATGCCGAAAAAGTGGCGGAAAAGCTAGAAGCTCTCTCGGTGAAGGAGGAGACCAAGGAGGATGCTGAGGAGAAGC
AATAAAATCGTCTTATTTTATTTTCTTTTCCTCTCTTTCTTTCTTTTTTTTAAAAAATTTTACCCTGCCCTCTT
TTTCGGTTTGTTTTATTCTTTTATTTTACAAGGGACGTTATATAAAGAACTGAACTC

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FIGURE 217

MAAAKDTHEDHDTSTENTDESNHDPQFEP IVSLPEQEIKTLEEDDEEELFKMRACLFRFÀSENDLPEWKERTGDV
KLLKHKEKGAIRLLMRRDKTLKICANHYYITPMELKPNAGSDRAWVWNTHADFADEC PKPELLAIRFLNAENAQK
FKTKFEECRKEIEEREKKAGSGKNDHAEKVAEKL EALSVKEETKEDAE EKQ

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FIGURE 218A

GTGGGGTGGGGTGGGGCTGGGGGCTTGTGCGCCCTTTCAGGCTCCACCCTTTGCGGAGATTATAAATAGTCATGAT
CCCAGCGAGACCCAGAGATGCCTGTAATGGTGAGACTTTGGATCCTTCCTGAGGACGTGGAGAAAACCTTTCTGCT
GAGAAGGACATTTTGAAGGTTTTGTTGGCTGAAAAAGCTGTTTCTGGAATCACCCCTAGATCTTTCTTGAAGACT
TGAATTAGATTACAGCGATGGGGACACAGAAGGTCACCCAGCTCTGATATTTGCCATCACAGTTGCTACAATCG
GCTCTTTCCAATTTGGCTACAACACTGGGGTCATCAATGCTCCTGAGAAGATCATAAAGGAATTTATCAATAAAA
CTTTGACGGACAAGGGAAATGCCCCACCCTCTGAGGTGCTGCTCACGTCTCTCTGGTCCTTGTCTGTGGCCATAT
TTCCGTCGGGGGTATGATCGGCTCCTTTTCCGTCGGACTCTTCGTCAACCGCTTTGGCAGGCGCAATTCAATGC
TGATTGTCAACCTGTTGGCTGTCACTGGTGGCTGCTTTATGGGACTGTGTAAAGTAGCTAAGTCGGTTGAAATGC
TGATCCTGGGTCGCTTGGTTATTGGCCTCTTCTGCGGACTCTGCACAGGTTTTGTGCCCATGTACATTGGAGAGA
TCTCGCTACTGCCCTGCGGGGTGCCTTTGGCACTCTCAACCAGCTGGGCATCGTTGTTGGAATTTCTGGTGGCCC
AGATCTTTGGTCTGGAATTCATCCTTGGGTCTGAAGAGCTATGGCCGCTGCTACTGGGTTTTACCATCCTTCCTG
CTATCCTACAAAGTGCAGCCCTTCCATTTTGCCCTGAAAGTCCCAGATTTTGTCTCATTAAACAGAAAAGAAGAGG
AGAATGCTAAGCAGATCCTCCAGCGGTTGTGGGGCACCCAGGATGTATCCCAAGACATCCAGGAGATGAAAGATG
AGAGTGCAAGGATGTCAACAAGAAAAGCAAGTCACCGTGCTAGAGCTCTTTAGAGTGTCCAGCTACCGACAGCCCA
TCATCATTTCCATTGTGCTCCAGCTCTCTCAGCAGCTCTCTGGGATCAATGCTGTGTTCTATTACTCAACAGGAA
TCTTCAAGGATGCAGGTGTTCAAGAGCCCATCTATGCCACCATCGGCGCGGGTGTGGTTAATACTATCTTCACTG
TAGTTTCTCTATTTCTGGTGGAAAGGGCAGGAAGAAGGACTCTGCATATGATAGGCCTTGGAGGGATGGCTTTTT
GTTCCACGCTCATGACTGTTTTCTTTGTTATTAAAGGATAACTATAATGGGATGAGCTTTGTCTGTATTGGGGCTA
TCTTGGTCTTTGTAGCCTTCTTTGAAATTGGACCAGGCCCATTCCTGTTTATTGTGGCCGAACCTCTTCAGCC
AGGGCCCCCGCCAGCTGCGATGGCAGTGGCCGGCTGCTCCAACCTGGACCTCCAACCTCCTAGTCGGATTGCTCT
TCCCCCTCCGCTGCTCACTATTTAGGAGCCTACGTTTTTATTATCTTACCGGCTTCCTCATTACCTTCTTGGCTT
TTACCTTCTTCAAAGTCCCTGAGACCCGTGGCAGGACTTTTGAGGATATCACACGGGCCTTTGAAGGGCAGGCAC
ACGGTGCAGATAGATCTGGAAAGGACGGCGTCATGGAGATGAACAGCATCGAGCCTGCTAAGGAGACCACCACCA
ATGCTTAAGTCGTGCCTCCTTCCACCTCCCTCCCGGCATGGGAAAGCCACCTCTCCCTCAACAAGGGAGAGACCT
CATCAGGATGAACCCAGGACGCTTCTGAATGCTGCTACTTAATTCCTTTCTCATCCCACGCACTCCATGAGCACC
CCAAGGCTGCGGTTTGTGGATCTTCAATGGCTTTTTAAATTTTATTTCCTGGACATCCTCTTCTGCTTAGGAGA
GACCGAGTGAACCTACCTTCATTTTCAAGGAGGATTGGCCGCTTGGCACATGACAACTTTGCCAGCTTTTCTCCC
TTGGGTTCTGATATTGCCGCACTAGGGGATATAGGAGAGGAAAAGTAAGGTGCAGTCCCCCAACCTCAGACTTA
CCAGGAAGCAGATACATATGAGTGTGGAAGCCGGAGGGTGTATTATGTAAGAGCACCTTCCTCACTTCATACAGC
TCTACGTGGCAAATTAACCTGAGTTTTATTTATTTTATCTCTGGTTTAATTACATAATTTTTTTTTTTTTACTT
TAAGTTTCAGGATACATGTGCCGAATGTGCAGGTTTGTACATAGGTATATATATGCCATGATGGAAATATTTAT
TTTTTTAAGCGTAATTTTGCCAAATAATAAAAACAGAAGGAAATTGAGATTAGAGGGAGGTGTTTAAAGAGAGGT
TATAGAGTAGAAGATTTGATGCTGGAGAGGTTAAGGTGCAATAAGAATTTAGGGAGAAATGTTGTTTATTATTGG
AGGGTAAATGATGTGGTGCCTGAGGTCTGTACGTTACCTCTTAACAATTTCTGTCTTCAGATGGAACTCTTTA
ACTTCTCGTAAAGTCATATACCTATATAATAAAGCTACTGATTTTCTTGGAGCTTTTTTCTTTAAGATAATAGT
TTACATGTAGTAGTACTTGAAATCTAGGATTATTAACATAATATGGGCATTGTAGTTAATGATGGTTGATGGGTTT
TAATTTTGGATGGAGTCCAGGGAAAGAGAAAGTGATTTCTAGAAAGCCTGTTCCCCCTCACTGGATGAAATAACTCC
TTCTTGTAGTAGTCTCATTACTTTTGAAGTAATCCCGCCACCTATCTCGTGGGAGAGCCATCCAAATAAGAAACC
TAAATAAATTGGTTCTTGGTAGAGATTCAATATTTTTTCCACTTTGTTCTTTAGGAGATTTTAGGTGTTGATTTTC
TGTTGTATTTTAACTCATACCTTTTAAAGGAATCCCCAAAGAATGTTTATAGCAAACCTTGAATTTGTAACCTCA
GCTCTGGGAGAGGATTTTTTTCTGAGCGATTATTATCTAAAGTGTGTTGTTGCTTTAGGCTCACGGCACGCTTGC
GTATGTCTGTTACCATGTCACTGTGGTCCATGCCGAATGCCCTCAGGGGACTTGAATCTTTCCAATAAACCAGG
TTTAGACAGTATGAGTCAATGTGCAGTGTAGCCACACTTGAGAGGATGAATGTATGTGCACTGTCACTTTGCTC
TGGGTGGAAGTACGTTATTGTTGACTTATTTTCTCTGTGTTTGTTCCTACAGCCCTTTTTCATATGTTGCTCAG
TCTCCCTTTCCCTTCTTGGTGCTTACACATCTCAGACCCTTTAGCCAAACCCTTGTCAGTGACAGTATTTTGGTT
CTTAGTTCTCACTGTTCCCTCTGCTCCTGGAGCCTTTGAATAAAAATGCACGTAGCTGAGGCCGGATGCGGTGGC
TCACGCCTGTAATCCCAGCACTTTGGGAGGCCTAGGCGGGCGGTGAGGGGTTGAGACCAGTCTGGCCAACATCG
TGAAACCTGTCTCTACTAAAAATGCAAAAATTAGCCGGGCGTGGTGGCGGGCGCTGTAATCCCAGCTACTTGG

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FIGURE 218B

GAAGCTGAGGCGGGAGAATCATGTGAACCCGGGACGCAGGGGTTGCAGTGAGCGGAGATCGCATCATTGCACTCT
AGCCTGGGCCACAGGGCGAGACTCCGTCTCAAAAAAAAAAAAAATGCACATAGCTATCGAGTGTGCTTTAGCTTGA
AAAGGTGACCTTGCAACTTCATGTCAACTTTCTGGCTCCTCAAACAGTAGGTTGGCAGTAAGGCAGGGTCCCATT
TCTCACTGAGAAGATTGTGAATATTTCCATATGGATTTTCTATTGTTACTCTGGTTCTTTGTTTTAAATAAAAA
TTCTGAATGTACACG

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FIGURE 219

MGTQKVTPALIFAITVATIGSFQFGYNTGVINAPEKIIKEFINKTLTDKGNAPPSEVLLTSLWSLSVAIFSVGGM
IGSFVGLFVNRFGRNSMLIVNLLAVTGGCFMGLCKVAKSVEMLILGRLVIGLFCGLCTGFVPMYIGEISPTAL
RGAFGTLNQLGIVVGILVAQIFGLEFILGSEELWPLLLGFTILPAILQSAALPFCPEsprfLLINRKEEENAKQI
LQRLWGTQDVSQDIQEMKDESARMSQEKQVTVLELFRVSSYRQPIIISIVLQLSQQLSGINAVFYYSTGIFKDAG
VQEPYATIGAGVVNTIFTVVSLEFLVERAGRRTLHMIGLGMAFCSTILMTVSLLLKDNYNGMSFVCIGAILVFVA
FFEIGPGPIPWFIWAELFSQGPRAAMAVAGCSNWTSNFLVGLLFPSAAHYLGAYVFIIFTGFLITFLAFTFFKV
PETRGRTFEDITRAFEGQAHGADRSGKDGVMEMNSIEPAKETTTNV

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FIGURE 220A

GTGGGGTGGGGTGGGGCTGGGGGCTTGTCGCCCTTTTCAGGCTCCACCCTTTGCGGAGATTATAAAATAGTCATGAT
CCCAGCGAGACCCAGAGATGCCTGTAATGGTGAGACTTTGGATCCTTCCTGAGGACGTGGAGAAAACTTTCTGCT
GAGAAGGACATTTTGAAGGTTTTTGTGGCTGAAAAAGCTGTTTCTGGAATCACCCCTAGATCTTTCTTGAAGACT
TGAATTAGATTACAGCGATGGGGACACAGAAGGTCACCCAGCTCTGATATTTGCCATCACAGTTGCTACAATCG
GCTCTTTCCAATTTGGCTACAACACTGGGGTCATCAATGCTCCTGAGAAGATCATAAAGGAATTTATCAATAAAA
CTTTGACGGACAAGGGAAATGCCCCACCCTCTGAGGTGCTGCTCACGTCTCTCTGGTCCTTGTCTGTGGCCATAT
TTTCCGTGCGGGGTATGATCGGCTCCTTTTCCGTGCGACTCTTCGTCAACCGCTTTGGCAGGCGCAATTCAATGC
TGATTGTCAACCTGTTGGCTGTCACTGGTGGCTGCTTTATGGGACTGTGTAAAGTAGCTAAGTCGGTTGAAATGC
TGATCCTGGGTCGCTTGGTTATTGGCCTCTTCTGCGGACTCTGCACAGGTTTTGTGCCCATGTACATTGGAGAGA
TCTCGCCTACTGCCCTGCGGGGTGCCCTTGGCACTCTCAACCAGCTGGGCATCGTTGTTGGAATTCTGGTGGCCC
AGATCTTTGGTCTGGAATTCATCCTTGGGTCTGAAGAGCTATGGCCGCTGCTACTGGGTTTTACCATCCTTCCTG
CTATCCTACAAAGTGCAGCCCTCCATTTTGGCCTGAAAGTCCCAGATTTTTGCTCATTAACAGAAAAGAAGAGG
AGAATGCTAAGCAGATCCTCCAGCGGTTGTGGGGCACCCAGGATGTATCCCAAGACATCCAGGAGATGAAAGATG
AGAGTGCAAGGATGTCAACAAGAAAAGCAAGTCACCGTGCTAGAGCTCTTTAGAGTGTCCAGCTACCGACAGCCCA
TCATCATTTCCATTGTGCTCCAGCTCTCTCAGCAGCTCTCTGGGATCAATGCTGTGTTCTATTACTCAACAGGAA
TCTTCAAGGATGCAGGTGTTCAAGAGCCCATCTATGCCACCATCGGCGCGGGTGTGGTTAATACTATCTTCACTG
TAGTTTTCTCTATTTCTGGTGGAAAGGGCAGGAAGAAGGACTCTGCATATGATAGGCCCTTGAGGGGATGGCTTTTT
GTTCCACGCTCATGACTGTTTCTTTGTTATTAAAGGATAACTATAATGGGATGAGCTTTGTCTGTATTGGGGCTA
TCTTGGTCTTTGTAGCCTTCTTTGAAATTGGACCAGGCCCCATTCCCTGGTTTTATTGTGGCCGAACCTCTTCAGCC
AGGGCCCCCGCCAGCTGCGATGGCAGTGGCCGGCTGCTCCAACCTGGACCTCCAACCTTCCTAGTCGGATTGCTCT
TCCCCCTCCGCTGCTCACTATTTAGGAGCCTACGTTTTTTATTATCTTACCGGCTTCCTCATTACCTTCTTGGCTT
TTACCTTCTTCAAAGTCCCTGAGACCCGTGGCAGGACTTTTGAGGATATCACACGGGGCTTTGAAGGGCAGGCAC
ACGGTGCAAGATAGATCTGGAAAGGACGGCGTCATGGAGATGAACAGCATCGAGCCTGCTAAGGAGACCACCACCA
ATGCTCTAAGTCGTGCTCCTTCCACCTCCCTCCCGCATGGGAAAGCCACCTCTCCCTCAACAAGGGAGAGACCT
CATCAGGATGAACCCAGGACGCTTCTGAATGCTGCTACTTAATTCCTTTCTCATCCCACGCACCTCCATGAGCACC
CCAAGGCTGCGGTTTTGTTGGATCTTCAATGGCTTTTTAAATTTTATTTCTGGACATCCTCTTCTGCTTAGGAGA
GACCGAGTGAACCTACCTTCATTTCAAGAGGGATTGGCCGCTTGGCACATGACAACCTTGGCCAGCTTTTCTCTCC
TTGGGTTCTGATATTGCCGCACTAGGGGATATAGGAGAGGAAAAGTAAGGTGCAGTCCCCCAACCTCAGACTTA
CCAGGAAGCAGATACATATGAGTGTGGAAGCCGGAGGGTGTATGTAAGAGCACCTTCCTCACTTCCATACAGC
TCTACGTGGCAAATTAACCTGAGTTTTATTTATTTTATCCTCTGGTTAATTACATAATTTTTTTTTTTTACTT
TAAGTTTCAGGATACATGTGCCGAATGTGCAGGTTTGTACATAGGTATATATATGCCATGATGGAAATATTTAT
TTTTTTAAGCGTAATTTTGCCAAATAATAAAAACAGAAGGAAATTGAGATTAGAGGGAGGTGTTTAAAGAGAGGT
TATAGAGTAGAAGATTGATGCTGGAGAGGTTAAGGTGCAATAAGAATTTAGGGAGAAATGTTGTTCAATTATTGG
AGGGTAAATGATGTGGTGCTGAGGTCTGTACGTTACCTCTTAACAATTTCTGTCCTTCAGATGGAACTCTTTA
ACTTCTCGTAAAAGTCATATACCTATATAATAAAGCTACTGATTTCTTGGAGCTTTTTTCTTTAAGATAATAGT
TTACATGTAGTAGTACTTGAAATCTAGGATTATTAACATAATATGGGCATTGTAGTTAATGATGGTTGATGGGTTC
TAATTTTGGATGGAGTCCAGGGAAGAGAAAGTGATTTCTAGAAAGCCTGTTCCCTCACTGGATGAAATAACTCC
TTCTTGTAGTAGTCTCATTACTTTTGAAGTAATCCCGCCACCTATCTCGTGGGAGAGCCATCCAAATAAGAAACC
TAAAATAATTGGTTCTTGGTAGAGATTCATTATTTTTTCCACTTTGTTCTTTAGGAGATTTTAGGTGTTGATTTTC
TGTTGTATTTTAACTCATACCTTTAAAGGAATTCCTCAAGAATGTTTATAGCAAACCTGGAAATTTGTAACCTCA
GCTCTGGGAGAGGATTTTTTTCTGAGCGATTATTATCTAAAGTGTGTTGTTGCTTTAGGCTCACGGCACGCTTGC
GTATGTCTGTTACCATGTCACGTGTGGTCTATGCCGAATGCCCTCAGGGGACTTGAATCTTTCCAATAAACCAGG
TTTAGACAGTATGAGTCAATGTGCAGTGTAGCCACACTTGAGAGGATGAATGTATGTGCACTGTCACTTTGCTC
TGGGTGGAAGTACGTTATTGTTGACTTAATTTCTCTGTGTTTGTCTCTACAGCCCCCTTTTTCATATGTTGCTCAG
TCTCCCTTTTCCCTTCTTGGTGCTTACACATCTCAGACCCTTTAGCCAAACCCTTGTGAGTGACAGTATTTTGGTT
CTTAGTTCTCACTGTTCCCTCTGCTCCTGGAGCCTTTGAATAAAAATGCACGTAGCTGAGGCCGGATGCGGTGGC
TCACGCCTGTAATCCCAGCACTTTGGGAGGCCTAGGCGGGCGGTGAGGGGTCGAGACCAGTCTGGCCAACATCG
TGAAACCCTGTCTCTACTAAAAATGCAAAAATTAGCCGGGCGTGGTGGCGGGCGCCTGTAATCCCAGCTACTTGG

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FIGURE 220B

GAAGCTGAGGCGGGAGAATCATGTGAACCCGGGACGCAGGGGTTGCAGTGAGCGGAGATCGCATCATTGCACTCT
AGCCTGGGCCACAGGGCGAGACTCCGTCTCAAAAAAAAAAAAAATGCACATAGCTATCGAGTGTGCTTTAGCTTGA
AAAGGTGACCTTGCAACTTCATGTCAACTTTCTGGCTCCTCAAACAGTAGGTTGGCAGTAAGGCAGGGTCCCATT
TCTCACTGAGAAGATTGTGAATATTTCCATATGGATTTTCTATTGTTACTCTGGTTCTTTGTTTTAAATAAAAA
TTCTGAATGTACACG

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FIGURE 221

MGTQKVTPALIFAITVATIGSFQFGYNTGVINAPEKIIKEFINKTLTLDKGNAPPSEVLLTSLWSLSVAIFSVGGM
IGSFSVGLFVNRFGRNSMLIVNLLAVTGGCFMGLCKVAKSVEMLILGRLVIGLFCGLCTGFVPMYIGEISPTAL
RGAFGTNLQLGIVVGILVAQIFGLEFILGSEELWPLLLGFTILPAILQSAALPFCPESPRFLLINRKEEENAKQI
LQRLWGTQDVSQDIQEMKDESARMSQEKQVTVLELFRVSSYRQPIIISIVLQLSQQLSGINAVFYYSTGIFKDAG
VQEPIYATIGAGVVNTIFTVVSFLVERAGRRTLHMIGLGMAFCSTLMTVSLLLKDNYNGMSFVCIGAILVFVA
FFEIGPGPIPWFIWAELFSQGRPAAMAVAGCSNWTSNFLVGLLFPSAAHYLGAYVFIIFTGFLITFLAFTFFKV
PETRGRTFEDITRAFEGQAHGADRSGKDGVMEMNSIEPAKETTTNV

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FIGURE 222

GTGAAACACCCTCGGCTGGGAAGTCAGTTCGTTCTCTCCTCTCCTCTTCTTGTTTGAACATGGTGCGGACTAA
AGCAGACAGTGTTCCAGGCACTTACAGAAAAGTGGTGGCTGCTCGAGCCCCCAGAAAGGTGCTTGGTTCTTCCAC
CTCTGCCACTAATTCGACATCAGTTTCATCGAGGAAAGCTGAAAAATAAATATGCAGGAGGGAACCCCGTTTGCGT
GCGCCCAACTCCCAAGTGGCAAAAAGGAATTGGAGAATTCTTTAGGTTGTCCCCTAAAGATTCTGAAAAAGAGAA
TCAGATTCTGAAGAGGCAGGAAGCAGTGGCTTAGGAAAAGCAAAGAGAAAAGCATGTCCTTTGCAACCTGATCA
CACAAATGATGAAAAAGAATAGAACTTTCTCATTTCATCTTTGAATAACGTCTCCTTGTTTACCCTGGTATTCTAG
AATGTAAATTTACATAAATGTGTTTGTTCGAATTAGCTTTGTTGAACAGGCATTTAATTAAAAAATTTAGGTTTA
AATTTAGATGTTCAAAAGTAGTTGTGAAATTTGAGAATTTGTAAGACTAATTATGGTAACTTAGCTTAGTATTCA
ATATAATGCATTGTTTGGTTTCTTTTACCAAATTAAGTGTCTAGTTCTTGCTAAAATCAAGTCATTGCATTGTGT
TCTAATTACAAGTATGTTGTATTTGAGATTTGCTTAGATTGTTGTACTGCTGCCATTTTTATTGGTGTGTGATT
TTGGAATGGTGCCATATTGTCCTCCTTCTACTTGCTTTAAAAAGCAGAGTTAGATTTTTGCACATTAAAAAATT
CAGTATTAATT

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FIGURE 223

MVRTKADSVPGTYRKVVAARAPRKVLGSSTSATNSTSVSSRKAENKYAGGNPVCVRPTPKWQKGIGEFFRLSPKD
SEKENQIPEEAGSSGLGKAKRKACPLQPDHTNDEKE

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FIGURE 224A

CGGACGCGTGGGAACGAAGCCACCCATTACGGTATGATGATGTCAAACGTGATGCTGATGCTACAGTTACAGCCC
CTGCTGGCGCAGCCTCTCTGATTCTCTCTCCCTCTCCGCGTCCAGTGCTGGGCTTTTTTCAGACAAGTGCATCTCC
TAACCAGGTCACATTTAGCCGCGACCCACTCTCCGCCAGTCACCGGAGGCAGACCGCGGGAGGAGAGCTGAGGA
CAGCCGCGTGCCTTCGCCAGCAGCGGGGTGGGAGGAAGGACATTAAATACTGCAGAAGTCAAGACCCCCCAGG
TCGAACCCAGACCACGATGCGCGCCCCGGGCTGCGGGCGGCTGGTGCTGCCGCTGCTGCTCCTGGCCGCGGCAGC
CCTGGCCGAAGGCGACGCCAAGGGGCTCAAGGAGGGCGAGACCCCGGCAATTTTCATGGAGGACGAGCAATGGCT
GTCGTCCATCTCGCAGTACAGCGGCAAGATCAAGCACTGGAACCGCTTCCGAGACGAAGTGGAGGATGACTATAT
CAAGAGCTGGGAGGACAATCAGCAAGGAGATGAAGCCCTGGATACCACCAAGGACCCCTGCCAGAAGGTGAAGTG
CAGCCGCCACAAGGTGTGATTGCCAGGGCTACCAGCGGGCCATGTGCATCAGTCGCAAGAAGCTGGAGCACAG
GATCAAGCAGCCGACCGTGAACTCCATGGAACAAAGACTCCATCTGCAAGCCCTGCCACATGGCCAGCTTGC
CTCTGTCTGCGGCTCAGATGGCCACACTTACAGCTCTGTGTGTAAGCTGGAGCAACAGGCGTGCCTGAGCAGCAA
GCAGCTGGCGGTGCGATGCGAGGGCCCCCTGCCCCTGCCCCACGGAGCAGGCTGCCACCTCCACCGCCGATGGCAA
ACCAGAGACTTGACCGGTGAGGACCTGGCTGACCTGGGAGATCGGCTGCGGGACTGGTTCCAGCTCCTTCATGA
GAACTCCAAGCAGAATGGCTCAGCCAGCAGTGTAGCCGGCCCCGGCCAGCGGGCTGGACAAGAGCCTGGGGGCCAG
CTGCAAGGACTCCATTGGCTGGATGTTCTCCAAGCTGGACACCAGTGCTGACCTCTTCTGGACCAGACGGAGCT
GGCCGCCATCAACCTGGACAAGTACGAGGTCTGCATCCGTCCCTTCTTCAACTCCTGTGACACCTACAAGGATGG
CCGGGTCTCTACTGCTGAGTGGTGTCTTCTGCTTCTGGAGGGGAGAAGCCCCCTGCCTGGCAGAGCTGGAGCGCAT
CCAGATCCAGGAGGCCGCCAAGAAGAAGCCAGGCATCTTCATCCCGAGCTGCGACGAGGATGGCTACTACCGGAA
GATGCAGTGTGACCAGAGCAGCGGTGACTGCTGGTGTGTGGACCAGCTGGGCCTGGAGCTGACTGGCACGCGCAC
GCATGGGAGCCCCGACTGCGATGACATCGTGGGCTTCTCGGGGGACTTTGGAAGCGGTGTGCGCTGGGAGGATGA
GGAGGAGAAGGAGACGGAGGAAGCAGGCGAGGAGGCCGAGGAGGAGGAGGCGAGGCAGGCGAGGCTGACGACGG
GGGCTACATCTGGTAGACGCCCTCAGAAGCCGGCTGCCGGGGGGGACTCAACAGCAGAGCTCTGAGCAGCAGCAG
GCAACTTCGAGAACGGATCCAGAAATGCAGTCAGAAGGACCCTGCTCCACCTGGGGGGACTGGGAGTGTGAGTGT
GCATGGCATGTGTGTGGCACAGATGGCTGGGACGGGTGACAGTGTGAGTGCATGTGTGCATGCATGTGTGTATGT
GTGTGTGTGTGTGGCATGCGTGACAAATGTGTCTTGTATCCACACTGCTCCTGGCAGAGTGAGTAACCCAAAGG
CCCCCTTCGGCTCCTTGTAGCTGTTTTCTTTCTTTTGTGTTGGTTTTTAAAATACATTACACACAAATACAAA
TTGACAGGTCAAAATCCATGAAATGAGATCCCCAGCCGTGTCTCCAGCCCAGCCCTGACCCCTTGGTTTTCTAC
CCTGGCTCCCCCTTGGTTTTCTACCCTGGCTCAACCGACCCCTGTCTGCCCTTCTCCCTCCTGCTTCTGAGGTCAAG
CTCTGGCCTGCGAGCCTGTCCCCATTGCAAAGGGGAGGGAGGGGCAGGGAGCTGTCTACCAGCTGAGGTCTCTCC
AAAATGGGCCGATGTGGTGTGACATCCCCACCAGCCTCAGATGAGACGGGCCAGGACGCCCAGCCACAGCAAGC
CCTGTCCCTTTGCCGGATCCCCAAACACTAGAGAAGCTCTCTAACCCAAGGCGGAGAATGAAGGTGGTGGCGGC
AGAGGAGGAGGGCAGCAGCTGAGAGGCCAGGGACAGGTGCCTCGCCAAGCTGTCTGAGGTCTGTCCAGGTGGC
CCAGGTGGTGCAGGTAGAACAGGTGAGGAGAGGGGGTGGCTCAACAGGAGGAGGCTGTGGCTGCAGAGCCTGG
AGGAGCTTTTAGGTGTTGAGATGGGGCAGCTCTGAATCCTAGACCCTGGAATAGCCTGTCCCTTTTCTCTGGGTC
TCGTGGTGGAGCCATGATCTGGGCTGCTCTCTTGGGGACACTGGGTGGTGGTTACACAGTTGACCTCTGCCTGGC
TCCCCCTTGGTGCAACTCCTGCCTCCATCCCCCTTGTGGGGTCCCCCTCATCCACTTGAGGGCGCCTGAGGGCCA
GGAGCAGCAGGCAAGGAGCCTGGGTCTAGGCTAAGGGGGTGTGTGCCACCTCCTCCCTGACCCCTTAACACTCCT
GTCTTGGCCAGACCAACAGAGAGAGCTGTCCCTGAGACCCCGAGAGAAGCAGCTGCCGAAAGCTGCAGCCTTTC
CGCACTCTGAGACCATGATCTTCTCCTGCCAGGGGAGAGCCACCCACAGGCCATGTCCAGCCCCACTTCCCTCA
GCCCCAGGGCTTCTTCTGGCCCCCTCTGAGGATTCCCTAGGGCTGCCCGCAGAGGGGCTTCCCCAAGCTCTGT
TTTGAAGCCTGCAATGTGGAAGAGTGAGAAGTCAGAGGGAACAGGACAGGTGCAGCCGGGCTCTGAGGCCACACC
TCACACCTCGCTGTTCCCCAACATCCCCCTGAGCAGTGTGAGCTCATCTACCAGATGAGAAGAGGCCCTGTGCAT
TTCTTTTGTGTTGTTGTTGCTGTTTTCCCCCACCCATCCAGTTCTCCTCAGCAAAGCAAATTCCTTAACACCTTT
GGTGGAGAATTTCTTACCCAGACTTGGGGCTGTGATGCCCTTCAGTGCGTGGTGAGTGCAGCGTGTGTGCGTGTG
CCTGTGTGTGAACCTGGGGGCCATCCTGGTGGCCTGGGAGCGTGAGGAGAGGCCCCCTGTGTGCTGGGTGAGTGG
TGGGTGTGGGGTCAATGCAGTGAGGCTCTCTGGGTGAGGCTCCCAACCTGGCAGTCCCCAGCCTCCAGCATCTG
TGAGCGTCTGTTGGACTTTACAGAAGAGCCTCATCCCGTCTGCCCTCACTCTGCCCTGGAATCAACATCTTCCG
AGTCCTTCTTGGGGGAAATAGCAGAGCCCCACTTAACCTCATAAACTGCTTCCCATTCCGCAGCCCAGTTCTGAT

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FIGURE 224B

TGTTGAGGTGTCGCGTCGTTCCAGGTCCCCAGTCCCCTCTTTCTCCTGTCCTCTCTCTGTCCTTCACCTCCCCA
CTCCAGCCCCGGCTCAGTTCAGGGAAATGCTGTTCCATATCAGCCCTCTGCTCTCTGAGGCAGCCGCGCCTCTGA
CTCGGAGCTACTTGAAACTTCTGCTCTTGCTAGGATTGGAGTCTACCTATCTCTTCCATTTGTCCTCAGCTGGAGT
TCTGGAACCTTTCTCCTCGGGGTGGGGGTGGGGGTTGTTAAGGATGCTGGGGGGCCTGGGGAAGGAAGGAGTTCA
GAGGAAGGGTGTCCCCCTGTCTCTTGATGTCACCCTCCGCTCCTGGGACACGTGCTCTCTCTGTCTCTGGGTCTT
CTGGCTGTGCACGTTTGTGTGCTCTGTAAATATGTTTTAGGAAGAAAGCAAAAGGGACTGAACTAGCCTCTGGT
AGGATTGCAGGGGTCCAGCCTTGCTGTTCGGAAGCCCCACACTGCCTTTCGCCCCACTGAGACTGGTCCCCT
CAAAAGGTAGACAAAACAGCAGCTCCCTGTGGAGCTGAAGGGCGGCCTCAAAGTGGCTTTTTGTTAGACAAGGTT
AAGGTTTCCTCATGAGCAAGGTTGCAGATCGGTCTTCTCAGCTCCTTGATTTGTGACCTTGACCAAGGGGCCT
GCCACCCAGCCCCCTCAGTGCCTCTCTCGATGCCTCGCTCCTTCTGCCCCACTCCCCTGGCTTAGGCAGGT
AGGGGAATTAGGGCCATGCTGGAAGAAGCTTAACCATGTGTTCAAAGAACGGTTTCTTGCTTGCTTGGTCCTGGA
ACTCCCCTTGCTGCCCCAGGCCTCCTTGCCCATGGGTGCTGGGGGAGGTGGATGTCAGATCTGGTAGGTTGCA
GCAGAGAAAATAAATGTGCCTTGAGAGACCACTCAGAGAGGGTCCAAGGGTGATGGAGAAGGAAGCATGGCCTGG
GAGCTTGGAAGGGAGGGGTGGTGGGTGGCGGCATCTTGAAGTCCCCCTGTTGTCCACACGTGGGGGGTGGTCAC
CCCCCTTCACTCCAGCCCGCCTGCCTTCAGCCTTCCATGAGCTTACCTGCTTCCAACCTCACTTTGGAGGGGGT
GGGGTCCGTTGGCATCAACACGGGGACCTCTGCTTACCAAAGCCGAGCCCTCAGCCCCGAGGAGAACAAT
GGCTGAGCTTTGATACCTGGGGTCGTGAGAGGCTGCGGGCTGGCGGCAGTCCCAGGGGAGAGACACCACAGAAG
GAGACCCAGACATCCCGAGGAAGTTCCCAGCAGAGCAAACTGCTTTCCAGCCTGAAGCCTGCTTAACTGTGTGA
TGTGCAATAACTGAGCTTAGAGTTAGGAATTGTGTTCAAGTGCTTGGATTTCGTCGTAGATTAACTGCTGAA
ATTGTAICTCTCAGTAATTTTAGATGTCTTTTAAAAAATTGAAAAACAAAGTGTAGACTGTGTGCGTGTGCGTT
GATGGGCACTCAAGAGTCCCGTGAGTCATCCAGCCCTGCCTTTCCCCTGCGCCCCCATCCTCTCACGTCCCGCCC
TGCTTCCACTTGGGGACCTGCCTCGTGTGCTCTTTATCTGCCTATTACTCAGCCTAAGGAAACAAGTACACTCC
ACACATGCATAAAGGAAATCAAATGTTATTTTTAAGAAAATGGAAAATAAAAACTTTATAAACACC

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FIGURE 225

MRAPGCGRLVLP LLLLLAAAALAEGLKEGETPGNFMEDQWLSSISQYSGKIKHWNFRDEVEDDYIKSWED
NQQGDEALD TTKDPCQKVKCSRHKVCIAQGYQRAMCISRKKLEHRIKQPTVKLHGKNKDSICKPCHMAQLASVCGS
DGHTYSSVCKLEQQACLSSKQLAVRCEGPCPCPTEQAATSTADGKPETCTGQDLADLGDRLRDWFQLLHENSQN
GSASSVAGPASGLDKSLGASCKDSIGWMFSKLDTSADLFLDQTELAALNLDKYEVCIRPFFNSCDTYKDGRVSTA
EWCFCFWREKPPCLAELERIQIQEA AAKKPGIFIPSCDEDEGYRKMQCDQSSGDCWCVDQLGLELTGTRTHGSPD
CDDIVGFSGDFGSGVGWEDEEEKETEEAGEEAE EEEGEAGEADDGGYIW

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FIGURE 226A

TTCGGTGGCCTCTAGTGAGATCTGGAGGATCCAAGGATTCTGTAGCTACAATGTTGTCAAGACTTTTTTCGAATGC
ATGGCCTCTTTGTGGCCTCCCATCCCTGGGAAGTCATAGTGGGGACAGTGACACTGACCATCTGCATGATGTCCA
TGAACATGTTTACTGGTAACAATAAGATCTGTGGTTGGAATTATGAATGTCCAAAGTTTGAAGAGGATGTTTGA
GCAGTGACATTATAATTCTGACAATAACACGATGCATAGCCATCCTGTATATTTACTTCCAGTTCCAGAATTTAC
GTCAACTTGGATCAAAATATATTTTGGGIATTGCTGGCCTTTTCACAATTTTCTCAAGTTTGTATTTCAGTACAG
TTGTCAATTCATTCTTAGACAAAGAATTGACAGGCTTGAATGAAGCTTTGCCCTTTTCTACTTTTGATTGACC
TTTCCAGAGCAAGCACATTAGCAAAGTTTGCCCTCAGTTCCAACCTCACAGGATGAAGTAAGGGAAAATATTGCTC
GTGGAATGGCAATTTTAGGTCCTACGTTTACCCTCGATGCTCTTGTGTAATGCTTGTGATTGGAGTTGGTACCA
TGTCAGGGGTACGTCAGCTTGAATTATGTGCTGCTTTGGCTGCATGTCAGTTCTTGCCAACTACTTCGTGTTCA
TGACTTTCTTCCAGCTTGTGTGCTCTTGGTATTAGAGCTTTCTCGGGAAAGCCGCGAGGGTTCGTCCAATTTGGC
AGCTCAGCCATTTTGCCCGAGTTTGAAGAAGAAGAAAATAAGCCGAATCCTGTAACCTCAGAGGGTCAAGATGA
TTATGTCTCTAGGCTTGGTTCTTGTTCATGCTCACAGTCGCTGGATAGCTGATCCTTCTCCTCAAAACAGTACAG
CAGATACTTCTAAGGTTTCATTAGGACTGGATGAAAATGTGTCCAAGAGAATTGAACCAAGTGTTCCTCTGGC
AGTTTTATCTCTCTAAATGATCAGCATGGATATTGAACAAGTTATTACCCTAAGTTTAGCTCTCCTTCTGGCTG
TCAAGTACATCTTCTTTGAACAAACAGAGACAGAATCTACACTCTCATTAAAAACCCCTATCACATCTCCTGTAG
TGACACAAAAGAAAGTCCCAGACAATTGTTGTAGACGTGAACCTATGCTGGTCAGAAATAACCAGAAATGTGATT
CAGTAGAGGAAGAGACAGGGATAAACCGAGAAAGAAAAGTTGAGGTTATAAACCCCTTAGTGGCTGAAACAGATA
CCCCAACAGAGCTACATTTGTGGTTGGTAACTCCTCCTTACTCGATACTTCATCAGTACTGGTGACACAGGAAC
CTGAAATTGAACCTCCCAGGGAACCTCGGCCTAATGAAGAATGTCTACAGATACTTGGGAATGCAGAGAAAGGTG
CAAAATTCCTTAGTGATGCTGAGATCATCCAGTTAGTCAATGCTAAGCATATCCCAGCCTACAAGTTGGAACTC
TGATGGAACTCATGAGCGTGGTGTATCTATTTCGCCGACAGTTACTTTCCAAGAAGCTTTCAGAACCTTCTTCTC
TCCAGTACCTACCTTACAGGGATTATAATTACTCCTTGGTGATGGGAGCTTGTGTGAGAATGTTATTGGATATA
TGCCCATCCCTGTTGGAGTGGCAGGACCCCTTTGCTTAGATGAAAAAGAATTTTCAGGTTCCAATGGCAACAACAG
AAGGTTGTCTTGTGGCCAGCACCAATAGAGGCTGCAGAGCAATAGGCTTGTGGTGGAGGTGCCAGCAGCCGAGTCC
TTGCAGATGGGATGACTCGTGGCCAGTTGTGCGTCTTCCACGTGCTTGTGACTCTGCAGAAGTGAAAGCCTGGC
TCGAAACATCTGAAGGGTTTCGCAGTGATAAAGGAGGCATTTGACAGCACTAGCAGATTTGCACGTCTACAGAAAC
TTCATACAAGTATAGCTGGACGCAACCTTTATATCCGTTTCCAGTCCAGGTCAGGGGATGCCATGGGGATGAACA
TGATTTCAAAGGGTACAGAGAAAGCACTTTCAAACCTTCACGAGTATTTCCCTGAAATGCAGATTCTAGCCGTTA
GTGGTAACTATTGTACTGACAAGAAACCTGCTGCTATAAATTGGATAGAGGGAAGAGGAAAATCTGTTGTTTGTG
AAGCTGTCAATCCAGCCAAGGTTGTGAGAGAAGTATTAAGACTACCACAGAGGCTATGATTGAGGTCAACATTA
ACAAGAATTTAGTGGGCTCTGCCATGGCTGGGAGCATAGGAGGCTACAACGCCCATGCAGCAAAACATTGTACCCG
CCATCTACATTGCCTGTGGACAGGATGCAGCACAGAATGTTGGTAGTTCAAACCTGTATTACTTTAATGGAAGCAA
GTGGTCCCACAAATGAAGATTTATATATCAGCTGCACCATGCCATCTATAGAGATAGGAACGGTGGGTGGTGGGA
CCAACCTACTACCTCAGCAAGCCTGTTTGCAGATGCTAGGTGTTCAAGGAGCATGCAAAGATAATCCTGGGGAAA
ATGCCCGGCAGCTTGCCCGAATTGTGTGTGGGACCGTAATGGCTGGGGAATTGTCATTATGGCAGCATTGGCAG
CAGGACATCTTGTCAAAGTACATGATTACAAACAGGTGGAAGATCAATTTACAAGACCTCCAAGGAGCTTGCA
CCAAGAAGACAGCCTGAATAGCCCCGACAGTTCTGAACTGGAACATGGGCATTGGGTTCTAAAGGACTAACATAAA
ATCTGTGAATTAAAAAGCTCAATGCATTGTCTTGTGGAGGATGAATAAATGTGATCACTGAGACAGCCACTTGG
TTTTTGGCTCTTTCAGAGAGGCTCAGGTTCTTTCCATGCAGACTCCTCAGATCTGAACACAGTTTAGTGCTTTA
CATGCTGTGCTCTTTGAAGAGATTTCAACAAGAATATTGTATGTTAAAGCATCAGAGATGGTAATCTACAGCTCA
CCTCTGAAAGCAAATATAAGCTGGGAAAAAAGTTTTGATGAAATTCTTGAAGTTTCATGGTGATCAGTGCAATTGA
CCTTCTCCCTCACTCCTGCCAGTTGAAAATGGATTTTTAAATTATACTGTAGCTGATGAAACTCCTGATTTTGTA
GTTAATTTATTAAGTCTGGGATGTAGAACTTCAAGAAGTAAGAGCTAAGTTCTAAGTTTCATGTTTGTAAATTAAT
ACTTCATTGGTGCTGGTCTATTTTGATTTTGGGGGTAATCAGCATTATTCTTCAGAAGGGGACCTGTTTCTT
CAAGGGAAAGAAACACTCTTATTCCAAACCTACAGAATAATGTGTTAAACATGCTAAATAGTTCTATCAGGAAAAC
AAATCACTGTATTTATCTCCGACGGCTATTTGTTTCAGAGAGGCCCTTTGTTTAAATATAAATGTTTAAATATAAA
TGTTTGTCTGGATTGGCTATAACATGTCTTTCAGCATTAGGCTTTTAAGAAACACAGGGTTTTGTATTCTTACT
AAAGATATCAGAGCTCTAATGTTGCTTAGATGAGGGTGACTGTCAAGTACAAGCAAGACTGGGACCTTAGAAAT

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FIGURE 226B

CATTGTAGAAACACAGTTTTGAAAGATTTTTACCATGTCTCTAAGCCAACTTTAATTGCTTAAAAGACATTTTTA
TTTAGTTGAAAAATCTAGTTTTTTTTGTAAACTGTACCAAATCTGTATATGTTGTAATAAACTTATGCTAGTTT
ATTGGAAGTGTTCAAGAAATAAAAATCAACTTGTGTACTGATAAAATACTCTAGCCTGGGCCAGAGAAGATAATG
TTCTTTAATGTTGTCAGGAAACCCCTGGCTTGCTTGCCGAGCCTAATGAAAGGGAAAGTCAGCTTTCAGAGCCAGT
GAAGGAGCCACGTGAATGGCCCTAGAACTGTGCCTAGTTTCTGTGGCCAGGAGGTTGGTGACTGAAACATT CACA
CAGGGCTCTTGATGGACCCACGAACGCTCTTAGCTTTCTCAGGGGGTCAGCAGAGTTATTGAATCTTAATTTTT
TTTAATGTACAAGTTTTGTATAAATAATAAAGAACTCCTTATTTTGTATTACATCTAATGCTTAAGTGTTGCTCT
TGGAAGCTGATGATGTCTCTTGTAGAGATGACTCTGAAAAACATTCCAGGAAACCATGGCAGCATGGAGAGCCT
CTTAGTGATTGTGTCTGCATTGTTATTGTGGAAGATTTACCTTTTCTGTTGTACGTAAAGCTTAAATTACTTTTG
TTGTGACTTTTTAGCCAGTGACTTTTTCTGAGCTTTTCATGGAAGTGCCAGTGAAAAATATGTTGAGTGTTCAA
AAAGTGACTGTAATTAATATCTTGCTGGATTAATGTTTTGTACAATTACTAAATTGTATACATTTTGTATAGAA
TACTTTTTTCTAGTTTCAGTAAATAATGAAAAGGAAGTTAATACCA

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FIGURE 227

MLSRLFRMHGLFVASHPWEVIVGTVTLTICMMSMNMTGNKICGWNIECPKFEEDVLSSDIIILTITRCIAILY
IYFQFQNLRLGSKYILGIAGLFTIFSSVFSTVVIHFIDKELTGLNEALPFFLLIDLSRASTLAKFALSSNSQ
DEVRENIARGMAILGPTFTLDALVECLVIGVGTMMSGVRQLEIMCCFGCMSVLANYFVFMFFPACVSLVLELSRE
SREGRPWQLSHFARVLEEEENKPNPVTQRVKMIMSLGLVLVHAHSRWIADPSPQNSTADTSKVSGLDENVSKR
IEPSVSLWQFYLSKMISMIDIEQVITLSLALLLAVKYIFFEQTETESTLSLKNPITSPVVTQKKVPDNCCRREPML
VRNNQKCDSEEEETGINRERKVEVIKPLVAETDTPNRATFVVGNSLLDTSSVLVTQEPEIELPREPRPNEECLQ
ILGNAEKGAFLSDAEIIQLVNAKHIPAYKLETLMETHERGVSIRRQLLSKKLSEPSLQYLPYRDYNYSLVMG
CCENVIGYMPIPVGVAGPLCLDEKEFQVPMATTEGCLVASTNRGCRAIGLGGGASSRVLADGMTRGPVVRLP
DSAEVKAWLETSEGFVAVIKEAFDSTSRFARLQKLHTSIAGRNLRIYRFQSRSGDAMGMNMISKGTEKALSKLHEYF
PEMQILAVSGNYCTDKKPAAINWIEGRGKSVVCEAVIPAKVVREVLKTTTEAMIEVNINKNLVGSAMAGSIGGYN
AHAANIVTAIYIACGQDAAQNVGSSNCITLMEASGPTNEDLYISCTMPSIEIGTVGGGTNLLPQQACLQMLGVQG
ACKDNPGENARQLARIVCGTVMAGELSLMAALAAGHLVKSHMIHNRSKINLQDLQGACTKKTA

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FIGURE 228A

TTCGGTGGCCTCTAGTGAGATCTGGAGGATCCAAGGATTCTGTAGCTACAATGTTGTCAAGACTTTTTCGAATGC
ATGGCCTCTTTGTGGCCTCCCATCCCTGGGAAGTCATAGTGGGGACAGTGACACTGACCATCTGCATGATGTCCA
TGAACATGTTTACTGGTAACAATAAGATCTGTGGTTGGAATTATGAATGTCCAAAGTTTGAAGAGGATGTTTTGA
GCAGTGACATTATAATTCTGACAATAACACGATGCATAGCCATCCTGTATATTTACTTCCAGTTCCAGAATTTAC
GTCAACTTGGATCAAAAATATATTTTGGGTATTGCTGGCCTTTTACAAATTTTCTCAAGTTTTGTATTTCAGTACAG
TTGTCAATTCACCTTCTTAGACAAAAGAATTGACAGGCTTGAATGAAGCTTTGCCCTTTTCTACTTTTGATTGACC
TTTCCAGAGCAAGCACATTAGCAAAGTTTGCCCTCAGTTCCAACTCACAGGATGAAGTAAGGGAAAATATTGCTC
GTGGAATGGCAATTTTAGGTCTTACGTTTACCCTCGATGCTCTTGTTGAATGTCTTGTGATTGGAGTTGGTACCA
TGTCAGGGGTACGTCAGCTTGAAATTATGTGCTGCTTTGGCTGCATGTCAGTTCTTGCCAACACTTTCGTGTTCA
TGACTTTCTTCCCAGCTTGTTGTGCTTGGTATTAGAGCTTTCTCGGGAAAGCCGCGAGGGTCTGCCAATTTGGC
AGCTCAGCCATTTGCCCGAGTTTGAAGAAGAAGAAAATAAGCCGAATCCTGTAACCTCAGAGGGTCAAGATGA
TTATGTCTCTAGGCTTGGTTCTTGTTCATGCTCACAGTCGCTGGATAGCTGATCCTTCTCCTCAAAACAGTACAG
CAGATACTTCTAAGGTTTCATTAGGACTGGATGAAAATGTGTCCAAGAGAATTGAACCAAGTGTTCCTCTGGC
AGTTTTATCTCTCTAAAATGATCAGCATGGATATTGAACAAGTTATTACCCTAAGTTTAGCTCTCCTTCTGGCTG
TCAAGTACATCTTCTTTGAACAAACAGAGACAGAATCTACACTCTCATTAAAAAACCCATACATCTCCTGTAG
TGACACAAAAGAAAGTCCCAGACAATTGTTGTAGACGTGAACCTATGCTGGTCAGAAATAACCAGAAATGTGATT
CAGTAGAGGAAGAGACAGGGATAAACCAGAGAAAGAAAGTTGAGGTTATAAAACCCCTTAGTGGCTGAAACAGATA
CCCCAAACAGAGCTACATTTGTGGTTGGTAACTCCTCCTTACTCGATACTTCATCAGTACTGGTGACACAGGAAC
CTGAAATTGAACTTCCCAGGGAACCTCGGCCTAATGAAGAATGTCTACAGATACTTGGGAATGCAGAGAAAGGTG
CAAAATTCCTTAGTGATGCTGAGATCATCCAGTTAGTCAATGCTAAGCATATCCCAGCCTACAAGTTGGAACTC
TGATGGAAACTCATGAGCGTGGTGTATCTATTGCGCCGACAGTTACTTTCCAAGAAGCTTTCAGAACCTTCTTCTC
TCCAGTACCTACCTTACAGGGATTATAATTACTCCTTGGTGATGGGAGCTTGTGTGAGAATGTTATTGGATATA
TGCCCATCCCTGTTGGAGTGGCAGGACCCCTTTGCTTAGATGAAAAAGAATTCAGGTTCCAATGGCAACAACAG
AAGGTTGTCTTGTGGCCAGCACCAATAGAGGCTGCAGAGCAATAGGTCTTGGTGGAGGTGCCAGCAGCCGAGTCC
TTGCAGATGGGATGACTCGTGGCCAGTTGTGCGTCTTCCACGTGCTTGTGACTCTGCAGAAGTGAAAGCCTGGC
TCGAAACATCTGAAGGGTTCGCAGTGATAAAGGAGGCATTTGACAGCACTAGCAGATTTGCACGTCTACAGAAAC
TTCATACAAGTATAGCTGGACGCAACCTTTATATCCGTTTCCAGTCCAGGTCAGGGGATGCCATGGGGATGAACA
TGATTTCAAAGGGTACAGAGAAAGCACTTTCAAACCTTCACGAGTATTTCCCTGAAATGCAGATTCTAGCCGTTA
GTGGTAACCTATTGTACTGACAAGAAACCTGCTGCTATAAATTGGATAGAGGGAAGAGGAAAATCTGTTGTTGTG
AAGCTGTCAATCCAGCCAAGGTTGTGAGAGAAGTATTAAAGACTACCACAGAGGCTATGATTGAGGTCAACATTA
ACAAGAATTTAGTGGGCTCTGCCATGGCTGGGAGCATAGGAGGCTACAACGCCCATGCAGCAAAACATTGTACCG
CCATCTACATTGCCTGTGGACAGGATGCAGCACAGAATGTTGGTAGTTCAAACCTGTATTACTTTAATGGAAGCAA
GTGGTCCCACAAATGAAGATTTATATATCAGCTGCACCATGCCATCTATAGAGATAGGAACGGTGGGTGGTGGGA
CCAACCTACTACCTCAGCAAGCCTGTTTGCAGATGCTAGGTGTTCAAGGAGCATGCAAAGATAATCCTGGGGAAA
ATGCCCGGACGCTTGCCCGAATTGTGTGTGGGACCGTAATGGCTGGGGAATTGTCACTTATGGCAGCATTGGCAG
CAGGACATCTTGTCAAAAGTCACATGATTACACAACAGGTGGAAGATCAATTTACAAGACCTCCAAGGAGCTTGCA
CCAAGAAGACAGCCTGAATAGCCCCGACAGTTCTGAACTGGAACATGGGCATTGGGTTCTAAAGGACTAACATAAA
ATCTGTGAATTAAAAAGCTCAATGCATTGTCTTGTGGAGGATGAATAAATGTGATCACTGAGACAGCCACTTGG
TTTTTGGCTCTTTCAGAGAGGTCTCAGGTCTTTCCATGCAGACTCCTCAGATCTGAACACAGTTTAGTGCTTTA
CATGCTGTGCTCTTTGAAGAGATTTCAACAAGAATATTGTATGTTAAAGCATCAGAGATGGTAATCTACAGCTCA
CCTCTGAAAGCAAATATAAGCTGGGAAAAAAGTTTTGATGAAATCTTGAAGTTCATGGTGATCAGTGCAATTGA
CCTTCTCCCTCACTCCTGCCAGTTGAAAATGGATTTTTAAATTATACTGTAGCTGATGAAACTCCTGATTTTGTA
GTTAATTTATTAAGTCTGGGATGTAGAACCTCAAGAAGTAAGAGCTAAGTTCTAAGTTCATGTTTGTAATTAAT
ACTTCATTTGGTGCTGGTCTATTTTGATTTTGGGGGTAATCAGCATTATTTCTCAGAAGGGGACCTGTTTTCTT
CAAGGGAAGAAACACTCTTATTTCCAAACTACAGAATAATGTGTTAAACATGCTAAATAGTTCTATCAGGAAAC
AAATCACTGTATTTATCTCCGACGGCTATTTGTTTCAGAGAGGCCCTTTGTTTAAATATAAATGTTTAAATATAAA
TGTTTGTCTGGATTGGCTATAACATGTCTTTTCAGATTAGGCTTTTAAAGAAACACAGGGTTTTGTATTCTTTACT
AAAGATATCAGAGCTCTAATGTTGCTTAGATGAGGGTGACTGTCAAGTACAAGCAAGACTGGGACCTTAGAAAT

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FIGURE 228B

CATTGTAGAAACACAGTTTTGAAAGATTTTTACCATGTCTCTAAGCCAACTTTAATTGCTTAAAAGACATTTTTA
TTTAGTTGAAAATCTAGTTTTTTTTGTAAACTGTACCAAATCTGTATATGTTGTAATAAACTTATGCTAGTTT
ATTGGAAGTGTTCAAGAAATAAAAATCAACTTGTGTACTGATAAAATACTCTAGCCTGGGCCAGAGAAGATAATG
TTCTTTAATGTTGTCAGGAAACCCCTGGCTTGCTTGCCGAGCCTAATGAAAGGGAAAGTCAGCTTTCAGAGCCAGT
GAAGGAGCCACGTGAATGGCCCTAGAACTGTGCCTAGTTCCTGTGGCCAGGAGGTTGGTGAAGTGAACATTCACA
CAGGGCTCTTGGATGGACCCACGAACGCTCTTAGCTTTCTCAGGGGGTCAGCAGAGTTATTGAATCTTAATTTTT
TTTAATGTACAAGTTTTGTATAAATAATAAAGAACTCCTTATTTTGTATTACATCTAATGCTTAAGTGTGCTCT
TGGAAGCTGATGATGTCTCTTGTAGAGATGACTCTGAAAACATTCCAGGAAACCATGGCAGCATGGAGAGCCT
CTTAGTGATTGTGTCTGCATTGTTATTGTGGAAGATTTACCTTTTCTGTTGTACGTAAAGCTTAAATTACTTTTG
TTGTGACTTTTTAGCCAGTGACTTTTTCTGAGCTTTTCATGGAAGTGGCAGTGAAAAATATGTTGAGTGTTCAA
AAAGTGACTGTAATTAATATCTTGCTGGATTAATGTTTTGTACAATTACTAAATTGTATACATTTTGTATAGAA
TACTTTTTTCTAGTTTCAGTAAATAATGAAAAGGAAGTTAATACCA

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FIGURE 229

MLSR LFRMHGLFVASHPWEVIVGTVTLTICMMSNMFTGNKICGWNYECPKFEEDVLSSDIIILTTITRCIAILY
IYFQFQNLRLQLGSKYILGIAGLFTIFSSFVFSTVVIHFLDKELTGLNEALPFFLLIDLSRASTLAKFALSSNSQ
DEVRENIARGMAILGPTFTLDALVECLVIGVGTMSGVRQLEIMCCFGCMSVLANYFVFMTFFPACVSLVLELSRE
SREGRPWQLSHFARVLEEEENKPNPVTQRVKMIMSLGLVLVHAHSRWIADPSPQNSTADTSKVS LGLDENVSKR
IEPSVSLWQFYLSKMISMDIEQVITLSLALLLAVKYIFFEQTTETESTLSLKNPITSPVVTQKKVPDNCCRREPM L
VRNNQKCD SVEEETGINRERKVEVIKPLVAETDTPNRATFVVGNSSLLDTSSVLVTQEPEIELPREPRPNEECLQ
ILGNAEKGAFLSDAEIIQLVNAKHIPAYKLETLMETHERGVSIRRQLLSKKLSEPSSLQYLPYRDYNYSLVMGA
CCENVIGYMPIPVGVAGPLCLDEKEFQVPMATTEGCLVASTNRCRAIGLGGGASSRVLADGMTRGPVVR LPRAC
DSAEVKAWLETSEGF AVIKEAFDSTSRFARLQKLHTSIAGRNL YIRFQSRSGDAMGMNMISKGTEKALSKLHEYF
PEMQILAVSGNYCTDKKPAAINWIEGRGKSVCEAVIPAKVVREVLKTTTEAMIEVNINKNLVGSAMAGSIGGYN
AHAANIVTAIYIACGQDAAQNVGSSNCITLMEASGPTNEDLYISCTMPSIEIGTVGGGTNLLPQQACLQMLGVQG
ACKDNPGENARQLARIVCGTVMAGELSLMAALAAGHLVKSHMIHNRSKINLQDLQGACTKKTA

FIGURE 230

GGCACGAGGAAGATATATGGATACAGATTATATATATATATACATATTTTCCTTAATAGAGGAATGCTTCATATT
ATTCAAAAATTATATCCTGATCACCTTTTTTTGTTTTTTATTGTAAAGTATCTCTGCTTTATCCATTGCTGAATT
CGATAGGATGTTGAAATGCTGGTCACCAAAAAAGGAACTGAGCAAATTCATTTCAACAACATCAAACTTCAGC
TTCTCATAGTAAAAAGCTGAATGTTACTAATATTTTTCATATCTAAAAAAAATTCTTAGCAATGAAATTGCTGT
TAAACACAAATTTCAATCAAATACTTTTGTGTATAGAAAATATGTATAGTAGGTAGATAGAAAAGTATAAAATG
TTTGTGTAAGTATCTTATTTTAGAATGAATGGAGAAATGCCAAAGATGAATCCCTTCACTGCATTATGAAAATATT
TCACATGTTCTCTTGGACTTTATATAAAATCTGTAATAGATTTTAGAATTGAAAAATTCCTTTGTGAAGGTCTTCTA
AAAGTGTTCCAATTTATCTCAAAAATCTCCAATATATAGGATCAGCTTAAACATAAAGAAAACCTTGAATTTCTCA
AATGTTTGAGATGTTCAAGACAGTCTCTTAATCCGTTAATGCTTTTGGAACAATTGACAAAATAGGGCAGGCAG
CTCATCTCATGTCTGAAGTTGGAATTTAAATAATTCCATTTTGCAAATTAGAATGACAGTGTTGGAATTTGGAG
GCAGTAGTTGAGCATATTCTCTAGTATATAGCTACACCTTTAATAAAATGAAGGAATGCTTCAATCATATTTTA
GTGGGCTATTTATAAATAGTCTTGAAGTCAATTTAGTTTATTTATTTAAAAGATAATGCATCCTGAAAGGGATCA
TTTATGAATAACAATCTGAAGTCTTTTCATAAAAAAATTAATAAACTTTAGTTGTACATTTAGCCAGTGTTATT
TGAAGTATGTAACCTTTTAAAAATATTAAGTGTCTTGTATGATTAGAATATGTGAATGAGTAACCTTATTTTGTATCA
GGAATGTTTTGGTACTGTGTTTTCACTCAAACCACTGACTTAAACAGATACTGCTGTGTATAACATGTACTAAATA
TTACAGTTATTGTGCATAACAGATTGTTCCCTCTTATATTTGTGTGTATACAGGCAATTCATGTTTTAATGTAAT
AAATACCATTTTGCAGTTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 231

GGGGGGGGGGGACCACTTGGCCTGCCTCCGTCCCGCCGCGCCACTTGGCCTGCCTCCGTCCCGCCGCGCCACTT
CGCCTGCCTCCGTCCCCCGCCGCGCGCC**ATG**CCTGTGGCCGGCTCGGAGCTGCCGCGCCGGCCCTTGCCCCC
GCCGCACAGGAGCGGGACGCCGAGCCGCGTCCGCCGCACGGGGAGCTGCAGTACCTGGGGCAGATCCAACACATC
CTCCGCTGCGGCGTCAGGAAGGACGACCGCACGGGCACCGGCACCCTGTCGGTATTTCGGCATGCAGGCGCGCTAC
AGCCTGAGAGATGAATTCCCTCTGCTGACAACCAACGTGTGTTCTGGAAGGGTGTTTTGGAGGAGTTGCTGTGG
TTTATCAAGGGATCCACAAATGCTAAAGAGCTGTCTTCCAAGGGAGTGAAAATCTGGGATGCCAATGGATCCCGA
GACTTTTTGGACAGCCTGGGATTCTCCACCAGAGAAGAAGGGGACTTGGGCCAGTTTATGGCTTCCAGTGGAGG
CATTTTGGGGCAGAATACAGAGATATGGAATCAGATTATTCAGGACAGGGAGTTGACCAACTGCAAAGAGTGATT
GACACCATCAAAACCAACCCTGACGACAGAAGAATCATCATGTGCGCTTGGAATCCAAGAGATCTTCCTCTGATG
GCGCTGCCCTCCATGCCATGCCCTCTGCCAGTTCTATGTGGTGAACAGTGAGCTGTCCTGCCAGCTGTACCAGAGA
TCGGGAGACATGGGCCTCGGTGTGCCCTTTCAACATCGCCAGCTACGCCCTGCTCACGTACATGATTGCGCACATC
ACGGGCCTGAAGCCAGGTGACTTTATACACACTTTGGGAGATGCACATATTTACCTGAATCACATCGAGCCACTG
AAAATTCAGCTTCAGCGAGAACCCAGACCTTTCCCAAAGCTCAGGATTCTTCGAAAAGTTGAGAAAATTGATGAC
TTCAAAGCTGAAGACTTTCAGATTGAAGGGTACAATCCGCATCCAACATTTAAATGGAAATGGCTGTT**TAG**GGT
GCTTTCAAAGGAGCTTGAAGGATATTGTCAGTCTTTAGGGGTGGGCTGGATGCCGAGGTAAAAGTTCTTTTGC
TCTAAAAGAAAAAGGAAGTAGGTCAAAAATCTGTCCGTGACCTATCAGTTATTAATTTTTAAGGATGTTGCCACT
GGCAAATGTAAGTGTGCCAGTTCTTTCCATAATAAAAGGCTTTGAGTTAACTCACTGAGGGTATCTGACAATGCT
GAGGTTATGAACAAAGTGAGGAGAATGAAATGTATGTGCTCTTAGCAAAAACATGTATGTGCATTTCAATCCAC
GTAATTATAAGAAGGTTGGTGAATTTACAAGCTATTTTTGGAATATTTTGAATATTTTGAAGATTTTACAA
GCTATTCCTCAAATCTGAGGGAGCTGAGTAACACCATCGATCATGATGTAGAGTGTGGTTATGAAGTTTATAGT
TGTTTTATATGTTGCTATAATAAGAAGTGTCTGC

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FIGURE 232

MPVAGSELPRRPLPPAAQERDAEPRPPHGELQYLGQIQHILRCGVRKDDRTGTGTLSVFGMQARYSLRDEFPLLT
TKRVFWKGVLEELLWFIKGSTNAKELSSKGVKIWDANGSRDFLDLGFSTREEDLGPVYGFQWRHFGAEYRDME
SDYSGQGVDQLQRVIDTIKTNPDDRIIMCAWNPRDLPLMALPPCHALCQFYVNSELSQLYQRSMDMGLGVPF
NIASYALLTYMIAHITGLKPGDFIHTLGDAHIYLNHIEPLKIQLQREPRPFPKLRILRKVEKIDDFKAEDFQIEG
YNPHPTIKMEMAV

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FIGURE 233

CTATCCGCGCGCTCGCCGGCCAGTCCTGTCGCTGACGGGAGGATCTGAAGCCGGCCGCGAGGTCAAAGAGTAAA
ATGAAGTACATTCTGGTTACTGGTGGTGTATATCAGGAATTGGAAAAGGAATCATTGCCAGCAGTGTGGGCACA
ATACTCAAGTCATGTGGTTTACATGTAACCTCAATCAAAATTGACCCCTACATTAACATTGATGCAGGAACATTC
TCTCCTTATGAGCATGGTGAGGTTTTTGTGCTGGATGATGGTGGGGAAAGTAGACCTTGACCTGGGTAACTATGAG
CGGTTCTTGACATCCGCCCTACCAAGGACAATAATCTGACCACTGGAAAAGATATACCAGTATGTCATTAACAAG
GAACGGAAAAGGAGATTACTTGGGGAAAACCTGTCCAAGTTGTCCCTCATATCACAGATGCAATCCAGGAGTGGGTG
ATGAGACAGGCGTTAATACCTGTAGATGAAGATGGCCTGGAACCTCAAGTGTGTGTTATTGAGCTTGGTGGAAACC
GTGGGGGACATAGAAAGCATGCCCTTTATTGAGGCCCTTCCGTCAGTTCCAATTCAAGGTCAAAGAGAGAACCTTT
TGTAACATCCACGTCAGTCTAGTTCCCCAGCCAAGTTCAACAGGGGAACAGAAGACTAAACCTACCCAGAATAGT
GTTCCGGGAACCTTAGAGGACTTGGGCTTTCCCCAGATCTGGTTGTATGCAGGTGCTCAAATCCACTTGACACATCA
GTGAAGGAGAAAAATATCAATGTTCTGCCATGTTGAGCCTGAACAAGTGATCTGTGTCCACGATGTCTCATCCATC
TACCGAGTCCCCCTTGTGTTAGAGGAGCAAGGGGTTGTAGATTATTTCTTCGAAGACTTGACCTTCCTATTGAG
AGGCAGCCAAGAAAAATGCTGATGAAATGGAAAGAGATGGCTGACAGATATGATCGCTTGCTGGAGACCTGCTCT
ATTGCCCTTGTGGCGAAATACACCGAGTTCTCAGACTCCTATGCCTCTGTCATTAAGGCTCTGGAGCATTCTGCA
CTGGCCATCAACCACAAATTGGAATCAAGTACATAGATTCTGCGGACTTGAGAGCCCATCACCTCGCAAGAAGAG
CCCGTGCGCTACCACGAAGCTTGGCAGAAGCTCTGTAGTGCTCATGGAGTGCTGGTTCCAGGAGGATTTGGTGTT
CGAGGAACAGAAGGAAAAATCCAAGCAATTGCCTGGGCTCGGAATCAGAAAAAGCCTTTTTTGGGCGTGTGCTTA
GGGATGCAGTTGGCAGTGGTTGAATTTCAAGAAACGTGCTGGGATGGCAAGATGCCAATTCTACAGAGTTTGAC
CCTACGACCAGTCATCCCGTGGTCTGATGACATGCCAGAACACAACCCAGGGCAGATGGGCGGAACCATGAGGCTG
GGCAAGAGGAGAACCCTGTTCCAGACCAAGAACTCAGTCATGAGGAACTCTATGGAGACGCAGACTACTTGGA
GAGAGGCACCGCCACCGATTTGAGGTGAATCCAGTCTGGAAAAAGTGTTTGGAGAACAAGGCTTGAAGTTTGTT
GGCCAAGATGTTGAAGGAGAGAGAATGGAAATTGTGGAGTTAGAAGATCATCCCTTTTTTGTGGGGTTTCAGTAC
CACCTGAGTTCCTGTCCAGGCCTATCAAGCCCTCCCCACCATACTTTGGCCTCCTCCTGGCCTCTGTGGGGCGG
CTCTCACATTACCTCCAGAAAGGCTGCAGGCTCTCACCCAGGGACACCTATAGTGACAGGAGTGGAAGCAGCTCC
CCTGACTCTGAAATCACCGAACTGAAGTTTCCATCAATAAATCATGACTAGATCTTGTAGCGGATGATTCTTCAAG
AGACCTTCAAACCTTGGGTAGAGTTTACAGCTCTGACTTTTACACTCGGCTTTGGAGACTTTCTTTAAATTATGTT
TTTATTAAGATTATTTTATTATGCGGAAAGGTATTTGGGAAACTTGTCACTTGCATGTCCCATCACGTGTACTGG
CTCCTCTGTGGTGTCTGCCTGTTGCGTGACACTCTCCTTGCACTTCTTGAGTTGCGGCAGAACATCGCGATGGGA
ACCGATGGTGGGTGGGGCTGCAGATGTCCCATCGGTACCTTGTCTCAACTACCTCGCATCATTGCAGATCG
TAGCGCGTTGCCTGTGCTGCTTTCCCTTGGATACCTAGACCGTTATAAAGTGTGCCACATGGACTTACCGAGCATGG
AGAGAGGATTTTAGCTAGGATTTGAACACTTGGTGTGTTGGGAACTCAGGGTATTGCTTGCCACTAAGCCATGAAA
CCAGAGACAAAATCTCTATACTGCCCTGAGTTGGGGGGAATTCTCAGTGCCAACCTGTGGCTGGTCTCTATTCAA
GGGACGGTCAGTTTGGTGTCAACATGAAACACCAAGATGTCTGTCTCTGAAGCGTGATTTTAAATCCCATGCC
TGTGCGTGCGCTTCCATTTCTAGGGCTGGGAAACACTCCTTGATCAAGGGGTCACTTACAGAACAAGAATCT
TTTGGGGGAACTTCCCTCTAAACCTCTCATATATAGACAGCTTTGACTGGAGGGTCCATTTTCTTCCAGGAT
GGTGTACTGCAGTTGAAGGGCAATATGAAGTTACTTTCTTAATGTGACCTAGCAATAGGCATAGCTACGTGGCA
CTATATTCTGGCCAGACTCGATGTGTACTCTAACTTAAGAAATAAATCAGTAAGGCAG

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FIGURE 234

MKYILVTGGVISGIGKGIIASSVGTILKSCGLHVTSIKIDPYINIDAGTFSPYEHGEVFLDDGGEVDLDLGNYE
RFLDIRLTKDNNLTGKIYQYVINKERKGDYLGKTVQVPHITDAIQEWVMRQALIPVDEDGLEPQVCVIELGGT
VGDIESMPFIEAFRQFQFKVKRENFCNIHVSLVPQPSSTGEQKTKPTQNSVRELRLGLSPDLVVCRCNSNPLDTS
VKEKISMFCHVEPEQVICVHDVSSIYRVPLLLLEEQGVVDYFLRRDLPIERQPRKMLMKWKEMADRYDRLLETCS
IALVAKYTEFSDSYASVIKALEHSALAINHKLEIKYIDSADLEPITSQEEPVRVYHEAWQKLCSAHGVLVPGGFGV
RGTEGKIQAIAWARNQKKPFLGVCLGMQLAVVEFSRNVLGWQDANSTFDPTTSHPVVDMPEHNPGQMGGTMRL
GKRRTLFQTKNSVMRKLYGDADYLEERHRHRFEVNPVWKKCLEEQGLKFVGQDVEGERMEIVELEDHPFFVGVOY
HPEFLSRPIKPSPPYFGLLLASVGRLSHYLQKGCRLSPRDTYSDRSGSSSPDSEITELKFPSINH

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FIGURE 235

GCGCCCCAGTCGACGCTGAGCTCCTCTGCTACTCAGAGTTGCAACCTCAGCCTCGCT**ATGG**CTCCAGCAGCCCC
CGGCCCCGCTGCCCCGCACTCCTGGTCCTGCTCGGGGCTCTGTTCCCAGGACCTGGCAATGCCAGACATCTGTG
TCCCCCTCAAAAGTCATCCTGCCCCGGGGAGGCTCCGTGCTGGTGACATGCAGCACCTCCTGTGACCAGCCCAAG
TTGTTGGGCATAGAGACCCCGTTGCCTAAAAAGGAGTTGCTCCTGCCTGGGAACAACCGGAAGGTGTATGAACTG
AGCAATGTGCAAGAAGATAGCCAACCAATGTGCTATTCAAACCTGCCCTGATGGGCAGTCAACAGCTAAAAACCTTC
CTCACCGTGTACTGGACTCCAGAACGGGTGGAACCTGGCACCCCTCCCCCTCTGGCAGCCAGTGGGCAAGAACCTT
ACCCTACGCTGCCAGGTGGAGGGTGGGGCACCCCGGGCCAACCTCACCGTGGTGCTGCTCCGTGGGGAGAAGGAG
CTGAAACGGGAGCCAGCTGTGGGGGAGCCCGCTGAGGTACAGACCAGGTGCTGGTGAGGAGAGATCACCATGGA
GCCAATTTCTCGTGCCGCACTGAACTGGACCTGCGGGCCCCAAGGGCTGGAGCTGTTTGAGAACACCTCGGCCCCC
TACCAGCTCCAGACCTTTGTCTGCCAGCGACTCCCCACAACCTTGTGAGCCCCGGGTCTAGAGGTGGACACG
CAGGGGACCGTGGTCTGTTCCCTGGACGGGCTGTTCCCACTCTCGGAGGCCAGGTCCACCTGGCACTGGGGGAC
CAGAGGTTGAACCCACAGTCACTATGGCAACGACTCCTTCTCGGCCAAGGCCTCAGTCAGTGTGACCGCAGAG
GACGAGGGCACCCAGCGGCTGACGTGTGAGTAATACTGGGGAACAGAGCCAGGAGACACTGCAGACAGTGACC
ATCTACAGCTTTCGGCGGCCAACGTGATTCTGACGAAGCCAGAGGTCTCAGAAGGGACCGAGGTGACAGTGAAG
TGTGAGGCCCCACCTAGAGCCAAGGTGACGCTGAATGGGGTTCAGCCAGCCACTGGGCCCCGAGGGCCAGCTC
CTGCTGAAGGCCACCCAGAGGACAACGGGCGCAGCTTCTCCTGCTCTGCAACCTGGAGGTGGCCGGCCAGCTT
ATACACAAGAACCAGACCCGGGAGCTTCGTGTCTGTATGGCCCCGACTGGACGAGAGGGATTGTCCGGGAAAC
TGGACGTGGCCAGAAAATTCCCAGCAGACTCCAATGTGCCAGGCTTGGGGGAACCCATTGCCCGAGCTCAAGTGT
CTAAAGGATGGCACTTTCCCACTGCCCATCGGGGAATCAGTGACTGTCACTCGAGATCTTGAGGGCACCTACCTC
TGTCGGGCCAGGAGCACTCAAGGGGAGGTACCCGCGAGGTGACCGTGAATGTGCTCTCCCCCGGTATGAGATT
GTCATCATCACTGTGGTAGCAGCCGACATATAATGGGCACTGCAGGCCCTCAGCACGTACCTCTATAACCGCCAG
CGGAAGATCAAGAAATACAGACTACAACAGGCCCAAAAAGGGACCCCCATGAAACCGAACACACAAGCCACGCCT
CCCT**GAA**ACCTATCCCGGGACAGGGCCTCTTCTCGGCCTTCCCATATTGGTGGCAGTGGTGCCCACTGAACAGA
GTGGAAGACATATGCCATGCAGCTACACCTACCGGCCCTGGGACGCCGGAGGACAGGGCATTGTCTCTAGTCAGA
TACAACAGCATTTGGGGCCATGGTACCTGCACACCTAAAACACTAGGCCACGCATCTGATCTGTAGTCACATGAC
TAAGCCAAGAGGAAGGAGCAAGACTCAAGACATGATTGATGGATGTTAAAGTCTAGCCTGATGAGAGGGGAAGTG
GTGGGGGAGACATAGCCCCACCATGAGGACATACTGGGAAATACTGAAACTTGCTGCCTATTGGGTATGCTG
AGGCCCCAGACTTACAGAAGAAGTGGCCCTCCATAGACATGTGTAGCATCAAAACACAAAGGCCACACTTCCT
GACGGATGCCAGCTTGGGCACCTGCTGTCTACTGACCCCAACCCCTTGATGATATGTATTTATTCATTTGTTATTTT
ACCAGCTATTTATTGAGTGTCTTTTATGTAGGCTAAATGAACATAGGTCTCTGGCCTCACGGAGCTCCCAGTCCA
TGTCACATTCAAGGTCACCAGGTACAGTTGTACAGGTTGTACACTGCAGGAGAGTGCCTGGCAAAAAGATCAAAT
GGGGCTGGGACTTCTCATTGGCCAACCTGCCTTTCCCCAGAAGGAGTGATTTTTCTATCGGCACAAAAGCACTAT
ATGGACTGGTAATGGTTCACAGGTTACAGAGATTACCCAGTGAGGCCTTATTCCTCCCTTCCCCCAAACTGACA
CCTTTGTTAGCCACCTCCCCACCCACATACATTTCTGCCAGTGTTTCAATGACACTCAGCGGTGATGCTCTGGAC
ATGAGTGCCAGGGAATATGCCAAGCTATGCCTTGCTCTTGTCTGTTGTCATTTCACTGGGAGCTTGCACT
ATTGCAGCTCCAGTTTCTGCAGTGATCAGGGTCTGCAAGCAGTGGGGAAGGGGGCCAAGGTATTGGAGGACTC
CCTCCAGCTTTGGAAGGGTCATCCGCGTGTGTGTGTGTGTGTATGTGTAGACAAGCTCTCGCTCTGTACCCAG
GCTGGAGTGCAGTGGTGCAATCATGGTTCACTGCAGTCTTGACCTTTTGGGCTCAAGTGATCTCCACCTCAGC
CTCCTGAGTAGCTGGGACCATAGGCTCACAACACCACACCTGGCAAATTTGATTTTTTTTTTTTTTTTTCAGAGAC
GGGTCTCGCAACATTGCCAGACTTCCTTTGTGTTAGTTAATAAAGCTTTCTCACTGCC

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FIGURE 236

MAPSSPRPALPALLVLLGALFPGPGNAQTSVSPSKVILPRGGSVLVTCSTSCDQPKLLGIETPLPKKELLPLGNN
RKVYELSNVQEDSQPMCYSNCPDGQSTAKTFLTVYWTPERVELAPLPSWQPVGKNLTLRCQVEGGAPRANLTVVL
LRGEKELKREPAVGEPAEVTTTTLVRRDHHGANFSCRTELDLRPQGLELFENTSAPYQLQTFVLPATPPQLVSPR
VLEVDTQGTVVCSLDGLFPVSEAQVHLALGDQRLNPTVTYGNDSFSAKASVSVTAEDEGTQRLTCAVILGNQSQE
TLQTVTIYSFPAPNVILTKPEVSEGTEVTVKCEAHPRAKVTLNGVPAQPLGPRAQLLLKATPEDNGRSFSCSATL
EVAGQLIHKNQTRELRVLYGPRLDERDCPGNWTWPENSQQTPMCQAWGNPLPELKCLKDGTFFPLPIGESVTVTRD
LEGTYLCRARSTQGEVTREVTNVLSPRYEIVIIITVAAAVIMGTAGLSTYLYNRQRKIKKYRLQQAQKGTMPKP
NTQATPP

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FIGURE 237

GCGCCCCAGTCGACGCTGAGCTCCTCTGCTACTCAGAGTTGCAACCTCAGCCTCGCTATGGCTCCCAGCAGCCCC
CGGCCCCGCGCTGCCCCGACTCCTGGTCCTGCTCGGGGCTCTGTTCCAGGACCTGGCAATGCCAGACATCTGTG
TCCCCCTCAAAAGTCATCCTGCCCCGGGAGGCTCCGTGCTGGTGACATGCAGCACCTCCTGTGACCAGCCCAAG
TTGTTGGGCATAGAGACCCCGTTGCCTAAAAAGGAGTTGCTCCTGCCTGGGAACAACCGGAAGGTGTATGAACTG
AGCAATGTGCAAGAAGATAGCCAACCAATGTGCTATTCAAACCTGCCCTGATGGGCAGTCAACAGCTAAAACCTTC
CTACCGTGTACTGGACTCCAGAACGGGTGGAACCTGGCACCCCTCCCCCTCTTGGCAGCCAGTGGGCAAGAACCTT
ACCCTACGCTGCCAGGTGGAGGGTGGGGCACCCCGGGCCAACCTCACCGTGGTGCTGCTCCGTGGGGAGAAGGAG
CTGAAACGGGAGCCAGCTGTGGGGGAGCCCGCTGAGGTACGACCACGGTGCTGGTGAGGAGAGATCACCATGGA
GCCAATTTCTCGTGCCGCACTGAACTGGACCTGCGGGCCCCAAGGGCTGGAGCTGTTTGAGAACACCTCGGCCCCC
TACCAGCTCCAGACCTTTGTCTGCCAGCGACTCCCCACAACCTGTGACCCCCGGGTCTAGAGGTGGACACG
CAGGGGACCGTGGTCTGTTCCCTGGACGGGCTGTTCCAGTCTCGGAGGCCAGGTCCACCTGGCACTGGGGGAC
CAGAGGTTGAACCCACAGTCACCTATGGCAACGACTCCTTCTCGGCCAAGGCCCTCAGTCAGTGTGACCGCAGAG
GACGAGGGCACCCAGCGGTGACGTGTGAGTAATACTGGGGAACAGAGCCAGGAGACACTGCAGACAGTGACC
ATCTACAGCTTTCCGGCGCCCAACGTGATTCTGACGAAGCCAGAGGTCTCAGAAGGGACCGAGGTGACAGTGAAG
TGTGAGGGCCACCTAGAGCCAAGGTGACGCTGAATGGGGTTCCAGCCAGCCACTGGGGCCGAGGGCCAGCTC
CTGCTGAAGGCCACCCAGAGGACAACGGGCGCAGCTTCTCCTGCTCTGCAACCTTGGAGGTGGCCGGCCAGCTT
ATACACAAGAACCAGACCCGGGAGCTTCGTGTCTGTATGGCCCCGACTGGACGAGAGGGATTGTCCGGGAAAC
TGGACGTGGCCAGAAAATTCCCAGCAGACTCCAATGTGCCAGGCTTGGGGGAACCCATTGCCCGAGCTCAAGTGT
CTAAAGGATGGCACTTTCCCACTGCCCATCGGGGAATCAGTGACTGTCACTCGAGATCTTGAGGGCACCTACCTC
TGTCGGGCCAGGAGCACTCAAGGGGAGGTACCCGCGAGGTGACCGTGAATGTGCTCTCCCCCGGTATGAGATT
GTCATCATCACTGTGGTAGCAGCCGACATATAATGGGCACTGCAGGCCTCAGCACGTACCTCTATAACCGCCAG
CGGAAGATCAAGAAATACAGACTACAACAGGCCCAAAAAGGGACCCCCATGAAACCGAACACACAAGCCACGCCT
CCCTGAACCTATCCCGGGACAGGGCCTCTTCTCGGCCTTCCCATATTGGTGGCAGTGGTGCCACACTGAACAGA
GTGGAAGACATATGCCATGCAGCTACACCTACCGGCCCTGGGACGCCGGAGGACAGGGCATTGTCTCAGTCAGA
TACAACAGCATTGTTGGGGCCATGGTACCTGCACACCTAAACACTAGGCCACGCATCTGATCTGTAGTCACATGAC
TAAGCCAAGAGGAAGGAGCAAGACTCAAGACATGATTGATGGATGTTAAAGTCTAGCCTGATGAGAGGGGAAGTG
GTGGGGGAGACATAGCCCCACCATGAGGACATACTGGGAAATACTGAAACTTGCTGCCTATTGGGTATGCTG
AGGCCACAGACTTACAGAAGAAGTGGCCCTCCATAGACATGTGTAGCATCAAAACACAAAGGCCACACTTCCT
GACGGATGCCAGCTTGGGCACTGCTGTCTACTGACCCCAACCCCTTGATGATATGTATTTATTTCATTTGTTATTTT
ACCAGCTATTTATTGAGTGTCTTTTATGTAGGCTAAATGAACATAGGTCTCTGGCCTCACGGAGCTCCCAGTCCA
TGTCACATTCAAGGTCACAGGTACAGTTGTACAGGTTGTACACTGCAGGAGAGTGCCTGGCAAAAAGATCAAAT
GGGGCTGGGACTTCTCATTGGCCAACCTGCCTTTCCCAGAAGGAGTGATTTTCTATCGGCACAAAAGCACTAT
ATGGACTGGTAATGGTTCACAGGTTACAGAGATTACCCAGTGAGGCCTTATTCCTCCCTCCCCCAAACTGACA
CCTTTGTTAGCCACCTCCCCACCCACATACATTTCTGCCAGTGTTTACAATGACACTCAGCGGTGATGTCTGGAC
ATGAGTGCCAGGGAATATGCCAAGCTATGCCTTGTCTCTTGTCTGTTTGCATTTCACTGGGAGCTTGCACT
ATTGCAGCTCCAGTTTCTGCAGTGATCAGGGTCTGCAAGCAGTGGGGAAGGGGGCCAAGGTATTGGAGGACTC
CCTCCAGCTTTGGAAGGGTCATCCGCGTGTGTGTGTGTGTGTATGTGTAGACAAGCTCTCGCTCTGTACCCAG
GCTGGAGTGCAGTGGTGCAATCATGGTTCACTGCAGTCTTGACCTTTTGGGCTCAAGTGATCTCCACCTCAGC
CTCCTGAGTAGCTGGGACCATAGGCTCACAACACCACACCTGGCAAATTTGATTTTTTTTTTTTTTTTTCAGAGAC
GGGGTCTCGCAACATTGCCAGACTTCCTTTGTGTTAGTTAATAAGCTTTCTCAACTGCC

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FIGURE 238

MAPSSRPALPALLVLLGALFPGPGNAQTSVSPSKVILPRGGSVLVTCSTSCDQPKLLGIETPLPKKELLLPGNN
RKVYELSNVQEDSQPMCYSNCPDGQSTAKTFLTIVYWTPERVELAPLPSWQPVGKNLTLRCQVEGGAPRANLTVVL
LRGEKELKREPAVGEPAEVTTTTLVRRDHHGANFSCRTELDLRPQGLELFENTSAFYQLQTFVLPATPPQLVSPR
VLEVDTOGTVVCSLDGLFPVSEAQVHLALGDQRLNPTVTYGNDSFSAKASVSVTAEDEGTQRLTCAVILGNQSQE
TLQTVTIYSFPAPNVILTKPEVSEGTEVTVKCEAHPRAKVTLNGVPAQPLGPRAQLLLKATPEDNGRSFSCSATL
EVAGQLIHKNQTRELRLVLYGPRLDERDCPGNWTWPENSQQTPMCQAWGNPLPELKCLKDGTFFLPIGESVTVTRD
LEGTYLCRARSTQGEVTREVTNVLSFRYEIVIIITVAAAVIMGTAGLSTYLYNRQRKIKKYRLQQAQKGTMPKP
NTQATPP

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FIGURE 239

CTTCGGTCCTGCTGTAGTGCCTTCTGCGCCAGGCCCGGTTCAATCAGCGGCCACAACCTGTCTAGGGCTCAGACAC
CACCAGCCAATGAGGGAGGGCACGTGGAGCCGCGTCTGGGCTCGCGGCTCCTGACCAATGGGGAAGTGGCATGTG
GGAGGGCGCCGGGGTTCCCCCGCCAATGGGGAGCTACGGCGCGCGGGCCGGGACTTGGAGGCGGTGCGGCGCGGC
GGGTGCGGTTTCAGTCGGTCGGCGGGCGGCAGCGGAGGAGGAGGAGGAGGAGGATGAGGAGGATGAGGAGGATG
TGGGCCACGCAGGGGCTGGCGGTGCGCGTGGCTCTGAGCGTGTGCGGGCAGCCGGGCGCTGCGGCCGGGCGAC
TGCGAAGTTTGTATTTCTTATCTGGGAAGATTTTACCAGGACCTCAAAGACAGAGATGTCACATTCTCACCAGCC
ACTATTGAAAACGAACCTTATAAAGTTCTGCCGGGAAGCAAGAGGCAAAGAGAATCGGTTGTGCTACTATATCGGG
GCCACAGATGATGCAGCCACCAAAATCATCAATGAGGTATCAAAGCCTCTGGCCCACCACATCCCTGTGGAGAAG
ATCTGTGAGAAGCTTAAGAAGAAGGACAGCCAGATATGTGAGCTTAAGTATGACAAGCAGATCGACCTGAGCACA
GTGGACCTGAAGAAGCTCCGAGTTAAAGAGCTGAAGAAGATTCTGGATGACTGGGGGAGACATGCAAAGGCTGT
GCAGAAAAGTCTGACTACATCCGGAAGATAAATGAACTGATGCCTAAATATGCCCCAAGGCAGCCAGTGCACCG
ACCGATTTGTAGTCTGCTCAATCTCTGTTGCACCTGAGGGGGAAAAACAGTTCAACTGCTTACTCCCAAAACAG
CCTTTTGTAAATTTATTTTTTAAGTGGGCTCCTGACAATACTGTATCAGATGTGAAGCCTGGAGCTTTCCTGATG
ATGCTGGCCCTACAGTACCCCATGAGGGGATTCCCTTCCTTCTGTTGCTGGTGTACTCTAGGACTTCAAAGTGT
GTCTGGGATTTTTTTATTAAAGAAAAAAATTTCTAGCTGTCAAAAAAAAAA

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FIGURE 240

MGKWHVGGRRGSPRQWGATARGRDLEAVRRGGCGSVGRRRQRRRRRRRRMRRMRMWATQGLAVRVALSVLPGR
ALRPGDCEVCISYLGRFYQDLKDRDVTTFSPATIENELIKFCREARGKENRLCYYIGATDDAATKIINEVSKPLAH
HIPVEKICEKLKKKDSQICELKYDKQIDLSTVDLKKLRVKELKKILDDWGETCKGCAEKSDYIRKINELMPKYAP
KAASAPTDL

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FIGURE 241

CGGAGCCGCCCCGCTGAGGTGAGAAGGAGGCGTCTGCGCTGATCGGGTCCGCCGCGGCCAGAGCCAGAGTCGCAG
CCGAGGGGAGCCGGGGCCGGAGCCCGAGCCCGAGCCGAGCCGGAGCCCGAGCGAGCGGCGGAGACCGTGCCCCCG
CCTCGGCCCCGCGCCGCGCGGCCAGGCCCGGCATCGAGGAGGAGTGCCGGGTGCTCTCCATACAGAGCCACGTC
ATCCGCGGCTACGTGGGCAACCGGGCGGCCACGTTCCCGCTGCAGGTTTTGGGATTTGAGATTGACGCGGTGAAC
TCTGTCCAGTTTTCAAACCACACAGGCTATGCCCACTGGAAGGGCCAAGTGCTGAATTCAGATGAGCTCCAGGAG
TTGTACGAAGGCCTGAGGCTGAACAACATGAATAAATATGACTACGTGCTCACAGGTTATACGAGGGACAAGTCG
TTCCTGGCCATGGTGGTGGACATTGTGCAGGAGCTGAAGCAGCAGAACCCAGGCTGGTGTACGTGTGTGATCCA
GTCTTGGGTGACAAGTGGGACGGCGAAGGCTCGATGTACGTCCCGGAGGACCTCCTTCCCGTCTACAAAGAAAAA
GTGGTGCCGCTTGACAGACATTATCACGCCCCAACAGTTTGAGGCCGAGTTACTGAGTGGCCGGAAGATCCACAGC
CAGGAGGAAGCCTTGCGGGTGATGGACATGCTGCACTCTATGGGCCCCGACACCGTGGTCATCACCAGCTCCGAC
CTGCCCTCCCCGAGGGCAGCAACTACCTGATTGTGCTGGGGAGTCAGAGGAGGAGGAATCCCGCTGGCTCCGTG
GTGATGGAACGCATCCGGATGGACATTGCGAAAGTGGACGCCGTCTTTGTGGGCACTGGGGACCTGTTTGCTGCC
ATGCTCCTGGCGTGGACACACAAGCACCCCAATAACCTCAAGGTGGCCTGTGAGAAGACCGTGTCTACCTTGAC
CACGTTCTGCAGAGGACCATCCAGTGTGCAAAAGCCCAGGCCGGGGAAGGAGTGAGGCCAGCCCCATGCAGCTG
GAGCTGCGGATGGTGCAGAGCAAAAGGGACATCGAGGACCCAGAGATCGTCGTCCAGGCCACGGTGCTGTGAGGG
CCCCGCCGCTTGCCCGTGACACGCAGCGCGTTGGTGTCTCCGTGTTTGTCCCTGTGAAAACATGTAACGTCTGCC
TTAGAGCCATGACCGAACTTGATATTTTTTTCTTTTCATGAGTGTCGGCATCTGCTGGTCTTCATTGTGAAACG
TGCCAGTCGTGCTTTGTGAAAAATAACAAAGTGGTCACAAAAA

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FIGURE 242

MEEECRVLSIQSHVIRGYVGNRAATFPLQVLGFEIDAVNSVQFSNHTGYAHWKGQVLNSDELQELYEGLRLNNMN
KYDYVLTGYTRDKSFLAMVVDIVQELKQQNPRLVYVCDPVLGDKWDGEGSMYVPEDLLPVYKEKVVPLADIITPN
QFEAELLSGRKIHSQEEALRVMDMLHSMGPDTVVITSSDLPS PQGSNYLIVLGSQRRRNPA GSVVMERIRMDIRK
VDAVFVGTGDLFAAMLLAWTHKHPNNLKVACEKTVSTLHHVLQRTIQCAKAQAGEGVRPSPMQLELRMVQSKRDI
EDPEIVVQATVL

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FIGURE 243

GAATTCccccccccccccagtgctccgCGCGCTCTTGACGTCCGGAGCCCCTGGAGTAGGCGCTTCCGGCCATT
CATACTGCAGTCGGTCAGTGTTTCGGTTGAAGGATTCTGTGTGCTGTCCGACCCAGAGGGTGACGGCGCCGCTAGG
ATGAAGCTCGTGAGATTTTTGATGAAATTGAGTCATGAAACTGTAACCATTGAATTGAAGAACGGAACACAGGTC
CATGGAACAATCACAGGTGTGGATGTCAGCATGAATACACATCTTAAAGCTGTGAAAATGACCCTGAAGAACAGA
GAACCTGTACAGCTGGAACGCTGAGTATTCGAGGAAAATAACATTTCGGTATTTTATTCTACCAGACAGTTTACCT
CTGGATACACTACTTGTGGATGTTGAACCTAAGGTGAAATCTAAGAAAAGGGAAGCTGTTGCAGGAAGAGGCAGA
GGAAGAGGAAGAGGAAGAGGACGTGGCCGTGGCAGAGGAAGAGGGGGTCCTAGGCGATTAATGTCTCTCAAGATTT
CAAAGTCATATGAGATTTGGGATATTTTTTGTACAGGTTGTGTTTATGTCAGTTTTTAATAAACATAAAATG
TGGGACAGAGCTGTCTATTTAGTATATCAAAGTTTTAGTAGTTTCCTCCACATTCACGAAATTACCACAGTGAGA
GCTAAGCATTTTCTACTGGGCAGTTTCATTTTTAGTTGATCAGGTTTTAAGTTTTTGAATAAAATTTTTCTTTTT
CTTTTTATGATGAATAAGGTTAAAATAAAAGCCTTAGACAAATTAAATTTGGCAGAGTTTAATTGAGCAAAGGAC
AATTCACAAATCAGGTAGCCCCGAACCATAATAGGCTCAGAGGCTTCAGCCCAGCTGCATAGTTGAAGATTTAT
GGACAGAAGGAAAGTGATGTATGGAATGGAAGTGAGATACAGCAACAGCCGGATTAGTTACAGTTCAGCGTTT
GCCTTATTTGAATATGGTTTGAACAGTTCGCTGTCTTTGGTTGGCTGAAACTTAGTGATTGCCACAAGAGTAGGG
TACCGTCTGTTTACACGTCCAGTTAGGCTACAGTTCTATGTACTGAGAAACCTTTAAGCTGAACTTGAGATATGT
AAAGAGACTTTAGGCTAACTTAACAATATATATAGGAATATATCCCTTCTACTTCACATGCACTGAATATGCAT
TTTATTGCTTTACTCTTCATTCTGTGGCACCTACCCACAGGGGAAGTAAGAAGTTTGTGTTTGGTATTTTCGGAAAC
TAAAGTCCTTATGGGATGGGGTCTAGAATTGATTCTCCTTTTCTGAGTTTTACTCCACGGAGTCTTAGGTACCTG
GTAAAAAGTTGTCTTCTAAATTAAGGGTCATTGCTTTGTTGTCTAGCTGCTAATGTCTTACTTTTGTCTTTTGT
CTTTTTAATCAGTTCTTAATAGGATATAGTTTTATGTTTTCCAAGTTATAACTTGGAGTTAATGGTCACTAGATT
ATCAGTTATGAGCAGTGTTAAATCTCCTATTAATGTGTAATGTACCTGTGAGTGCCTCCTTTATTAAGGGGTTT
TTTGAGAATAAAAGAGAAAAGACCTACTTTATTTGACAGCAAAAAAAAAAAGGAATTC

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FIGURE 244

MKLVRFLMKLSHETVTIELKNGTQVHGTTITGVDVSMNTHLKAVKMTLKNREPVOLETLSIRGNNIRYFILPDSL
LDTLLVDVEPKVKSKKREAVAGRGRGRGRGRGRGRGRGRGRGGPRR

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FIGURE 245

CGACCACCCGGCCTCGGCCAATAAGCGCCGCCCTCTCGCCCCCGTGTACTGGGTAGAAGAAAACAAAAACAAAC
AGAGCGAGAAGGGCCAGAGACTCTCCGAGGCGGCGGCAGAGACAGAAGAGCGGGGTCTGGGGCCGGCTGACCAGGA
ACCTGGGCGAGCAGCGGCGGGGGCCCCGAGGGATTCTGAAGGAAGATTTCCATTAGGTAATTTGTTTAATCAGTGC
AAGCGAAATTAAGGGAAAATGGATGTAGAAAATGAGCAGATACTGAATGTAAACCCTGCAGATCCTGATAACTTA
AGTGACTCTCTCTTTTCCGGTGATGAAGAAAATGCTGGGACTGAGGAAATAAAGAATGAAATAAATGGAAATTGG
ATTCAGCATCCTCCATTAAACGAAGCTAGAATTAATGCCAAGGCAAAAAGGCGACTAAGGAAAACTCATCCCGG
GACTCTGGCAGAGGCGATTTCGGTCAGCGACAGTGGGAGTGACGCCCTTAGAAGTGGATTAAGTGTGCCAACCACT
CCAAAGGGAAGGTTGCTGGATAGGCGATCCAGATCTGGGAAAGGAAGGGGACTACCAAAGAAAGGTGGTGCAGGA
GGCAAAGGTGTCTGGGGTACACCTGGACAGGTGTATGATGTGGAGGAGGTGGATGTGAAAGATCCTAACTATGAT
GATGACCAGGAGAAGTGTGTTTATGAAACTGTAGTTTGCCTTTGGATGAAAGGCGATTTGAGAAGACTTTAACA
CCAATCATACAGGAATATTTTGGAGCATGGAGATACTAATGAAGTTGCGGAAATGTTAAGAGATTTAAATCTTGGT
GAAATGAAAAGTGGAGTACCACTGTTGGCAGTATCCTTAGCATTTGGAGGGGAAGGCTAGTCATAGAGAGATGACA
TCTAAGCTTCTTTCTGACCTTTGTGGGACAGTAATGAGCACAACTGATGTGGAAAAATCATTGTATAAATTGTTG
AAAGATCTACCTGAATTAGCACTGGATACTCCTAGAGCACCACAGTTGGTGGGCCAGTTTATTGCTAGAGCTGTT
GGAGATGGAATTTTATGTAATACCTATATTGATAGTTACAAAGGAACTGTAGATTGTGTGCAGGCTAGAGCTGCT
CTGGATAAGGCTACCGTGCTTCTGAGTATGTCTAAAGGTGGAAAGCGTAAAGATAGTGTGTGGGGCTCTGGAGGT
GGGCGCAATCTGTCAATCACCTTGTTAAAGAGATTGATATGCTGCTGAAAGAATATTTACTCTCTGGAGACATA
TCTGAAGCTGAACATTGCCTTAAGGAACTGGAAGTACCTCATTTTCACCATGAGCTTGTATATGAAGCTATTATA
ATGGTTTTAGAGTCAACTGGAGAAAGTACATTTAAGATGATTTTGGATTTATTAAAGTCCCTTTGGAAGTCTTCT
ACCATTACTGTAGACCAAATGAAAAGAGGTTATGAGAGAATTTACAATGAAATTCCGGACATTAATCTGGATGTC
CCACATTCATACTCTGTGCTGGAGCGGTTTGTAGAAGAATGTTTTCAGGCTGGAATAATTTCCAAACAACCTCAGA
GATCTTTGTCTTCAAGGGGCGAGAAAGCGTTTTGTAAGCGAAGGAGATGGAGGTCGTCTTAAACCAGAGAGCTAC
TGAATATAAGAAGTCTTGCAGTCTTAGATGTTATAAAAAATATATATCTGAATTGTAAGAGTTGTTAGCACAAAGTT
TTTTTTTTTTTTTTTTTAAAGCACTTGTTTTGGGTACAAGGCATTTCTGACATTTTATAAACCTACATTTAAGGG
GAATTTTTTAAAGGAAATGTTTTTCTTTTTTTTTTGTTTTTTCGAGGGGGCAAGGAGGGACAGAAAAGTAACCTCT
TCTTAAGTGAATATTCTAATAAGCTACCTTTTGTAAAGTGCCATGTTTATTATCTAATCATTCCAAGTTTTGCAT
TGATGTCTGACTGCCACTCCTTTCTTTCAAGGACAGTGTTTTTTGTAGTAAATCACTGGTTTTATACAAAGCTTT
ATTTAGGGGGTAAAGTTAAGCTGCTAAAACCCCATGTTGGCTGCTGCTGTTGAGATACTGTGCTTTGGGAGTAAA
AAAAGAAAGTTATTTCTTTGTCTTAAAGAATTTTTAAAAAATTAGTCATGAGACTTATTCATCTTTCCAGGGAAC
ATACTGATTGGTCTTAAAGACTAGACAGTTAAGTAAAAGGTGGCTGGAACATCTATTTTCTACAAAAGTGGAA
AAATGAACCTGGTTCTAGAAGAATGTACACCAAATAAAACATGTGAAGCAGTAAAAAAAAAAAAAAAAA

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FIGURE 246

MDVENEQILNVNPADPDNLSDSLFSGDEENAGTEEIKNEINGNWISASSINEARINAKAKRRLRKNSSRDSGRGD
SVSDSGSDALRSLTVPTSPKGRLLDRRSRSGKGRGLPKKGGAGGKGVWGTPGQVYDVEEVDVKDPENYDDDQENC
VYETVVLPLDERAFEKTLTPIIQEYFEHGDNEVAEMLRDLNLGEMKSGVPVLAVSLALEGKASHREMTSKLLSD
LCGTMSTTDVEKSFDKLLKDLPELALDTPRAPQLVGQFIARAVGDGILCNTYIDSYKGTVDVCVQARAALDKATV
LLSMSKGGKRKDSVWGSQQSVNHLVKEIDMLLKEYLLSGDISEAEHCLKELEVPHFHHELVYEAIMVLEST
GESTFKMILDLLKSLWKSSTITVDQMKRGYERIYNEIPDINLDVPHSYSVLERFVEECFQAGIISKQLRDLCP
SRGRKRFVSEGDGGRLKPESY

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FIGURE 247

CGACCACCCGGCCTCGGCCAATAAGCGCCGCCCTCTCGCCCCGTGTTACTGGGTAGAAGAAAACAAAAACAAAC
AGAGCGAGAAGGGCCAGAGACTCTCCGAGGCGGCGGCAGAGACAGAAGAGCGGGGTCTGGGGCCGGCTGACCAGGA
ACCTGGGCGAGCAGCGCGGGGGCCCGAGGGATTCTGAAGGAAGATTTCATTAGGTAATTTGTTTAATCAGTGC
AAGCGAAATTAAGGGAAAATGGATGTAGAAAATGAGCAGATACTGAATGTAAACCCTGCAGATCCTGATAACTTA
AGTGACTCTCTCTTTTCCGGTGATGAAGAAAATGCTGGGACTGAGGAAATAAAGAATGAAATAAATGGAAATTGG
ATTTTCAGCATCCTCCATTAAACGAAGCTAGAATTAATGCCAAGGCAAAAAGGCGACTAAGGAAAACTCATCCCCG
GACTCTGGCAGAGGCGATTCCGGTCAGCGACAGTGGGAGTGACGCCCTTAGAAGTGGATTAACTGTGCCAACCAGT
CCAAAGGGAAGGTTGCTGGATAGGCGATCCAGATCTGGGAAAGGAAGGGGACTACCAAGAAAGGTGGTGCAGGA
GGCAAAGGTGTCTGGGGTACACCTGGACAGGTGTATGATGTGGAGGAGGTGGATGTGAAAGATCCTAACTATGAT
GATGACCAGGAGAATGTGTTTTATGAACTGTAGTTTTGCCTTTGGATGAAAGGGCATTGAGAAGACTTTAACA
CCAATCATACAGGAATATTTTGAGCATGGAGATACTAATGAAGTTGCGGAAATGTTAAGAGATTTAAATCTTGGT
GAAATGAAAAGTGGAGTACCAGTGTGGCAGTATCCTTAGCATTGGAGGGGAAGGCTAGTCATAGAGAGATGACA
TCTAAGCTTCTTTCTGACCTTTGTGGGACAGTAATGAGCACAACCTGATGTGGAAAAATCATTGATAAATTGTTG
AAAGATCTACCTGAATTAGCACTGGATACTCCTAGAGCACCACAGTTGGTGGGCCAGTTTATTGCTAGAGCTGTT
GGAGATGGAATTTTATGTAATACCTATATTGATAGTTACAAAGGAACTGTAGATTGTGTGCAGGCTAGAGCTGCT
CTGGATAAGGCTACCGTGCTTCTGAGTATGTCTAAAGGTGGAAAGCGTAAAGATAGTGTGTGGGGCTCTGGAGGT
GGGCAGCAATCTGTCAATCACCTTGTTAAAGAGATTGATATGCTGCTGAAAGAATATTTACTCTCTGGAGACATA
TCTGAAGCTGAACATTGCCTTAAGGAACTGGAAGTACCTCATTTTCACCATGAGCTTGTATATGAAGCTATTATA
ATGGTTTTAGAGTCAACTGGAGAAAGTACATTTAAGATGATTTTGGATTATTAAAGTCCCTTTGGAAGTCTTCT
ACCATTACTGTAGACCAAATGAAAAGAGGTTATGAGAGAATTTACAATGAAATTCGGACATTAATCTGGATGTC
CCACATTCATACTCTGTGCTGGAGCGGTTTGTAGAAGAATGTTTTCAGGCTGGAATAATTTCCAAACAACCTCAGA
GATCTTTGTCCCTCAAGGGGCAGAAAGCGTTTTGTAAGCGAAGGAGATGGAGGTCGTCTTAAACCAGAGAGCTAC
TGAATATAAGAACTCTTGCACTCTTAGATGTTATAAAAAATATATATCTGAATTGTAAGAGTTGTTAGCACAAAGTT
TTTTTTTTTTTTTTTTTAAAGCACTTGTTTTGGGTACAAGGCATTTCTGACATTTTATAAACCTACATTTAAGGG
GAATTTTTAAAGGAAATGTTTTTCTTTTTTTTTTGTTCGAGGGGGCAAGGAGGGACAGAAAAGTAACCTCT
TCTTAAGTGGAATATTCTAATAAGCTACCTTTTGTAAGTGCCATGTTTATTATCTAATCATTCCAAGTTTTCAT
TGATGTCTGACTGCCACTCCTTTCTTTCAAGGACAGTGTTCCTTTGTAGTAAAATCACTGGTTTATACAAAGCTTT
ATTTAGGGGGTAAAGTTAAGCTGCTAAAACCCCATGTTGGCTGCTGCTGTTGAGATACTGTGCTTTGGGAGTAAA
AAAAGAAAGTTATTTCTTTGTCTTAAAGAATTTTTAAAAAATTAGTCATGAGACTTATTCATCTTTCCAGGGAAC
ATACTGATTGGTCTTAAAGACTAGACAGTTAAGTAAAAGGTGGCTGGAACATCTATTTTCTACAAAACCTGGAA
AAATGAACCTGGTCTAGAGAATGTACACCAAATAAAACATGTGAAGCAGTAAAAAAAAAAAAAAAAA

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FIGURE 248

MTKYPDNLSDSLFSGDEENAGTEEIKNEINGNWISASSINEARINAKAKRRLRKNSSRDSGRGDSVSDSGSDALR
SGLTVPTSPKGRLLDRRSRSGKGRGLPKKGGAGGKGVWGTPGQVYDVEEVDVKDPNYDDDQENCVYETVVLPLDE
RAFEKTLTPIIQEYFEHGD TNEVAEMLRDLNLGEMKSGVPVLAVSLALEGKASHREMTSKLLSDLCGTVMSTTDV
EKSFDKLLKDLPELALDTPRAPQLVGQFIARAVGDGILCNTYIDSYKGTVDVCVQARAALDKATVLLSMSKGGKRK
DSVWGS GGGQQSVNHLVKEIDMLLKEYLLSGDISEAEHCLKELEVPHFHHELVEAIIMVLESTGESTFKMILD
LKSLWKSSTITVDQMKRGYERIYNEIPDINLDVPHSYSVLERFVEECFQAGIISKQLRDLCP SRGRKRFVSEGDG
GRLKPESY

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FIGURE 249

CGGAGCCAGCGTGGGAGGCCGCTGCCGTCGCGCGCCTTGGTTTTTCTGTTTCCTTTTTTTTTTTTTTTTTTAACTT
CCTGCCTATCACACGCAGCCATCAGCCCACAAAGACAATGACTACCAACGCGGGCCCCCTTGACCCATACTGGCCT
CAGCACCTAAGACTGGACAACCTTTGTACCTAATGACCGCCCCACCTGGCATATACTGGCTGGCCTCTTCTCTGTCTC
ACAGGGGTCTTAGTCGTGACCACATGGCTGTTGTCAGGTCGTGCTGCGGTTGTCCCATTTGGGGACTTGGCGGCGA
CTGTCCCTGTGCTGGTTTTGCAGTGTGTGGGTTCAATCACCTGGTGATCGAGGGCTGGTTCGTTCTCTACTACGAA
GACCTGCTTGGAGACCAAGCCTTCTTATCTCAACTCTGGAAGAGTATGCCAAGGGAGACAGCCGATACATCCTG
GGTGACAACCTTCACAGTGTGCATGGAAACCATCACAGCTTGCCCTGTGGGGACCACTCAGCCTGTGGGTGGTGATC
GCCTTTCTCCGCCAGCATCCCCCTCCGCTTCATTCTACAGCTTGTGGTCTCTGTGGGCCAGATCTATGGGGATGTG
CTCTACTTCCTGACAGAGCACCGCGACGGATTCCAGCACGGAGAGCTGGGCCACCCTCTCTACTTCTGGTTTTAC
TTTGTCTTCATGAATGCCCTGTGGCTGGTGCTGCCTGGAGTCCTTGTGCTTGATGCTGTGAAGCACCTCACTCAT
GCCCAGAGCACGCTGGATGCCAAGGCCACAAAAGCCAAGAGCAAGAAGAACTGAGGAGTGGTGGACCAGGCTCGA
ACACTGGCCGAGGAGGAGCTCTCTGCCTGCCAGAAGAGTCTAGTCCTGCTCCCACAGTTTGGAGGGACAAAGCTA
ATTGATCTGTCACTCAGGCTCATGGGCAGGCACAAGAAGGGGAATAAAGGGGCTGTGTGAAGGCACTGCTGGG
AGCCATTAGAACACAGATACAAGAGAAGCCAGGAGGTCTATGATGGTGACGATTTTTAAATCAGGAAATAAAAG
ATCTTGACTCTAAAAAAAAAAAA

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FIGURE 250

MTTNAGPLHPYWPQHRLDNFVPNDREPTWHILAGLFSVTGVLVVTTWLLSGRAAVVPLGTWRRLSLCWFAVCGFI
HLVIEGWFLVLYYEDLLGDQAFLSQLWKEYAKGDSRYILGDNFTVCMETITACLWGFLSLWVVI AFLRQHPLRFIL
QLVVS VGQIYGDVLYFLTEHRDGFQHGELGHPLYFWFYFVMNALWLVLP GVLVLDAVKHLTHAQSTLDAKATKA
KSKKN

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FIGURE 251A

CGTGCGGCGGTGGGCTGGTCTTCCGCGGCCGCGCTTGCGCCGCGGCGGAGGGTGGGCGCGCGGGGAGCGGGATGG
AGCTGGGGCGACCTTGCTGGAGGTACTGGCCTCAGCCCTTTCTCCCGCTTCCCCACCCCTCTTACCCCCAGATT
ACATTCTCTGTGTGGTGTCTTTACTGCAGATGAAGATTGGGGGCGAGCACTTGGCAGGTCATGAAGGGGTCC
AATTCTCGGGTTGTTGAACGTCTACCTGGAACAAGAAGAGAGATTCCAACCTCGAGAAAAAGGGCTGAGTTTGA
TTGAGGCTACCCCGGAGAATGATAACACTTTGTGTCCAGGATTGAGAAATGCCAAAGTTGAAGATTTAAGGAGTT
TAGCCAACTTTTTTGGATCTTGCACTGAACTTTTGTCTGGCTGTCAATATTTTGGACAGGTTCTTGCTCTTA
TGAAGGTGAAACCTAAACATTTGTCTGCATTGGAGTCTGTTCTTTTTTGTCTGGCTGCTAGAATAGTTGAAGAAG
ACTGCAATATTCCATCCACTCATGATGTGATCCGGATTAGTCAGTGTAATGTACTGCTTCTGACATAAAACGGA
TGGAAAAAATAATTTAGAAAAATTGCACTATGAATTGGAAGCTACTACTGCCTTAAACTTTTTGCACTTATACC
ATACTATTATACTTTGTCATACTTCAGAAAGGAAAGAAATACTGAGCCTTGATAAACTAGAAGCTCAGCTGAAAG
CTTGCAACTGCCGACTCATCTTTTCAAAAGCAAAACCATCTGTATTAGCCTTGTCCTTCTCAATTTGGAAGTGG
AAACTTTGAAATCTGTTGAATTACTGGAAATTCTCTTGCTAGTTAAAAAACATTCCAAGATTAATGACACTGAGT
TCTTCTACTGGAGAGAGTTGGTTTCTAAATGCCTAGCCGAGTATTCTTCTCCTGAATGTTGCAAACCAGATCTTA
AGAAGTTGGTTTGGATCGTTTCAAGGCGCACAGCCAGAACCTCCACAACAGCTACTATAGTGTTCTGAGCTGC
CAACGATACCTGAGGGGGGTTGTTTGTATGAAAGTGAAAGTGAGGACTCTTGTAAGATATGAGTTGTGGAGAGG
AGAGTCTCAGCAGCTCTCCTCCAGTGATCAAGAGTGCACCTTCTTTTTCAACTTCAAAGTGGCACAACACTGT
GCTTTCCATCTTAGAAATCTGATTGTTCTGTGCAATTTATATTTACAGGTTTCAAAGCAATAAATGGGGGAATA
GGTAGTTTCTGGTTTAGCCCCCATCTAGTCAGGAATTAATATACTGGAATACCTACCTTCTATTTGTTATTTCAG
ATCAGATCTGGCCTATTTTCATATTTATCCTAAGCCATCAAATGGGGTAGTGCTCTTAAACCATTAAACAGTACT
TTAGACATTGGCACTTTATTTTTCTCGTAGATCTTTAGCTACTTTGGGGAGGAGGGAAGGTGCTGATACCTTCAA
TTTGTTACTTTTTCAAGATTTTTTAAAAATAACTAGTGTAGCTTATCTTAAACATTTTATAAAACCTTCAGATGTCT
TTAAGCAGATTGGAAGTATGCAAGTGCTTCCCTAGCAGGGACAGTGGATAATCCTTAATGGTTTATCATAGATTT
CACCTTCCCCCTTCTCAGAAGAGTGAGTATGCTCTTAAATGTCAAACACATTTTGTGTGTTTTTAAAT
GATCAGTGTCTATTTGATGTGATGCAGATCTTATAAATTTGGGAATTATAATATTGACATTTCTGTGATTTTTAT
ATATGTAATGTCTTAATTGAGATTTCTGTTAAGGCAGAAATAATTAGGCTAGGGCTCTTAGTTTTCATTCTTATT
GCCCAAGTATTGTCAAACATATGGTATTATTTTAAATGTTACTTTAAAAATCCATAATCTGCTAGTTTTGCATGTAC
TTATATGAAAACAGTGCAGTAAGTTGAAAACCTCAGTATCTATGGAATTGATAAATGTTGATCTGGTGTAGTATAT
TTTATCGCATTTTCTTATATTAATAAATGTCTGCATGATTACATTTTATTTCCTTTGTAATTTACATTTCAGAAT
AGTGTATTGCTATATGGGTGCCAAGATTGAATATGAAGAACCCGAGTGTTTGTAGTATTATAGTTTTAAGCAAAT
CTGTGTGGTGATACAGCCATAAGAATGGGGCTTATATAAACTCTGTACATGTAAGATTTTGTACAGAGAATTTTT
AACTTTATAAATTGTATATGAACATGTAAATCTTTTAAATGTACATAAAATACTGTATTTTTTTACCTTGTGTG
TGATAGTCTAGTCATTGCATGTAAATATAATTTATTATGTATTCTGTAGTATAAATCATACATTGATGACTTACA
TTTTTACTGGTAAGTCAACATCCGTTGGATGTTTTCTGAAGTGGCTCTTTTTGAAGTGATAATAGATTGTAATTC
AAAAATAAATTATTAATGAATTCTCCTTGTTTGGGATCACATCTTAATTTTTAATCTGTTAAAGTTCTTGATGT
ATTTTAATGAGAAGACTTTAGGTGAGGCTACAGTGATTCCAGAGTGAGCCTTCTAACTGGCTAGCAGAAGTTCTC
TAGGTTTGGCATCTGTGCCCTTGGAGATACTGAAAGAGAATCTGTCAATTTGACAATTGACCTCTTGTGGGATGGA
CTCATTAAGTATGCTCTCAGAGACTGGTATATTACCAGAATGCCTATTAATTTTCAGTGAGAGGCAACAGGTATT
AAGTAGAACAGAATGCTCAGGTTGGCAGATTAGAACGATCTTTCAGGAGACAAAGCAAGTTTTAATCAGTTGTTT
GGTTAATAAGTATGGGGTGTTGCTGTGATAGGGCCCCGCCAGCTTCTGGCTCTTGTGGACCTCAAAGTATCAG
GTGGTTTTGCAAGTGGTGGTCTTTCCCTGCCCCACCCCAATAGGTTCCCCATCTGTCTAGTTTGATTTTTGTA
GACCTTTGTTTTCTCTAGTTAGAAAATCAGGTACACTGAATATGGTTTTTCATGTAACACCTCTTCTCTGGAGATA
GGGGTATGTTTTCTACCCTTCTAGTGGAGAATCCTACTTGAGGATGACCTTTCCTCTCTTACTAAATAATATTA
GTAAATAGTGGGCAATATATTCTGCTTTCAGATTTTGATTTGTTGAGATGTAAAAGTTGTTTGGGGCTTACCAA
TCTCAAGACTCTCTTTAGCTCCTGCAGGATTGTATTGCTTTTCTTACTGGATATTTTTCTGGGTAAGCATCTTT
GTGGCTTCATCTCTTCCCCTGTGGTTTTTCAGTGTATTTAGTCGAGACCTCTCTGCTGAGCTTGCAACCTGTTTA
TTCACATGGCCTGCCATGCCACTTGGAGGTTTCTGATTACTCCAAACCTGCTGGTTCTTTATGTCTTTCTCAGC
GAATAATCCATCTGTTTATGTTGGAACCTTAGGTGATATGCTCATCTCCTTTTGCCTGTTTATGGAGGTACCA
GCCTCTATCATTGTATGATTTGTTTACACTGTTTATATCTCTGTCCCCCTTTTTCTGCCATTGGCATGGT

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FIGURE 251B

TTAGACCTGTACTCTTTATCAGCAGAGGTACTGTAATATATTTGTGATCCCTCAGCTTCCAGGCTTACTCCTGGT
CTCTGCCTTCCTATCTACATATCCTTTTAAAATAAAATTTTAACTATCTCCTGAAAAATTGTTGAGTAGGTCACG
CACAATCAGGAGAAAAATCTATTCATGACATACAAGTCTCTGTCTAATCTGAACACTGCACCTGTCTCTGGCCTT
TTTTTCTTGTCAATTCCTAGACCTTAAAAAATGTGTATTGAGAAAGAACTCTGTTAGCTATACAGAAGATGAACT
GGGCAATATAGAGTAGCAGCATGGAGACCAGTCTGACTGAACTAAGGCAGTGGAAGTGTGGATGAGGAAGAGAGG
TGAAAAATTGAGAAGCGCTATCCTTTTCTCTTTGGGCATTATTAGGAGGCTCACAGACAAGTCCAGGAGTCTGGTTA
TACCCTCCTGTGCCATTCAACCAGGTGGCTTTTCCCATGACTGTGATGAATAAAATTGAGAAGCCCTGCCCTTTT
CAGAGCAGAGGGTGAGGAGAAAGCTACCATTTTGTCTCATCCTTACCCCGTTGACTTGGCGAGAGATTTGACC
TTTCAGGTTTTGATCCTGTCAATTTTCTAGGATGTGGTGCACGCACTTTGTCTTGGCGATGGTGAAGTATTGTGC
CTAGGTCCTGGGTCTTCATCTGTTTGGCTCTGCTACTGTTTCTCCTCCCAGGAAGTGTGGTTAGACAAATAATG
TGTTTTAATTACCTGTCACTCAGGATTAATACATACTCAGGTTAACTGTAGAGAGGCATTGGCTTCAGAACAC
TCCTCGTGACAATTTTAACCATTTTCTTTGTCTAGAGTCTGCCTTTTTCTTTTTTACAATTTCTTTTATTTCAAC
ACTAGGTTTCAATATGGTGTTCCTGCTACCTCCCACCTCCCTCCTCCCTCATCACACATGCAAATTGTCAGCTTA
TTGAGACAACCCACTTAGATTCATATATGGACAAGGACAAGGTATTTGCATTTGTTACTGGAATTCAGTTTTCC
TAACTATTTACTACCAGAAATGGTCAATAACTTACTTTGTGGTTAGCAAATCAAATTGTGTGATAGATAGTTTCC
CAGTATGATGGCCAGTCAGTCTTTCCATCCCTGTGCCTACATGCTGCTCTTCCCGTCCACAAGTGGAGTCTGTTT
CTCTTGAGTTTTGGCTGGCCTTATGAATGGCTTTGCTTACTGAAGTGCAGCAGAAGAAATTTAGTATATGTCCAA
GCCTAGGCTTTAAGAGACTGGCAGCTTTCCTTTTATCCTTTTTTGGAAAGCTAGCCACCATGCTGCAAAGAAGCTCA
GCTGGATTACTGAAAGATGAGAGGCCATGTGGAGAGAGACTCTTGAGGATGAGAGATTATCTTGATGTTCCAGC
CTTAAGCTCCCAGCTGAATGTGGGTGTATCCTCAGCTACACCACAGAAAACAGAGGAACTACTCAGTCGATCCCA
ATCAACCCACAGACTCACTAGAAATAACAAATTATTGTTTTAAGCCACGAGGTTTTGGGGGAGGGTTGTTAAACA
GTAATAGATAAGTGAGACAGATTGCTTGTTATTTATGGTCAAATGGTGATTATCTCTGGTGAGATTACAGGTGAT
GTTTTTTTTAAGTTATGCCTATCTGTAGTTTCCTTTTTTTTCTTAAATTTGATTGAATTATTAGTGTATTAAACAG
AATAAAGAATGAACTTTAAACACACACGCTGGTTATATGCTTCCTCTAATTAAAATTCATGGCTCTCACCAC

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FIGURE 252

CGGGLVFRGRRCAAAEGGRAGSGMELGRPLLEVLAASALSPASPPLLPPDYILCVVSLQMKDLGAEHLAGHEGVQ
LLGLLNVYLEQEERFQPREKGLSLIEATPENDNTLCPGLRNAKVEDLRSLANFFGSCCTETFLAVNILDRLALM
KVKPKHLSCIGVCSFLLAARIVEEDCNIPSTHDVIRISQCKCTASDIKMEKIISEKLHYELEATTALNFLHLYH
TIILCHTSEKKEILSLDKLEAQLKACNCRLIFSKAKPSVLALCLLNLEVETLKSVELLEILLVKKHSHKINDTEF
FYWRELVSCLAEYSSPECCKPDLKKLVWIVSRRTAQNLHNSYYSVPELPTIPEGGCFDESESEDSCEDMSCGEE
SLSSPPSDQECTFFFNFKVAQTLCFPS

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FIGURE 253

CCGGTCGGATGCCGGACCGGGGGCACCCTGAGGCGGTGGGTCCCCGACCTGCGAGACAGGTTTGGAAGCCCCCG
CTGCGCCCACTCCGTGCGGACCGCGAGGCCGCGGGCGGGTGGAGGCGCGTCTCCGGCACCATGAAGGATTTGGGG
GCAGAGCACTTGCGCAGGTCATGAAGGGGTCCAACCTCTCGGGTTGTTGAACGTCTACCTGGAACAAGAAGAGAGA
TTCCAACCTCGAGAAAAAGGGCTGAGTTTGATTGAGGCTACCCCGGAGAATGATAACACTTTGTGTCCAGGATTG
AGAAATGCCAAAGTTGAAGATTTAAGGAGTTTAGCCAACCTTTTTGGATCTTGCACTGAAACTTTGTCTCTGGCT
GTCAATATTTTGGACAGGTTCTTGCTCTTATGAAGGTGAAACCTAAACATTTGTCTTGCACTGGAGTCTGTTCT
TTTTTGCTGGCTGCTAGAAATAGTTGAAGAAGACTGCAATATTCCATCCACTCATGATGTGATCCGGATTAGTCAG
TGTAATGTACTGCTTCTGACATAAAACGGATGGAAAAATAATTTAGAAAAATTGCACTATGAATTGGAAGCT
ACTACTGCCTTAAACTTTTTGCACTTATACCATACTATTATACTTTGTCATACTTCAGAAAGGAAAGAAATACTG
AGCCTTGATAAACTAGAAGCTCAGCTGAAAGCTTGCAACTGCCGACTCATCTTTTCAAAGCAAACCATCTGTA
TTAGCCTTGTGCCTTCTCAATTTGGAAGTGGAACCTTTGAAATCTGTTGAATTACTGGAAATCTCTTGCTAGTT
AA₃AAACATTCCAAGATTAATGACACTGAGTTCTTCTACTGGAGAGAGTTGGTTTCTAAATGCCTAGCCGAGTAT
TCTTCTCCTGAATGTTGCAAACAGATCTTAAGAAGTTGGTTTGGATCGTTTCAAGGCGCACAGCCCAGAACCTC
CACAACAGCTACTATAGTTTCTGAGCTGCCAACGATACCTGAGGGGGGTTGTTTTGATGAAAGTGAAAGTGAG
GACTCTTGTGAAGATATGAGTTGTGGAGAGGAGAGTCTCAGCAGCTCTCCTCCCAGTGATCAAGAGTGCACCTTC
TTTTTCAACTTCAAAGTGCCACAAACACTGTGCTTTCCATCTTAGAAATCTGATTGTTCTGTCAGAATTTATATT
TACAGGGTTTCAAAGCAATAAATGGGGGAATAGGTAGTTTCTGGTTTAGCCCCCATCTAGTCAGGAATTAATAT
ACTGGAATACCTACCTTCTATTTGTTATTAGATCAGATCTGGCCTATTTTCATATTTATCCTAAGCCATCAAAT
GGGGTAGTGCCTCTTAAACCATTAACAGTACTTTAGACATTGGCACTTTATTTTTCTCGTAGATCTTTAGCTACT
TTGGGGAGGAGGGAAGGTGCTGATACCTTCAATTTGTTACTTTTCAAGATTTTAAAAATAACTAGTGTAGCTTA
TCTTAAACATTTTATAAAACCTTCAGATGTCTTTAAGCAGATTGGAAGTATGCAAGTGCTTCCTTAGCAGGGACA
GTGGATAATCCTTAATGGTTTATCATAGATTTACCCCTCCCCCTTCTCAGAAGAGTGAGTATGCTCTTAAATGT
CAAACACATTTTGTGTTTTGTTTTTAAATGATCAGTGTCTATTTGATGTGATGCAGATCTTATAAATTTGGG
AATTATAATATTGACATTTCTGTGATTTTATATATGTAATGTCTTAATTGAGATTTGTGTTAAGGCAGAAATAA
TTAGGCTAGGGCTCTTAGTTTTATTCTTATGCCCCAAGTATTGTCAAACATATGGTATTATTTAATGTTACTT
TAAAAATCCATAATCTGCTAGTTTTGCATGTACTTATATGAAAACAGTGCAGTAAGTTGAAAACCTCAGTATCTAT
GGAATTGATAAATGTTGATCTGGTGTAGTATATTTATCCGCATTTTCTTATATTAATAAATGTTCTGCAATGATT
ACATTTTATTTGCCTTTGT

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FIGURE 254

MKDLGAEHLAGHEGVQLLGLLNVYLEQEERFQPREKGLSLIEATPENDNTLCPGLRNAKVEDLRSLANFFGSCTE
TFVLAVNILDRLALMKVKPKHLSCIGVCSFLAARIVEEDCNIPSTHDVIRISQCKCTASDIKRMEKIISEKLH
YELEATTALNFLHLYHTIILCHTSERKEILSLDKLEAQLKACNCRLIFSKAKPSVLALCLLNLEVETLKSVELLE
ILLLVKKHSHKINDTEFFYWRELVSCLAEYSSPECCPKDLKKLVWIVSRRTAQNHLHNSYYSVPPELPTIPEGGCFD
ESESEDSCEDMSCGEESLSSSPSDQECTFFFNFKVAQTLCFPS

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FIGURE 255

GGCGGACCGAAGAACGCAGGAAGGGGGCCGGGGGGACCCGCCCCCGGCCGGCCGCAGCCATGAACTCCAACGTGG
AGAACCTACCCCCGCACATCATCCGCCTGGTGTACAAGGAGGTGACGACACTGACCGCAGACCCACCCGATGGCA
TCAAGGTCTTTCCCAACGAGGAGGACCTACCGACCTCCAGGTCACCATCGAGGGCCCTGAGGGGACCCCATATG
CTGGAGGTCTGTTCCGCATGAAACTCCTGCTGGGGAAGGACTTCCCTGCCTCCCCACCCAAGGGCTACTTCCTGA
CCAAGATCTTCCACCCGAACGTGGGCGCCAATGGCGAGATCTGCGTCAACGTGCTCAAGAGGGACTGGACGGCTG
AGCTGGGCATCCGACACGTACTGCTGACCATCAAGTGCCTGCTGATCCACCCTAACCCCGAGTCTGCACTCAACG
AGGAGGCGGGCCGCCTGCTCTTGAGAACTACGAGGAGTATGCGGCTCGGGCCCGTCTGCTCACAGAGATCCACG
GGGGCGCCGGCGGGCCAGCGGCAGGGCCGAAGCCGGTCGGGCCCTGGCCAGTGGCACTGAAGCTTCCTCCACCG
ACCTGGGGCCCCAGGGGGCCCGGAGGGGCTGAGGGTCCCATGGCCAAGAAGCATGCTGGCGAGCGCGATAAGA
AGCTGGCGGCCAAGAAAAAGACGGACAAGAAGCGGGCGCTGCGGGCGCTGCGGCGGCTGTAGTGGGCTCTCTTCC
TCCTTCCACCGTGACCCCAACCTCTCCTGTCCCCTCCCTCCAACCTCTGTCTCTAAGTTATTTAAATTATGGCTGG
GGTCGGGGAGGGTACAGGGGGCACTGGGACCTGGATTTGTTTTTCTAAATAAAGTTGGAAAAGCA

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FIGURE 256

MNSNVENLPPHIIRLVYKEVTTLTADPPDGIKVPNEEDLTDLQVTIEGPEGTPYAGGLFRMKLLLGKDFPASPP
KGYFLTKIFHPNVGANGEICVNVLKRDWTAELGIRHVLLTIKCLLIHPNPESALNEEAGRLLLENYEEYAARARL
LTEIHGGAGGPGSGRAEAGRALASGTEASSTDPGAPGGPGGAEGPMAKKHAGERDKKLAAKKKTDKKRALRALRRL

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FIGURE 257A

ATTCAGCCGGTGCGCGCGGCGGGAGGCAGTGGCTGGGGAGTCCCGTCGACGCTCTGTTCCGAGAGCGTGCCC
CGGACCGCCAGCTCAGAACAGGGGCAGCCGTGTAGCCGAACGGAAGCTGGGAGCAGCCGGGACTGGTGGCCCCGCG
CCCGAGCTCCGCAGGCGGGAAGCACCTTGGATTTGGGAAGTCCCGGGAGCAGCGCGGCGGCACCTCCCTCACCCA
AGGGGCGCGGCGACGGTCACGGGGCGCGGCCACCGTGAGCGACCCAGGCCAGGATTCTAAATAGACGGCCCCA
GGCTCCTCCTCCGCCCCGGGCCGCCTCACCTGCGGGCATTGCCGCGCCGCTCCGCCGGTGTAGACGGCACCTGCG
CCGCTTGCTCGCGGGTCTCCGCCCTCGCCACCCCTCACTGCGCCAGGCCAGGCAGCTCACCTGTACTGGCGC
GGGTGCGGAAGCCTGCGTGAGCCGAGGCGTTGAGGCGCGGCCACGCCACTGTCCCGAGAGGACGCAGGTGG
AGCGGGCGCGGCTTCGCGGAACCCGGCGCCGGCCGCGCAGTGGTCCCAGCCTACACCGGGTTCCGGGGACCCGG
CCGCCAGTGCCCGGGGAGTAGCCGCCCGCTCGGCTGGGCACCAATGAACAGCAGCAGCGCCAACATCACCTACGC
CAGTCGCAAGCGGCGGAAGCCGGTGCAGAAAACAGTAAAGCCAATCCCAGCTGAAGGAATCAAGTCAAATCCTTC
CAAGCGGCATAGAGACCGACTTAATACAGAGTTGGACCGTTTGGCTAGCCTGCTGCCTTTCCACAAGATGTTAT
TAATAAGTTGGACAAACTTTTCACTTCTTAGGCTCAGCGTCAGTTACCTGAGAGCCAAGAGCTTCTTTGATGTTGC
ATTAATACTCTCCCTACTGAAAGAAACGGAGGCCAGGATAACTGTAGAGCAGCAAATTTAGAGAAGGCCTGAA
CTTACAAGAAGGAGAATTCTTATTACAGGCTCTGAATGGCTTTGTATTAGTTGTACTACAGATGCTTTGGTCTT
TTATGCTTCTTCTACTATACAAGATTATCTAGGGTTTTCAGCAGTCTGATGTCATACATCAGAGTGTATATGAAC
TATCCATACCGAAGACCGAGCTGAATTTAGCGTCAGCTACACTGGGCATTAAATCCTTCTCAGTGTACAGAGTC
TGGACAAGGAATTGAAGAAGCCACTGGTCTCCCCAGACAGTAGTCTGTTATAACCCAGACCAGATTCTCCAGA
AACTCTCCTTTAATGGAGAGGTGCTTCATATGTCGTCTAAGGTGTCTGCTGGATAATTCATCTGGTTTTCTGGC
AATGAATTTCCAAGGGAAGTTAAAGTATCTTCATGGACAGAAAAAGAAAGGAAAGATGGATCAATACTTCCACC
TCAGTTGGCTTTGTTTGGGATAGCTACTCCACTTCAGCCACCATCCATACTTGAAATCCGGACCAAAAATTTAT
CTTTAGAACCAAAACACAACTAGACTTCACACCTATTGGTTGTGATGCCAAAGGAAGAATTGTTTATAGGATATAC
TGAAGCAGAGCTGTGCACGAGAGGCTCAGGTTATCAGTTTATTTCATGCAGCTGATATGCTTTATTGTGCCGAGTC
CCATATCCGAATGATTAAGACTGGAGAAAGTGGCATGATAGTTTCCGGCTTCTTACAAAAACAACCGATGGAC
TTGGGTCCAGTCTAATGCACGCGCTGCTTTATAAAAATGGAAGACCAGATTATATCATTGTAACCTCAGAGACCACT
AACAGATGAGGAAGGAACAGAGCATTACGAAAACGAAATACGAAGTTGCCTTTTATGTTTACCACTGGAGAAGC
TGTGTTGTATGAGGCAACCAACCCTTTTCTGCCATAATGGATCCCTTACCACTAAGGACTAAAAATGGCACTAG
TGGAAAAGACTCTGCTACCACATCCACTCTAAGCAAGGACTCTCTCAATCCTAGTTCCCTCCTGGCTGCCATGAT
GCAACAAGATGAGTCTATTTATCTCTATCCTGCTTCAAGTACTTCAAGTACTGCACCTTTTGAAAACAACCTTTTT
CAACGAATCTATGAATGAATGCAGAAATTGGCAAGATAATACTGCACCGATGGGAAATGATACTATCCTGAAACA
TGAGCAAATTGACCAGCCTCAGGATGTGAACCTCATTGCTGGAGGTCACCCAGGGCTCTTTCAAGATAGTAAAAA
CAGTGACTTGTACAGCATAATGAAAAACCTAGGCATTGATTTTGAAGACATCAGACACATGCAGAATGAAAAATT
TTTCAGAAATGATTTTCTGGTGAGGTTGACTTCAGAGACATTGACTTAACGGATGAAATCCTGACGTATGTCCA
AGATTCTTTAAGTAAGTCTCCCTTCATACCTTCAGATTATCAACAGCAACAGTCCCTGGCTCTGAACTCAAGCTG
TATGGTACAGGAACACCTACATCTAGAACAGCAACAGCAACATCACCAAAAGCAAGTAGTAGTGGAGCCACAGCA
ACAGCTGTGTGAGAAGATGAAGCACATGCAAGTTAATGGCATGTTTGAAAATTGGAACTCTAACCAATTCTGTGCC
TTTCAATTGTCCACAGCAAGACCCACAACAATATAATGTCTTTACAGACTTACATGGGATCAGTCAAGAGTTCCC
CTACAAATCTGAAATGGATTCTATGCCTTATACACAGAACTTTATTTCTGTAAATCAGCCTGTATTACCACAACA
TTCCAAATGTACAGAGCTGGACTACCTATGGGGAGTTTTGAACCATCCCCATACCCCACTACTTCTAGTTTAGA
AGATTTTGTCACTTGTTTACAACCTTCTGAAAACCAAAAGCATGGATTAAATCCACAGTCAGCCATAATAACTCC
TCAGACATGTTATGCTGGGGCCGTGTGATGTATCAGTGCCAGCCAGAACCTCAGCACACCCACGTGGGTGAGAT
GCAGTACAATCCAGTACTGCCAGGCCAACAGGCATTTTTAAACAAGTTTCAGAATGGAGTTTTAAATGAAACATA
TCCAGCTGAATTAATAACATAAATAACACTCAGACTACCACACATCTTCAGCCACTTCATCATCCGTGAGAAGC
CAGACCTTTTCTGATTTGACATCCAGTGGATTCTGTTAATTTCCAAGCCCAATTTTGACCTGGTTTTTGGATTA
AATTAGTTTGTGAAGGATTATGGAAAAATAAACTGTCACTGTTGGACGTCAGCAAGTTCACATGGAGGCATTGA
TGCATGCTATTACAAATTATTCCAAACCAATTTTAATTTTTGCTTTTAGAAAAGGGAGTTTAAAAATGGTATCA
AAATTACATATACTACAGTCAAGATAGAAAAGGTGCTGCCACGGAGTGGTGAGGTACCGTCTACATTTACATTA
TTCTGGGCACCACAAAATATACAAAACCTTTATCAGGGAACTAAGATTCTTTTAAATTAGAAAATATTCTCTATT
TGAATTATTTCTGTACAGTAAAAATAAAATACCTTTGAGTTTTGAGCTACTGGATTCTTATTAGTTCCCCAAATA

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FIGURE 257B

CAAAGTTAGAGAACTAACTAGTTTTTCCTATCATGTTAACCTCTGCTTTTATCTCAGATGTTAAATAAATGGT
TTGGTGCTTTTTATAAAAAGATAATCTCAGTGCTTTCCTCCTTCACTGTTTCATCTAAGTGCCTCACATTTTTTT
CTACCTATAACACTCTAGGATGTATATTTTATATAAAGTATTCTTTTTCTTTTTTAAATTAATATCTTCTGCAC
ACAAATATTATTTGTGTTTCCTAAATCCAACCAATTTTCATTAATTCAGGCATATTTTAACTCCACTGCTTACCT
ACTTTCTTCAGGTAAAAGGGCAAATAATGATCGAAAAAATAATTATTTATTACATAATTTAGTTGTTTCTAGACT
ATAAATGTTGCTATGTGCCTTATGTTGAAAAAATTTAAAAGTAAAATGCTTTTCCAAATTATTTCTTAATTATTA
TAAAAATATTAAGACAATAGCACTTAAATTCCTCAACAGTGTTTTTCAGAAGAAATAAATATACCACTCTTTACCT
TTATTGATATCTCCATGATGATAGTTGAATGTTGCAATGTGAAAAATCTGCTGTTAACTGCAACCTTGTTTATTA
AATTGCAAGAAGCTTTATTTCTAGCTTTTAAATTAAGCAAAGCACCCATTTCAATGTGTATAAATTGTCTTTAAA
AACTGTTTTAGACCTATAATCCTTGATAATATATTGTGTTGACTTTATAAATTTGCTTCTTAGAACAGTGAAAA
CTATGTGTTTTTCTCATATTTGAGGAGTGTTAAGATTGCAGATAGCAAGGTTTGGTGCAAAGTATTGTAATGAGT
GAATTGAATGGTGCAATTGTATAGATATAATGAACAAAATTATTTGTAAGATATTGTCAGTTTTTCATTTTAAAAA
GTCCATACCTTATATATGCACCTTAATTTGTTGGGGCTTTACATACTTTATCAATGTGTCTTTCTAAGAAATCAAG
TAATGAATCCAACCTGCTTAAAGTTGGTATTAATAAAAAAGACAACCACATAGTTCGTTTACCTTCAAACCTTTAGGT
TTTTTTAATGATATACTGATCTTCATTACCAATAGGCAAAATTAATCACCCCTACCAACTTTACTGTCTAACATGG
ACTTTCAAAAAAGAAAAATGACACCATCTTTTATTCTTTTTTTTTTTTTTTTTTTTGAGAGAGAGTCTTACTCTGC
CGCCCCAACTGGAGTGCAGTGGCACAATCTTGGCTCACTGCAACCTCTACCTCCTGGGTTCAAGTGATTCTCTTG
CCTCAGCCTCCCGAGTTGCTGGGATTGCGGGCATGGTGGCGTGAGCCTGTAGTCCTAGCTACTCGGGAGGCTGAG
GCAGGAGAATAGCCTGAACCTGGGAATCGGAGGTTGCAGGGCCAAGATCGCCCCACTGCACTCCAGCCTGGCAAT
AGACCGAGCTCCGTCTCCAAAAAATAACAATTTTATTCTTTTACTTTTTTTTAGTAAGTTAATGTATATA
AAAATGGCTTCGGACAAAATATCTCTGAGTTCTGTGATTTTCAGTCAAACTTTAAACCTGTAGAATCAATTTA
AGTGTGAAAAAATTTGTCTGAAACATTTTATAATTTGTTTCCAGCATGAGGTATCTAAGGATTTAGACCAGAG
GTCTAGATTAATACTCTATTTTTTACATTTAAACCTTTTATTATAAGTCTTACATAAACCATTTTTGTTACTCTCT
TCCACATGTTACTGGATAAATTGTTTAGTGAAAAATAGGCTTTTAAATCATGAATATGATGACAATCAGTTATAC
AGTTATAAAATTAAAAGTTTGAAAAGCAATATTGTATATTTTATCTATATAAAATAACTAAAATGTATCTAAGA
ATAATAAAATCACGTAAACC

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FIGURE 258

MNSSSANITYASRKRKRPVQKTVKPIPAEGIKSNPSKRHRDRLNTELDRLASLLPFPQDVINKLDKLSVLRLSVS
YLRAKSFFDVALKSSPTERNGGQDNCRAANFREGNLQEGEFLLQALNGFVLVVTDDALVFYASSTIQDYLGFFQ
SDVIHQSVYELIHTEDRAEFQRQLHWALNPSQCTESGQGIEEATGLPQTVVCYNPDQIPPENSPLMERCFCRLR
CLLDNSSGFLAMNFQGKLYLHGQKKKGKDGSIPLPQLALFAIATPLQPPSILEIRTKNFIFRTKHKLDFTPIGC
DAKGRIVLGYTEAELCTRGSYQFIHAADMLYCAESHIRMIKTGESGMIVFRLLTKNNRWTWVQSNARLLYKNGR
PDYIIIVTQRPLTDEEGTEHLRKRNTKLPFMFTTGEAVLYEATNPFPAIMDPLPLRTKNGTSGKDSATTSTLSKDS
LNPSSLLAAMMQQDESIYLYPASSTSSSTAPFENFFNESMNECRNWQDNTAPMGNDTILKHEQIDQPQDVNSFAG
GHPGLFQDSKNSDLYSIMKNLGIDFEDIRHMQNEKFFRNDFSGEVDFRDIDLTDEILTYVQDSLSKSPFIPSDYQ
QQQSLALNSSCMVQEHLHLEQQQHHQKQVVVEPQQQLCQKMKHMQVNGMFENWNSNQFVPFNCPPQDPQQYNVF
TDLHGISOEFYKSEMD SMPYTQNFISCNQPVLPQHSKCTELDYPMGSFEPSPYPTTSSLEDFVTCLQLPENQKH
GLNPQSAIITPQTCYAGAVSMYQCQPEPQH THVGQM QYNPVLPGQQAFLNKFQNGVLNETYPAELNNINNTQTTT
HLQPLHHPSEARPFDPDLTSSGFL

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FIGURE 259

AGCTGGCTGAGAGGGGACTGGGCGCCGGCGGGGAAGGAGGAGCGCTAGGTCGGTGTACGACCGAGATTAGGGTGC
GTGCCAGCTCCGGGAGGCCGCGGTGAGGGGCCGGGCCCAAGCTGCCGACCCGAGCCGATCGTCAGGGTCGCCAGC
GCCTCAGCTCTGTGGAGGAGCAGCAGTAGTCGGAGGGTGCAGGATATTAGAAATGGCTACTCCCCAGTCAATTTT
CATCTTTGCAATCTGCATTTTAATGATAACAGAATTAATTCTGGCCTCAAAAAGCTACTATGATATCTTAGGTGT
GCCAAATCGGCATCAGAGCGCCAAATCAAGAAGGCCTTTCACAAGTTGGCCATGAAGTACCACCTGACAAAA
TAAGAGCCCGGATGCTGAAGCAAAATTCAGAGAGATTGCAGAAGCATATGAAACACTCTCAGATGCTAATAGACG
AAAAGAGTATGATACACTTGGACACAGTGCTTTTACTAGTGGTAAAGGACAAAGAGGTAGTGGAAGTCTTTTGA
GCAGTCATTTAACTTCAATTTTGATGACTTATTTAAAGACTTTGGCTTTTTTGGTCAAAACCAAAACACTGGATC
CAAGAAGCGTTTTGAAAATCATTTCCAGACACGCCAGGATGGTGGTTCCAGTAGACAAAGGCATCATTTCCAAGA
ATTTTCTTTTGGAGGTGGATTATTTGATGACATGTTTGAAGATATGGAGAAAATGTTTTCTTTTAGTGGTTTTGA
CTCTACCAATCAGCATACAGTACAGACTGAAAATAGATTTTCATGGATCTAGCAAGCACTGCAGGACTGTCACCTCA
ACGAAGAGGAAATATGGTTACTACATACACTGACTGTTCCAGGACAGTAGTTCTTATTCTATTCTCACTAAATCCA
ACTGGTTGACTCTTCCTCATTATCTTTGATGCTAAACAATTTTCTGTGAAGTATTTTGACAAGTGCATGATTTCA
CTTTAAACAATTTGATATAGCTATTAAATATATTTAAGGGTTTTTTTTTTTTTGACAAATTCAACATTCAACGAGT
AGACAAAATGCTAATTATTTCCCTGATTAGGAAAGTTTCTTTAAAAACACGTAATTTTGCTAGTGCTTTTTCT
CTACCTGCCCTTGGGCTCACTAATATCACCAGTATTATTACCAAGAAAATATTGAGTTTACCTGATTAACTTTA
AAAGTTAATTGTAGATTTAAATTGTGTGAACCTAATGATTTTTGCAGTGAAACCTTTACTAATTCAAAGTTGCAT
GTTCTATGACATCTGTGACTTGCGTTGCAGAGTGTACATGAACTGTATAATTGAGTCATTTCAGTAAAGGAGAAC
AGTATCTTGGTTAATTGCTACTGAAAGGTTGAGAAAGGAATGGTTTGATATTTACCACAGCGCTGTGCCTTTCTA
CAGTAGAAGTGGGGTAAAGGAAATGGTTTTATTGCCCATAGTCATTTAGGCTGGAAAAAGTTGAAAACTTAACG
AAATATTGCCAAGAGATTGTTATGTGTTTGGTTCCAGCCTAAAAATGATTTTGTAGTGTGAAATCATAGCTACT
TACATAGCTTTTTTCATATTTCTTTCTTAGTTGTTGGCACTCTTAGGTCTTAGTATGGATTTATGTGTTTGTGTGT
GTGTAGTTTATCCTCTCTCTCATCTTTATCTAGAGATTGACTGATACCTCATTCTGTTTGTAACCAGCCAGTA
ATTTCTGTGCAACCTTACTATGTGCAATATTTTAAATCCTGAGAAATGTGTGCTTTTGTTTTCGGATAGACTTA
TTTCTTTAGTTCTGCACCTTTCCACATTATACTCCATATGAGTATTAATCCTATGGATACATATTAACAAGTG
TCTCATACAACATTGTATGTGAGAGAAATATAAATATTTACAACCTGATATTCGTTGTTGTTTATTGTTAAAG
TTTATTATGCAACTCTGGAGGTATAGAGGGCATATAAGCTATGGGACATATGCTGATCACAGGCTATATTTCATGA
AGTTACTTTTGACCAACCTGAAAACCTGATAGGATTTTGTGTTGTCATTTGGTAATTTCTACTGCATTCTTACCATC
CTTCTCTCACAATTTTGATAGCTTGAAGATCTTTTTAATTATAATTTGTTGTATTGTTTCCTAGGAGCAAGT
GTTCTGCTGCCAGTTCTTTCTCTTTAGGCGTGGTTGAGAAAAGCAGAACTTTACATAAAGCTGTATTTCTT
AATCATCTTTAATTTGAAACTTAAGAAAATGAATTTATTCTGTTATATTTATGTAACCTATTTCTGGAAGTTAT
ATCTACTAGTTTTGTTTGATAATAATAAATTAGCTATACCTTGAA

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FIGURE 260

MATPQSIFIFAICILMITELILASKSYDILGVPKSASERQIKKAFHKLAMKYHPDKNKSPDAEAKFREIAEAYE
TLSDANRRKEYDTLGHSAFTSGKGQRGSGSSFEQSFNFNFDDLKDFGFFGQNQNTGSKKRFENHFQTRQDGGSS
RQRHHFQEFSGGGGLFDDMFEDMEKMFSGFDSTNQHTVQTENRFHGSSKHCRVTQRRGNMVTITYTDCSGQ

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FIGURE 261

AGGAAATGGTTTCTGGAACCGTTAGTAAGGTCAGTTTTTAAACACTGAATCCAAGGTTGCTTCTGGAATATCC
AAATTGGTTATGACCAGAAATGTGATTCATTATACTAAGCTAAAGGAATAGATTAAAGAATTAGCAACAGTGGCCG
GGTGAGTGGCTCATGCCTGTAACCCAGCACTTTGGGGGAGGCCAGGTGGGTGGATCATTGAGGTGAGGAGT
TTGAGACCAGCCTGGCCAAACATGGTGAAACCTAAAAATACAAAAATTAGCCAGGTGTGGTGGCAGGTGCTTGTA
TCCAGCTGCTTGGGAGGCTGAAGCAGGAGAATTGCTTGAACCCGAGGCAGGGGTTGCAGTGAGCCAAGATCAC
ACCATTGCACTCCAGCCTGGGTGGCAGAGTGAGACTCTGTCTCAAAAATTAAAAAGCAACAGTGTATATGCAATA
GTTGCAAGATGTAAGATCACCCAAAGAGTATGCAGAGGGAAATGAGGGACAGAACCAGAAATATTAATACCCAG
GGAGTGAAACAGGAGGAGGACCCCAAGAAGTTACTGAGTCAGATTTTTCCCACTCATCCAGGTGAAAGTTTAGGTC
AATAATGTGAAATACCAGAGGGATTAAATGTCTACAGAAATAAAACCATGTCTCACATTAAGACAAACAAGTAGG
TTGGAGGGATATTTTGAAAGGCAAGGTGATATTAACTTTATTCTGAAAGTAGTTTGTAGAGAAAGAGGCATGA
TAAGAGTTGCAGTTAACTGATTGGAACCTATGCAGCAGATGAAACTGGAATAAAGGAACTCATCAGGAAATGAT
TATAGTAATAAGGGCCAGAAATAAGGGCTTGCTTGCTGAACTAAAAACAAAGAGGATACAAAGGTTCTAGAAAT
ATTTCAAAGGAATTAGCTTTAATTCAGCAATACTCATTGAGAATCACCTATGCACCTGGCTCTGAAGATGAAGTG
CTGAGTAACTTAGACATGGACCCTGCTATCATGGAGATGGCAGATTATTGGTCAGAATGCTCTTACCTGTCAAT
GTAGCAATTTTGTAGATCCTTAATACCTCTGAATTGCTAATAAACTTGTTTTGGCTGAAAAATAGTCCTGTGA
ATTTTACCATGCAGTTAAATAAGAACTAAAAGCAAACCTAAATACCACCAAAAAGGTTAGTAGTCTGTTATATG
CATTAGCCTTAATCTAAGGAAATATTTTATTATAGGTCTCCTTGAAGAAAATGATATTTTCAGGAATGCTCAAGC
AGGTGTTCTCATCAGCACTAATAGTCATCCAATCTTAAGGAAAAACAGAATATTTGATGGATTGCGCAGGTAT
TGAAATTACAAATCACGCACTGCAACACTAGAAGGCAATCAGATTTTTAACAACCGGTTTGGAGGCTTATTTTT
AGCATCTGGTGTTAATGTGACAATGAAAGATAACAAAATAATGAACAATCAAGATGCCATAGAAAAGGCTGTTAG
TAGAGGCCAATGTTTATATAAAATATCAAGTTATACCAGCTATCCCATGCATGATTTCTACAGATGTCATACTTG
TAACACCACAGATCGAAATGCCATATGTGTGAAGTGCATTAAGAAGTGCCATCAGGGACATGATGTAGAGTTTAT
TAGACATGATAGGTATGTAGCACACTTGCTTGATATATTACCCAATTACTTTCCCCCTCACTTTTCTAATATTTG
GGTTTCATTTTGCTTTAGGTTTTTCTGTGACTGTGGTGTGGAACACTGTCTAATCCTTGTACATTAGCTGGTGA
GCCTACACATGATACAGATACACTATATGACTCTGCTCCACCTATAGAATCTAATACATTGCAGCACAACTGAAT
TCCTTCCCTAAAGAAAAAGTCCCTGCCATTGTAACATCATAACTTAAACACTTTTTTGGAAGAAGATTTAAATA
TTTGCCCATGCTACAGGAAGAGACTGTATTAAAAATGGATACACAAGGTCAGTTGACACTATGAAGCTCAAGCTA
CCAAAAAGAAAGTGGAATATATTGACTCAGGATCTCAAAGCTGGGTGTTTTAGCATTACTGTGTAAAGACTTGA
AGGGACAGAAAGTGAAGAAAATAAGCTGCAATTTTGTACAGATACCAACTTCTGAAAAGCTGGTGTTTTTACAAC
AGCATTGAATGCAGTCCAATTTGCAGTAGTAATCTTCAATAGACAAGCAGCTTTGTTGCTGCCTTTATGGACATG
GGTACCAATTGCTTTTGTAAATATGGTAAAAATGTGAGCTAGCACTTCTGCGTTCCTTTTGATTTTTTTTTTAA
CATGTATTGAGATTGAGAAATATGATTTTAAATGCCTTAATCTCATGTAGTTTGTTTTTAATTTCAAGCAAAATCT
TACTGTACTTGAATGTGCCCTGTTTTGTAGCACACCTAGACTTGCTGTAAGTGTACTCATGTCCAGTATGTAC
GTTCTTTCTATGAAAGAGAAAACACTAATCTTAAATTATATCCAGCAATGTTTCTGGTATCCTTTAAGAAAAGTT
AAGACTATTATTTCCCTCCCTTCCCTGTGCAGCATTCAAAAATCACCCCTAGAAAAAGTGAGTGTTTAATGAGA
CTTCTAGGAAGGATGCAGTGTAACAAAAGTATTCTTGTAAGTCAAGTTTGTGAAAGGTAAAAAACTACTAT
GTTTTAAGTACACTTTAGAAAGTCTCTTCAAAAACAAACAGTCTGTATTTGAACTCTGTTTCATAGTTTTTTTTTG
AACAGTTTAGACAAAACCTGTTGGAATTAACCAATTTCTGCATTAAGCTGAGACAAGTATATAAACAGCCCTA
TACAGTTTCATAGCTTTTCCCTCCCCATTTATGTGTATTGGTGACAGTGGGTATAAACAGCCTGAAAGTGTATG
CATGTACCATAACATTTAGACTTAATATATTGTGGAGTATTCAATAACCATTATGTAGAAGGTAGATAAGAATTA
AAAGGGTTTAAATTTCTAGAAAGAAAATGGAATAATGGTCATTTTTAAAAAATAAAGTTTATTAGATCATAATGT
TGTCTGAATTTACCACCTTTGTGAGAAGTCAACTCAAAGCTTCCAATGTAGTCAGTCTATAATTCCTTAATCAA
GTCAGCAATTTATGGACAGCTTCAGCATTTACAGTTGACCTTTCACTAGCCAGGCAACTTCCCTTAAATTA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 262

MKDNKIMNNQDAIEKAVSRGQCLYKISSYTSYPMHDFYRCHTCNTTDRNAICVNCIKKCHQGHDFEIRHdryva
HLLDILPNYFPPHFSNIWVSFCFRFFCDCGAGTILSNPCTLAGEPTHDTDTLYDSAPPIESNTLQHN

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FIGURE 263

CGCGCCCCCTCCCTCCTCGCGGACCTGGCGGTTGCCGGCGCCCGGAGTGGCCCTTTAAAAGGCAGCTTATTGTCCGG
AGGGGGCGGGCGGGGGCGCCGACCGCGGCCTGAGGCCCCGCCCTCCCTCTCCCTCCCTCTGTCCCCGCGTCG
CTCGCTGGCTAGCTCGCTGGCTCGCTCGCCGTCGGCGCACGCTCCGCCTCCGTCAGTTGGCTCCGCTGTCCGG
TGCGCGCGCTGGAGCGGCAGCCGGTCTGGACGCGCGGCCGGGGCTGGGGGCTGGGAGCGCGGCGCGCAAGATCTC
CCCGCGGAGAGCGGCCCTGCCACCGGGCGAGGCCTGCGCCGCGATGGCAGAGATGGGCAGTAAAGGGGTGACG
GCGGGAAAGATCGCCAGCAACGTGCAGAAGAAGCTCACCCGCGCGCAGGAGAAGGTTCTCCAGAAGCTGGGGAAG
GCAGATGAGACCAAGGATGAGCAGTTTGAGCAGTGGCTCCAGAATTTCAACAAGCAGCTGACGGAGGGCACCCGG
CTGCAGAAGGATCTCCGGACCTACCTGGCCTCCGTCAAAGCCATGCACGAGGCTTCCAAGAAGCTGAATGAGTGT
CTGCAGGAGGTGTATGAGCCCGATTGGCCCCGAGGGATGAGGCAAACAAGATCGCAGAGAACAACGACCTGCTG
TGGATGGATTACCACCAGAAGCTGGTGGACCAGGCGCTGCTGACCATGGACACGTACCTGGGCCAGTTCCCCGAC
ATCAAGTCACGCATTGCCAAGCGGGGGCGCAAGCTGGTGGACTACGACAGTGCCCGGCACCACTACGAGTCCCTT
CAAAGTCCCAAAAAGAAGGATGAAGCCAAAATTGCCAAGGCCGAGGAGGAGCTCATCAAAGCCCAGAAGGTGTTT
GAGGAGATGAATGTGGATCTGCAGGAGGAGCTGCCGTCCCTGTGGAACAGCCGCGTAGGTTTCTACGTCAACACG
TTCCAGAGCATCGCGGGCCTGGAGGAAAATTCCACAAGGAGATGAGCAAGCTCAACCAGAACCTCAATGATGTG
CTGGTCCGCTGGAGAAGCAACACGGGAGCAACACCTTCACGGTCAAGGCCAGCCCAGAAAGAAAAGTAAACTG
TTTTGCGGCTGCGCAGAAAGAAGAACAGTGACAACGCGCCTGCAAAAGGGAACAAGAGCCCTTCGCCTCCAGAT
GGTCCCTGCCGCCACCCCCGAGATCAGAGTCAACCACGAGCCAGAGCCGGCCGGCGGGGCCACGCCCCGGGGCC
ACCTCCCCAAGTCCCATCTCAGCCAGCAGAGCCCTCGGAGGTGGCGGTGGGACCAACCTGCGGCTGGAGCC
CAGGAGCCAGGGGAGACGGCGGCAAGTGAAGCAGCCTCCAGCTCTCTCCTGCTGTCTGTGGTGGAGACCTTCCCA
GCAACTGTGAATGGCACCGTGGAGGGCGGCAAGTGGGGCCGGGCGCTTGACCTGCCCCAGGTTTCATGTTCAAG
GTACAGGCCCAGCACGACTACACGGCCACTGACACAGACGAGCTGCAGCTCAAGGCTGGTGTATGTGGTGTGGTG
ATCCCTTCCAGAACCTGAAGAGCAGGATGAAGGCTGGCTCATGGGCGTGAAGGAGAGCGACTGGAACCAGCAC
AAGGAGCTGGAGAAGTGCCGTGGCGTCTTCCCCGAGAACTTCACTGAGAGGGTCCCATGACGGCGGGGCCAGGC
AGCCTCCGGGCGTGTGAAGAACACCTCCTCCCGAAAAATGTGTGGTTCCTTTTTTTGTTTTGTTTTCGTTTTTCA
TCTTTTGAAGAGCAAAGGGAAATCAAGAGGAGACCCCCAGGCAGAGGGGCGTCTCCCAAAGATTAGGTCGTTTT
CCAAAGAGCCGCGTCCCGGCAAGTCCGGCGGAATTCACAGTGTTTCTGAAGCTGCTGTGTCTCTAGTTGAGTT
TCTGGCGCCCCTGCTGTGCCCGCATGTGTGCCTGGCCGAGGGCGGGGCTGGGGGCTGCCGAGCCACCATGCTT
GCCTGAAGCTTCGGCCGCGCCACCCGGGCAAGGGTCTCTTTTCTTGGCAGCTGCTGTGGGTGGGGCCAGACAC
CAGCTAGCCTGGCTCTGCCCCGAGACGGTCTGTGTGCTGTTTGAATAAATCTTAGTGTTCAAAACAAAATG
AAACAAAAAAAATGATAAAACTCTCAAAAAA

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FIGURE 264

MAEMGSKGVTAGKIASNVQKKLTRAQEKVLQKLGKADETKDEQFEQCVQNFNKQLTEGTRLQKDLRTYLASVKAM
HEASKKLNECLQEVYEPDWPGRDEANKIAENNDLLWMDYHQKLVDQALLTMDTYLGQFPDIKSRIAKRGRKLVDY
DSARHHYESLQTAKKKDEAKIAKEEELIKAQKVFEEMNVDLQEELPSLWNSRVGFYVNTFQSIAGLEENFHKEM
SKLNQNLNDVLVGLEKQHGSNTFTVKAQPSDNAPAKGNKSPSPPDGSPAATPEIRVNHEPEPAGGATPGATLPKS
PSQSSLPVVVETFPATVNGTVEGGSGAGRLDLPPGFMFKVQAQHDYTATDTDELQLKAGDVVLVIPFQNPPEEQD
EGWLMGVKESDWNQHKELEKCRGVFPENFTERVP

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FIGURE 265A

AGATTTGATAATGGGCTGCATTAAAAGTAAAGAAAACAAAAGTCCAGCCATTAAATACAGACCTGAAAATACTCC
AGAGCCTGTCTAGTACAAGTGTGAGCCATTATGGAGCAGAACCCACTACAGTGTACCATGTCCGTTCATCTTCAGC
AAAGGGAACAGCAGTTAATTTTCAGCAGTCTTTCCATGACACCATTGGAGGATCCTCAGGGGTAACGCCCTTTTGG
AGGTGCATCTTCCTCATTTTCAGTGGTGCCAAGTTCATATCCTGCTGGTTTAAACAGGTGGTGTTACTATATTTGT
GGCCTTATATGATTATGAAGCTAGAAGTACAGAAGACCTTTTCAATTAAGAAGGGTGAAAGATTTCAAATAATTAA
CAATACGGAAGGAGATTGGTGGGAAGCAAGATCAATCGCTACAGGAAAGAATGGTTATATCCCGAGCAATTATGT
AGCGCCTGCAGATTCCATTTCAGGCAGAAGAATGGTATTTTGGCAAATGGGGAGAAAAGATGCTGAAAGATTACT
TTTGAATCCTGGAAATCAACGAGGTATTTTCTTAGTAAGAGAGAGTGAAACAATAAGGTGCTTATTCCCTTTC
TATTCGTGATTGGGATGAGATAAGGGGTGACAATGTGAAACACTACAAAATTAGGAACTTGACAATGGTGGATA
CTATATCACACCAGAGCACAAATTTGATACTCTGCAGAAATTTGGTGAAACACTACACAGAACATGCTGATGGTTT
ATGCCACAAGTTGACAACCTGTGTGTCCAACCTGCAGACTCAAGGTCTAGCAAAAAGATGCTTGGGAAAT
CCCTCGAGAATCTTTGCGACTAGAGGTTAACTAGGACAAGGATGTTTTCGGCGAAGTGTGGATGGGAACATGGAA
TGGAACCACGAAAGTAGCAATCAAAACACTAAAACCAGGTACAATGATGCCAGAAGCTTTCCTTCAAGAAGCTCA
GATAATGAAAAAATTAAGACATGATAAACTTGTTCCTACTATATGCTGTTGTTTCTGAAGAACCAATTTACATTGT
CACTGAATTTATGTCAAAAGGAAGCTTATTAGATTTCTTAAGGAAGGAGATGGAAGTATTTGAAGCTTCCACA
GCTGGTTGATATGGCTGCTCAGATTGCTGATGGTATGGCATATATTGAAAGAATGAACTATATTCACCGAGATCT
TCGGGCTGCTAATATTCTTGTAGGAGAAAATCTTGTGTGCAAAATAGCAGACTTTGGTTTAGCAAGGTTAATTGA
AGACAATGAATACACAGCAAGACAAGGTGCAAAATTTCCAATCAAATGGACAGCTCCTGAAGCTGCACGTATGG
TCGGTTTACAATAAAGTCTGATGTCTGGTCATTGGAATCTGCAAAACAGAACTAGTAACAAAGGGCCGAGTGCC
ATATCCAGGTATGGTGAACCGTGAAGTACTAGAACAAGTGGAGCGAGGATACAGGATGCCGTGCCCTCAGGGCTG
TCCAGAATCCCTCCATGAATTGATGAATCTGTGTTGGAAGAAGGACCCTGATGAAAGACCAACATTTGAATATAT
TCAGTCTTCTTGAAGACTACTTCACTGCTACAGAGCCACAGTACCAGCCAGGAGAAAAATTTAATTTCAAGTA
GCCTATTTTATATGCACAAATCTGCCAAAATATAAAGAACTTGTGTAGATTTTCTACAGGAATCAAAAGAAGAAA
ATCTTCTTTACTCTGCATGTTTTTAATGGTAACTGGAATCCAGATATGGTTGCACAAAACCACTTTTTTTTCC
CCAAGTATTAACTCTAATGTACCAATGATGAATTTATCAGCGTATTTTCAGGGTCCAAACAAAATAGAGCTAAGA
TACTGATGACAGTGTGGGTGACAGCATGGTAATGAAGGACAGTGAGGCTCCTGCTTATTTATAAATCATTTCCTT
TCTTTTTTTCCCAAAGTCAGAATTGCTCAAAGAAAATTATTTATTGTTACAGATAAACTTGAGAGATAAAAAG
CTATACCATAATAAAATCTAAATTAAGGAATATCATGGGACCAAATAATTCCATTCCAGTTTTTTAAAGTTTCT
TGCATTTATTATTCTCAAAAGTTTTTTCTAAGTTAAACAGTCAGTATGCAATCTTAATATATGCTTTCTTTTGCA
TGGACATGGGCCAGGTTTTTCAAAGGAATATAAACAGGATCTCAAACCTTGATTAAATGTTAGACCACAGAAGTG
GAATTTGAAAGTATAATGCAGTACATTAATATTTCATGTTTCATGGAAGTAAAGAAATAAGAACTTTTTCACTTCAG
TCCTTTTCTGAAGAGTTTGACTTAGAATAATGAAGGTAAGTAAAGTGAAGTAAATCTTGTATGAGGTTGCATTG
ATTTTTTAAGGCAATATATAATTGAACTACTGTCCAATCAAAGGGGAAATGTTTGTATCTTTAGATAGCATGCA
AAGTAAGACCCAGCATTTTTAAAGCCCTTTTTTAAAACTAGACTTCGTACTGTGAGTATTGCTTATATGTCCTTA
TGGGGATGGGTGCCACAAATAGAAAATATGACCAGATCAGGGACTTGAATGCACTTTTGCTCATGGTGAATATAG
ATGAACAGAGAGGAAAATGTATTTAAAGAAAATACGAGAAAAGAAAATGTGAAAGTTTACAAGTTAGAGGGATG
GAAGGTAATGTTTAAATGTTGATGTCTGAGGTGACAGAATGGCTTTGCTGGCACTCAGAGCTCCTCACTTAGCTA
TATTCTGAGACTTTGAAGAGTTATAAAGTATAACTATAAACTAATTTTTCTTACACACTAAATGGGTATTTGTT
CAAAATAATGAAGTTATGGCTTCACATTCATTGCAGTGGGATATGGTTTTATGTAAACATTTTTTAGAACTCCA
GTTTTCAAATCATGTTTGAATCTACATTCACTTTTTTTTGTTTTCTTTTTTGAGACGGAGTCTCGCTCTGCCGCC
CAGGCTGGAGTGCAGTGGCGCGATCTCGGCTCACTGCAAGCTCTGCCTCCAGGTTACACCATTCCTCTGCCTC
AGCCTCCCGAGTAGCTGGGACTACAGGTGCCACCACCACGCCTGGCTAGTTTTTTGTATTTTTTAGTAGAGACGC
AGTTTCACCGTGTTAGCCAGGATGGTCTCGATCTCCTGACCTTGTGATCTGCCCCGCTCGGCCCTCCAAAGTGCT
GGGATTACAGGCGTGAGCCACCGCGCCCAGCCTACATTCACCTTCTAAAGTCTATGTAATGGTGGTCATTTTTTCC
CTTTTAGAATACATTAAATGGTTGATTGGGGAGGAAAACCTATTCTGAATATTAACGGTGGTGAAAAGGGGACA
GTTTTTACCCTAAAGTGCAAAAGTGAAACATACAAAATAAGACTAATTTTTTAAGAGTAACTCAGTAATTTCAAAA
TACAGATTTGAATAGCAGCATTAGTGGTTTGAAGTGTCTAGCAAGGAAAAATGATGAATAAAATGAAGGTCTGG
TGTATATGTTTTAAATACTCTCATATAGTCACACTTTAAATTAAGCCTTATATTAGGCCCTCTATTTTCAGGA

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FIGURE 265B

TATAATTCCTTAACATATCATTATTTACCTGATTTTAATCATCAGATTCGAAATTCGTGCCATGGCGTATATGTTT
AAATTCAAACCATTTTTTAAATGTGAAGATGGACTTCATGCAAGTTGGCAGTGGTTCTGGTACTAAAAATTGTGG
TTGTTTTTTCTGTTTACGTAACTGCTTAGTATTGACACTCTCTACCAAGAGGGTCTTCCTAAGAAGAGTGCTGT
CATTATTTCTCTTATCAACAACCTTGTGACATGAGATTTTTTAAGGGCTTTATGTGAACATATGATATTGTAATTT
TTCTAAGCATATTCAAAGGGTGACAAAATTACGTTTATGTACTAAATCTAATCAGGAAAGTAAGGCAGGAAAAG
TTGATGGTATTCATTAGGTTTTAACTGAATGGAGCAGTTCCTTATATAATAACAATTGTATAGTAGGGATAAAAC
ACTAATTAATGTGTATTCAATTTAAATTGTTCTGTATTTTTAAATTGCCAAGAAAAACAACTTTGTAAATTTGG
AGATATTTTCCAACAGCTTTTCGTCTTCAGTGTCTTAATGTGGAAGTTAACCCCTACCAAAAAAGGAAGTTGGCA
AAAACAGCCTTCTAGCACACTTTTTAAATGAATAATGGTAGCCTAACTTAATATTTTTATAAAGTATTGTAAT
ATTGTTTTGTGGATAATTGAAATAAAAAGTTCTCATTGAATGCACCTATTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 266

MGCIKSKENKSPAICYRPENTPEPVSTSVSHYGAEP TTVSPCPSSSAKGTAVNFSSLSMTPFGGSSGVTPFGGAS
SSFSVVPSSYPAGLTGGVTIFVALYDYEARTTEDLSFKKGERFQIINNTEGDWWEARS IATGKNGYIPSNYVAPA
DSIQAE EWYFGKMGRKDAERLLL NPGNQRGIFLVRESE TTKGAYSL SIRDWDEIRGDNVKHYKIRKLDNGGYYIT
TRAQFD TLQKLVKHYTEHADGLCHKLT TVCPTVKPQTQGLAKDAWEIPRESLRLEV KLGQGC FGEVWMGTWNGTT
KVAIKTLKPGTMMPEAF LQEAQIMKKLRHDKLVPLYAVVSEEP IYIVTEFMSKGSLLDFLKEGDGKYLKLPQLVD
MAAQIADGMAYIERMNYIHRDLRAANILVGENLVCKIADFGLARLIEDNEYTARQGA KFP IKWTAPEAALYGRFT
IKSDVWSFGILQTELVT KGRVPYPGMVNREVLEQVERGYRMPCPQGCPESLHELMNLCWKKDPDERPTFEYIQSF
LEDYFTATEPQYQPGENL

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FIGURE 267A

AGATTTGATAATGGGCTGCATTAAAAGTAAAGAAAAACAAAAGTCCAGCCATTAAATACAGACCTGAAAAATACTCC
AGAGCCTGTCAGTACAAGTGTGAGCCATTATGGAGCAGAACCCACTACAGTGTACCATGTCCGTTCATCTTCAGC
AAAGGGAACAGCAGTTAATTTTCAGCAGTCTTTCCATGACACCATTGGAGGATCCTCAGGGGTAACGCCCTTTTGG
AGGTGCATCTTCCTCATTTTCAGTGGTGCCAAGTTCATATCCTGCTGGTTTAACAGGTGGTGTACTATATTTGT
GGCCTTATATGATTATGAAGCTAGAACTACAGAAGACCTTTTCATTTAAGAAGGGTGAAAGATTTCAAATAATTAA
CAATACGGAAGGAGATTGGTGGGAAGCAAGATCAATCGCTACAGGAAAGAATGGTTATATCCCAGCAATTATGT
AGCGCCTGCAGATTCCATTTCAGGCAGAAGAATGGTATTTTGGCAAATGGGGAGAAAAGATGCTGAAAGATTACT
TTTGAATCCTGGAAATCAACGAGGTATTTTCTTAGTAAGAGAGAGTGAAACAATAAGGTGCTTATTCCCTTTC
TATTCGTGATTGGGATGAGATAAGGGGTGACAATGTGAAACACTACAAAATTAGGAACTTGACAATGGTGGATA
CTATATCACAACCAGAGCACAAATTTGATACTCTGCAGAAATTTGGTGAAACACTACACAGAACATGCTGATGGTTT
ATGCCACAAGTTGACAACGTGTGTGTCCAACGTGAAACCTCAGACTCAAGGTCTAGCAAAAGATGCTTGGGAAAT
CCCTCGAGAATCTTTGCGACTAGAGGTTAACTAGGACAAGGATGTTTCGGCGAAGTGTGGATGGGAACATGGAA
TGGAACCACGAAAGTAGCAATCAAAACACTAAAACCAGGTACAATGATGCCAGAAGCTTTTCCTTCAAGAAGCTCA
GATAATGAAAAAATTAAGACATGATAAACTTGTTCACATATATGCTGTTGTTTCTGAAGAACCAATTTACATTGT
CACTGAATTTATGTCAAAGGAAGCTTATTAGATTTCTTAAGGAAGGAGATGGAAAGTATTTGAAGCTTCCACA
GCTGGTTGATATGGCTGCTCAGATTGCTGATGGTATGGCATATATTGAAAGAATGAATATATTCACCGAGATCT
TCGGGCTGCTAATATTCTTGTAGGAGAAAATCTTGTGTGCAAAATAGCAGACTTTGGTTTAGCAAGGTAAATTGA
AGACAATGAATACACAGCAAGACAAGGTGCAAAATTTCCAATCAAATGGACAGCTCCTGAAGCTGCACTGTATGG
TCGGTTTACAATAAAGTCTGATGTCTGGTCATTTGGAATTCTGCAAAACAGAACTAGTAACAAAGGGCCGAGTGCC
ATATCCAGGTATGGTGAACCGTGAAGTACTAGAACAAGTGGAGCGAGGATACAGGATGCCGTGCCCTCAGGGCTG
TCCAGAATCCCTCCATGAATTGATGAATCTGTGTTGGAAGAAGGACCCTGATGAAAGACCAACATTTGAATATAT
TCAGTCTTCTTGGAAGACTACTTCCTGCTACAGAGCCACAGTACCAGCCAGGAGAAAATTTAATTTCAAGTA
GCCTATTTTATATGCACAAATCTGCCAAAATATAAAGAAGTGTGTAGATTTTCTACAGGAATCAAAGAAGAAA
ATCTTCTTTACTCTGCATGTTTTTAATGGTAAACTGGAATCCCAGATATGGTTGCACAAAACCACTTTTTTTTCC
CCAAGTATTAACTCTAATGTACCAATGATGAATTTATCAGCGTATTTTCAGGGTCCAAACAAAATAGAGCTAAGA
TACTGATGACAGTGTGGGTGACAGCATGGTAATGAAGGACAGTGAGGCTCCTGCTTATTTATAAATCATTTCCTT
TCTTTTTTTTCCCCAAAGTCAGAAATGCTCAAAGAAAATTATTTATTGTTACAGATAAACTTGAGAGATAAAAAG
CTATACCATAATAAAATCTAAAATTAAGGAATATCATGGGACCAATAATTCCATTCCAGTTTTTTTAAAGTTTCT
TGCATTTATTATTCTCAAAGTTTTTTCTAAGTTAAACAGTCAAGTATGCAATCTTAATATATGCTTTCTTTTGCA
TGGACATGGGCCAGGTTTTTCAAAGGAATATAAACAGGATCTCAAACCTTGATTAAATGTTAGACCACAGAAGTG
GAATTTGAAAGTATAATGCAGTACATTAATATTTCATGTTTCATGGAACCTGAAAGAATAAGAAGTTTTTCACTTCAG
TCCTTTTCTGAAGAGTTTGACTTAGAATAATGAAGGTAAGTAAAGTGAAGTAAATCTTGTATGAGGTTGCATTG
ATTTTTTAAGGCAATATATAATTGAAACTACTGTCCAATCAAAGGGGAAATGTTTTGATCTTTAGATAGCATGCA
AAGTAAGACCCAGCATTTTAAAGCCCTTTTTTAAAACTAGACTTCGTAAGTGTGAGTATTGCTTATATGTCCTTA
TGGGGATGGGTGCCACAAATAGAAAATATGACCAGATCAGGGACTTGAATGCACCTTTTGTCTATGGTGAATATAG
ATGAACAGAGAGGAAAATGTATTTAAAGAAAATACGAGAAAAGAAAATGTGAAAGTTTTACAAGTTAGAGGGATG
GAAGGTAATGTTTAAATGTTGATGTCTGAGTGACAGAATGGCTTTGCTGGCACTCAGAGCTCCTCACTTAGCTA
TATCTGAGACTTTGAAGAGTTATAAAGTATAAATAAATAAATAAATTTTCTTACACACTAAATGGGTATTTGTT
CAAAATAATGAAGTTATGGCTTCACATTTCATTGCAAGTGGATATGGTTTTTATGTAAAACATTTTGAAGTCCA
GTTTTCAAATCATGTTTGAATCTACATTCACTTTTTTTTGTCTTTTTTGTAGACGGAGTCTCGCTCTGCCGCC
CAGGCTGGAGTGCAGTGGCGCGATCTCGGCTCACTGCAAGCTCTGCCTCCAGGTTACACCATTCTCCTGCCTC
AGCCTCCCGAGTAGCTGGGACTACAGGTGCCCCACCACCACGCCTGGCTAGTTTTTTGTATTTTAGTAGAGACGC
AGTTTCACCGTGTTAGCCAGGATGGTCTCGATCTCCTGACCTTGTGATCTGCCCGCCTCGGCCTCCCAAAGTGCT
GGGATTACAGGCGTGAGCCACCGCGCCAGCCTACATTCACTTCTAAAGTCTATGTAATGGTGGTCATTTTTTCC
CTTTTAGAATACATTAATGGTTGATTTGGGGAGGAAAACCTTATTCTGAATATTAACGGTGGTGAAAGGGGACA
GTTTTTACCCATAAGTGCAAAAGTGAACATACAAAATAAGACTAATTTTTAAGAGTAACTCAGTAATTTCAAAA
TACAGATTTGAATAGCAGCATTAGTGGTTTGAAGTGTCTAGCAAAAGGAAAAATGATGAATAAATGAAGGTCTGG
TGTATATGTTTTAAATACTCTCATATAGTCACACTTTAAATTAAGCCTTATATTAGGCCCTCTATTTTCAGGA

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FIGURE 267B

TATAATTCTTAACATCATTATTTACCTGATTTTAATCATCAGATTCGAAATTCTGTGCCATGGCGTATATGTTT
AAATTCAAACCATTTTTTAAATGTGAAGATGGACTTCATGCAAGTTGGCAGTGGTTCTGGTACTAAAAATTGTGG
TTGTTTTTCTGTTTACGTAACTGCTTAGTATTGACACTCTCTACCAAGAGGGTCTTCCTAAGAAGAGTGCTGT
CATTATTTCTCTTATCAACAACCTGTGACATGAGATTTTTTAAGGGCTTTATGTGAACTATGATATTGTAATTT
TTCTAAGCATATTCAAAGGGTGACAAAATTACGTTTATGTACTAAATCTAATCAGGAAAAGTAAGGCAGGAAAAG
TTGATGGTATTCATTAGGTTTTAACTGAATGGAGCAGTTCCTTATATAATAACAATTGTATAGTAGGGATAAAAC
ACTAACTTAATGTGTATTCAATTTTAAATTGTTCTGTATTTTTTAAATTGCCAAGAAAAACAACTTTGTAAATTTGG
AGATATTTTCCAACAGCTTTTCGTCTTCAGTGTCTTAATGTGGAAGTTAACCCCTTACCAAAAAAGGAAGTTGGCA
AAAACAGCCTTCTAGCACACTTTTTTAAATGAATAATGGTAGCCTAACTTAATATTTTATAAAGTATTGTAAT
ATTGTTTTGTGGATAATTGAAATAAAAAGTTCTCATTGAATGCACCTATTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 268

MGCIKSKENKSPAICYRPENTPEPVSTSVSHYGAEP TTVSPCPSSSAKGTAVNFSSLSMTPFGGSSGVTPFGGAS
SSFSVVPSSYPAGLTGGVTIFVALYDYEARTTEDLSFKKGERFQIINNTEGDWWEARSIATGKNYIPSNYVAPA
DSIQAEWYFGKMGRKDAERLLLNPQNORGIFLVRESETTKGAYSL SIRDWDEIRGDNVKHYKIRKLDNGGYYIT
TRAQFDTLQKLVKHYTEHADGLCHKLT TVCPTVKPQTQGLAKDAWEIPRESLRLEVKLGQCGFGEVWMGTWNGTT
KVAIKTLKPGTMMPEAFLOEAQIMKKLRHDKLVPLYAVVSEEP IYIVTEFMSKGSLLDFLKEGDGKYLKLPQLVD
MAAQIADGMAYIERMNYIHRDLRAANILVGENLVCKIADFGLARLIEDNEYTARQGAKFPIKWTAP EAALYGRFT
IKSDVWSFGILQTELVTKGRVPYPGMVNREVLEQVERGYRMPCPQGCPESLHELMNLCWKKDPDERPTFEYIQSF
LEDYFTATEPQYQGENL

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FIGURE 269

CTCGGCCCCGGGCTGCCGCGCCAGCCCGTCTCCGCGGCGGGGACCGGGCTGCCTTGGCCCCCTCAGCGCTCGCGT
CTTTTCCGGCAGTTGGAACGCTTCCCTGTTGTCTCACCCGTAACCGCCTGTTGCCCCCTGTCTCAGAGTCCCTCA
CGCGTCCCCTCCCGTCTTTGGCTCGTTGGCTGCCGCGCCGGGGCTTCGCCAGCCTTCAAGTCGAGACTACTGGC
CGAAGGGGCGTCTGCGGCTCTCCGCGTCCCCAGCCCTGCCTCTCCCTGGGCTCTGCAGCCATGGCAATGACAGG
CTCAACACCTTGCTCATCCATGAGTAACCACACAAAGGAAAGGGTGACAATGACCAAAGTGACACTGGAGAATTT
TTATAGCAACCTTATCGCTCAACATGAAGAACGAGAAATGAGACAAAAGAAGTTAGAAAAGGTGATGGAAGAAGA
AGGCCATAAAGATGAGGAGAAACGACTCCGGAGATCAGCACATGCTCGGAAGGAAACAGAGTTTCTTCGTTTGAA
GAGAACAAAGACTTGGATTGGAAGATTTTGAGTCCTTAAAAGTAATAGGCAGAGGAGCATTGTTGGTGAGGTACGGCT
TGTTTCCAGAAAGATACGGGACATGTGTATGCAATGAAAATACTCCGTAAAGCAGATATGCTTGAAAAAGAGCA
GGTTGGCCACATTTCGTGCGGAGCGTGACATTCTAGTGAGGCGAGACAGTTTGTGGGTTGTGAAAATGTTCTATAG
TTTTCAGGATAAGCTAAACCTCTACCTAATCATGGAGTTCCTGCCTGGAGGGGACATGATGACCTTGTTGATGAA
AAAAGACACTCTGACAGAAGAGGAGACTCAGTTTTATATAGCAGAAACAGTATTAGCCATAGACTCTATTACCA
ACTTGATTTCATCCACAGAGACATCAAACCAGACAACCTTCTTTTGACAGCAAGGGCCATGTGAACTTTCTGA
CTTTGGTCTTTGCACAGGACTGAAAAAGCACATAGGACAGAAATTTATAGGAATCTGAACCACAGCCTCCCCAG
TGATTTCACTTTCCAGAACATGAATTCAAAAGGAAAGCAGAAACCTGGAAAAGAAATAGACGTAGCTAGCCTT
CTCCACAGTAGGCACTCCTGACTACATTGCTCCTGAGGTGTTTCATGCAGACCGGGTACAACAAGCTCTGTGATTG
GTGGTCGCTTGGGGTGATCATGTATGAGATGCTCATCGGCTACCCACCTTTCTGTTCTGAGACCCCTCAAGAGAC
ATATAAGAAGGTGATGAAGTGAAGAAACTTTGACTTTTCCCTCCAGAAGTCCCATCTCTGAGAAAGCCAAAGGA
TCTAATTTTGAGGTTCTGCTGTGAATGGGAACATAGAATTGGAGCTCCTGGAGTTGAGGAAATAAAAGTAAGTCT
TTTTTTTGAAGGCGTTGACTGGGAACATATCAGAGAGAGACCTGCTGCAATATCTATTGAAATCAAAAGCATTGA
TGATACCTCAAACCTTCGATGAGTTTCCAGAATCTGATATTCTTAAGCCAACAGTGGCCACAAGTAATCATCTCTGA
GACTGACTACAAGAACAAGACTGGGTCTTCATCAATTACAGTACAAGCGCTTTGAGGGCCTGACTGCAAGGGG
GGCAATACCTTCCCTACATGAAAGCAGCAAAATAGTACTCTTGCCACGGAATCCTATGTGGAGCAGAGTTCTTTGT
ATAACATCATGCTTTTCTCTCACACTCTTGAAGAGCTTCCAAGAAGTTGATGGAACCCACCAATATGTCATAGT
AAAGTCTCCTGAAATGTGGTAGTAAGAGGATTTTCTTCCATAATGCATCTGAAAACTGTAAACAAAGACAACCA
TTTCTACTACGTCGGCCATAAACAGCTATCCTGCTTTGGAAGAGAAGCATCATGAGCCAATTTGATAGGTGTTTT
AAAATAACTTGAGTTTTTCTTAAGTTCATCAGAATGAAGGGGAAAAACAGCCATCATCCAACATTATTGAGATTG
TCGTGTATAGTCATCGAATATCAGCCAGTTTCTGTAATTTTGTGACACGCTCTCTGCCAAGCCCACCAAGTATTT
CCTTTATAGCTAAAAGTTCATAGTACTAAGGAAATAAAGCAATAAAGACAGTCTCAGCAGCCAGGATTCTGGCT
GAAGGAAATGATCCGCCACCCTGAGGGTGGTGATGGTAGTTTCTACCCATACCTCAGCCTCAGGCGAGTGGCTTA
TAGCCTCCATTCATGGTGCACCTTTATTTATGGTACTAAGATAAAGACTGTCAATCCATTGATTTATCTCCTCCTG
TCCCCATCTAAAATACCCATGCTGCTTTTCTGAGTGTTGATGGGGTTACCAGCTTGATCCACTGTTGCTCTTA
GAAGGCCCAGAAAGTCTTTGGGCATTGCCAAGAAATCCCGGATTATGTGGAACCCCTCACTTTCTCTTACGGC
TGTACCAGAAAATCCCTAAGACAGATCTTGCCGTGGACTAGCAATACCTGCAAGTGCTGCCAATGGGAACCTCAAT
TTATTCCTGGGAACCTAACGAGGAGAGCCAGGCCCTAGGCAGGAGGCTGGAACCCCTCTTGGCTAAGGTGCTGTT
CCTGTTCTGCAAGGTCTCCAGAACCCCTTTGGAATGGTGAAGGAACCAGCCCAATAGAAGTACAGAGCCAGCT
GACAAGTCTTGTAAAGCTCACTCCTCAGTCCCTGGCACAGCCATGTTTTGTCTTCTCTCTTGGTATTTCTTCTC
TCCCAACTTTAGCCATTTTGCTTGGAAATCATGATTACAATTTTTCTTTGAGATGCCTTCTGGGGGATACT
CCTCCCCACCCTAAAGGGTCGCTGCAACTTAGGCGGATTGGGTCTCTCTGCTGTGGCGTTCTCTCTTGAGAGAC
CCTCTGAATTTTAGCACAAAGTGCCTTCTGTTTCACAGCTGCCACCACCTTTAGAGGAATTTGTCAGAAAAATG
TGGAGGCTCCATATTAATGCATTATTTTTTAAAAAGTTTTGATAACTCTTAAAGCATCATTTGCACCTATGTGGG
AACTTTGCCTGTTGCAAAGTATTGTGGCCGAGCTGCAGCTGGGAGCCTGCTTTCTGCCAGTCTTGAGGTTCTGAA
GATCAGCTTTGAAAGGAAAGTATGTCCTAGCTTAGCCATTCAGAAGAGAAAAATGGAATATCAGAGTTACAGTTG
TCAGTGAACTACTTTGGATTTTAACTCTTAGAGGAAGAAAAAGGTTAGGGAAGTGTCAACTCTGGATGAAGG
TGATGTGTTTGCCTCTCAGTCTTTCATTATAGCCTGCTAGTGAAAAGGAAGTAAATGAGATTCTTTTGTGTGAC
TTTGTAGTCTCTTTGTATTACCAATAGTTGGGGTGTGACTCCTGTGTGTTTTGCAAGAATGTGTGGTAAGCCT
GGGTAAAGAGAAGGAAGTGCAGGTGTTGGGAGAGTCTTTGTGTGGGGAGTGGCAGGGGATGATTTGTTTACAGGG
AAAATGCCACATTTTAACTTTTAACTTCTGAATAAACTGTGTAAAAACAAAAA

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FIGURE 270

MAMTGSTPCSSMSNHTKERVMTKVTLENFYSNLIAQHEEREMRQKKLEKVMEEGLKDEEKRLRRSAHARKETE
FLRLKRTRLGLEDFESLKVIGRGAFGEVRLVQKKDTGHVYAMKILRKADMLEKEQVGHIRAERDILVEADSLWVV
KMFYSFQDKLNLYLIMEFLPGGDMMTLLMKKDTLTEEETQFYIAETVLADS IHQLGFIHRDIKPDNLLLD SKGH
VKLSDFGLCTGLKKAHRTEFYRNLNHS LPSDFTFQNMNSKRKAETWKRNRRLAFSTVGTPDYIAPEVFMQTGYN
KLCDWWSLGVIMYEMLIGYPPFCSETPQETYKKVMNWKETLTFPPEVPISEKAKDLILRFCCWEHRIGAPGVEE
IKSNSFFEGVDWEHIRERPA AISIEIKSIDDT SNFDEFPESDILKPTVATSNHPETDYKNKDWVF INYTYKRFEG
LTARGAIPSYMKA AK

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FIGURE 271A

GGACTGTGTGTGTCTGGCTGTAGCAGACGCGAGGCGGCGACGAGGCGCCGGGGACCCGCGCGAGGGGCGGCCGGG
AGGCGGCGGGCGGGCGGCCAGAAAGTAGCAGCAGGACCGGCGGGCGGCGACGGCAGCCCTGAAATGCATTTTCCTC
TCCAGCGGCCATGTTAAACCAGGAAACCTTCGGCCGCCGCTCCCGCCGCCTACCCGACCGGGCCGAGGTGGGGACAG
CGCCGTTTCGTACGTTTACGGCTTCCCCGGGGCTCGGTGCAGGGCCCCACCCGGAGCGGAGTGGGGACTGGCCCGCC
CTCCCCCATCGCCCTGCCGCTCTCCGGGCCAGCAACGCTGCCGCCGACGCCCACACGATTGGCGGCAGTAAGCA
CACAATGAATGATCACCTGCATGTCGGCAGCCACGCTCACGGACAGATCCAGGTTCAACAGTTGTTTGAGGATAA
CAGTAACAAGCGGACAGTGCTCACGACACAACCAATGGGCTTACAACAGTGGGCAAAACGGGCTTGCCAGTGGT
GCCAGAGCGGCAGCTGGACAGCATTATAGACGGCAGGGGAGCTCCACCTCTCTAAAGTCCATGGAAGGCATGGG
GAAGGTGAAAGCCACCCCATGACACCTGAACAAGCAATGAAGCAATACATGCAAAACTCACAGCCTTCGAACA
CCATGAGATTTTACGCTACCTGAAATATATTTCTTGGGTCTAAATGCTAAGAAGCGCCAGGGCATGACAGGTGG
GCCCAACAATGGTGGCTATGATGATGACCAGGGATCATATGTGCAGGTGCCCCACGATCACGTGGCTTACAGGTA
TGAGGTCTCAAGGTCATTGGGAAGGGGAGCTTTGGGCAGGTGGTCAAGGCCTACGATCACAAAGTCCACCAGCA
CGTGGCCCTAAAGATGGTGCAGGAATGAGAAGCGCTTCCACCGCAAGCAGCGGAGGAGATCCGAATCTGGAACA
CCTGCGGAAGCAGGACAAGGATAACACAATGAATGTCATCCATATGCTGGAGAATTTACCTTCCGCAACCACAT
CTGCATGACGTTTGAGCTGCTGAGCATGAACCTCTATGAGCTCATCAAGAAGAATAAATTCAGGGCTTCAGTCT
GCCTTTGGTTTCGAAAGTTTGCCCACTCGATTCTGCAGTGCTTGGATGCTTTGCACAAAAACAGAATAATTCAGT
TGACCTTAAGCCCAGAACATTTTGTTAAAGCAGCAGGGTAGAAGCGGTATTAAAGTAATTGATTTTGGCTCCAG
TTGTTACGAGCATCAGCGTGTCTACACGTACATCCAGTCGCGTTTTTACC GGCTCCAGAAGTGATCCTTGGGGC
CAGGTATGGCATGCCCCATTGATATGTGGAGCCTGGGCTGCATTTTAGCAGAGCTCCTGACGGGTTACCCCTCTT
GCCTGGGGAAAGATGAAGGGGACCAGCTGGCCTGTATGATTGAAGTGTGGGCATGCCCTCACAGAACTGCTGGA
TGCATCCAAACGAGCCAAAAATTTTGAGCTCCAAGGGTTATCCCCGTTACTGCACTGTCAGACTCTCTCAGA
TGGCTCTGTGGTCTTAAACGGAGGCCGTTCCCGGAGGGGAAACTGAGGGGCCACCCGAGAGCAGAGAGTGGGG
GAACGCGCTGAAGGGGTGTGATGATCCCTTTTTCTTGACTTCTTAAACAGTGTTTAGAGTGGGATCCTGCAGT
GCGCATGACCCAGGCCAGGCTTTGCGGCACCCCTGGCTGAGGAGCGGTTGCCAAAGCCTCCACCGGGGAGAA
AACGTCAGTGAAAAGGATAACTGAGAGCACCGGTGCTATCACATCTATATCCAAGTTACCTCCACCTTCTAGCTC
AGCTTCCAAACTGAGGACTAATTTGGCGCAGATGACAGATGCCAATGGGAATATTCAGCAGAGGACAGTGTGCC
AAAACCTGTGTAGCTGAGCTCACGTCCCTGATGCTGGTAACCTGAAAGATACGACATTGCTGAGCCTTACTGGGT
TGAAAAGGAGTAGCTCAGACCTGTTTTTATTTGCTCAATAACTCTACTCATTGTATCTTTTACGACTTAATTT
TAATGTAAGAAAGTTGTTTCAATTTGTTTTATAAAATACATGAGGACAATGCTTTAAGTTTTTATACTTTAGAA
ACTTTTGTGTTCTAAAAGTACAATGAGCCTTACTGTATTTAGTGTGGCAGAATAATAACATCAGTGGCAGGCCA
CTGATTACTTCATGACTGCCACGCATTTACAGATTGGTGTCAAAGACATTCACTATGTTTTTATGGTTTATGTTA
TATCTCCCCAGGGTGACAGCCCTTAAGGCCCTCCTTTTCCCTCCATGCTCCAGGTCCATGCACAGGTGTAGCA
TGTCCTGCTTCCGTTTTTCATAAATTAATCTGGGTGTTGGGGGTAGTGGGAGGAGAACGGTCAGAATCAAAGTGA
CATTCTAAGAAAACTGTACCTTAGAGATTTTCTCTAGTGCTCAAACAAATACAAATAAGATCCCCAAGGTTT
AAACTGCCCAGTTAGCATTCTGACATTCTAAAAGCCGGCAAAGCAGCTTTTAGTGGATAAATGGGAATGGAAACG
TGTGTGTTCTCCAAATTTTCTAGTATGATCGGTGAGCTGTTTTGTAAAGAAGCCTCATATTACAGAGTTGCTTT
TGCACCTAAATTTAGAATTGTATCCATGAAGTGTCTCCCTTTTCTCTGCTTTTCTCCTCTCTGTTCTCTTT
TAATACCACACGTCTGTTGCTTGCAATTTAGTTTGTCTTCTTCCCTCAGCTGTGTATCCCAGACTGTTAATACAGA
AAAGAGACATTTACAGCTGTGATTATGACCATTGTTTTCATATTCCAATTAAAAAAGAAGCAGCAGCTAGCTACTT
AAGGTGGGGATTTTATAGTTCCAAAGAAGATTTAGCAGATTAGAGTGAGTTCACACTTTTACAGGTGCCACTGTAA
GGTTCTCTCAGCCTGGGAAACTATCAACTCTTTCTTTAAAAAGAAAGAGGGTTGAAAATCCTCTGGACGAACAGA
AGTCACTTTGGCTGTTTCAAGGCAATGTTAACAACACGTTTAGAGGAGGAAAAGTTCAACCTCAAGTTAAAT
GGTTTGACTTATTTCTCGTATCATTAGAAGAACCCAGAGATAGCATTCTCTATTTTATTTTACTTTCTTTTGG
ATTGCACTGATTGTTTTTGTGGGAATGACACTTTATCTGGCAAAGTAACTGAGAGTTTGGTAAAGAATATTTTC
TTCTCTGAATAATAATTATTTTACAGTGAAAATTTTCAAGTATTTTATCACTAATGTATGAGCAATGATCTATATC
AATTTCAAGGCACGTGAAAAAATTTTTTAGTATGTGCAATTTAATATAGAAAGATTTCTGCCTGTTTGGACAAT
AGGTTTTGGGTAGTACAGATTAGGATAAGTAAGCTTATATATGCACAGAGATTATTGTATTACCTGTAAATTGAT
TTACAAGTACTTAAAGCGTGGTCCCCAGTGAGGCCAAGAAAGTTCCGGTTAAGTTCTTTAATAATAATCCTAC

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FIGURE 271B

AGTTTATCTTAAGAA

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FIGURE 272

MLTRKPSAAAPAAAYPTGRGGDSAVRQLQASPGLGAGPTRSGVGTGPPSPIALPPLRASNAAAAAHTIGGSKHTMN
DHLHVGS SHAHGQIQVQQLFEDNSNKRTVLTTPNGLT TVGKTGLPVVPERQLDSIHRRQGSSTSLKSMEGMGKV
ATPMTPEQAMKQYMQKLTA FEHHEIFSYPEIYFLGLNAKKRQGMTGGPNNGGYDDDQGSYVQVPHDHVAYRYEVL
KVIGKGSFGQVVKAYDHKVHQHVALKMVRNEKRFHRQA AEEIRILEHLRKQDKDNTMNVIHMLENFTFRNHICMT
FELLSMNL YELIKKNKFQGFSLPLVRKFAHSILQCLDALHKNRIIHCDLKPENILLKQQGRSGIKVIDFGSSCYE
HQRVYTYIQSRFYRAPEVILGARYGMPIDMWSLGCILAELLTGYP LLPGEDEGDQLACMIELLGMP SQKLLDASK
RAKNFVSSKGYPRYCTVTTLSDGSVVLNGGRSRRGKLRGPPE SREWGNALKGCD DPLFLDFLKQCLEWDP AVRMT
PGQALRHPWLRRRLPKPPTGEKTSVKRITESTGAITSISKLPPPSSSASKLR TNLAQMTDANGNIQORTVLPKLV
S

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FIGURE 273A

CAGCTGCCAGCCGAGGAGGCGCGGCGGAGAGGGGACTGCGGTCAGCTGCGTCCACTTGGGGCTGTGCGGCGGTCC
CGCGCCCGGCGATGTTCCCGGGCACTCCCTGAGTAGCGGCAGCTTATCCCCGCCCCGCTAGCCCGCCCTGGTCCC
CGGCTCGCTCGCTGGCTGGCGCGGCCCGGCCCCGCTCTGCGTCGGCCCCGCCGCGGTGGAGGCGCGCAGGGGG
ACGCGGCCGGGGATGAGCGGATTGCGGGTGAACTCGCCGCCGGGGGCCCCGGAAGCCGTGAGCCGCTGCTTTT
CTCCGAGTCGCCGCCCTGCCCTTGGATTGAGATCATGTCCATCCACATCGTGGCGCTGGGGAACGAGGGGGACA
CATTCACCAGGACAACCGGCCGTGCGGGCTTATCCGCACTTACCTGGGGAGAAGCCCTCTGGTCTCCGGGGACG
AGAGCAGCTTGTGCTGAACGCGGCCAGCACGGTCGCGCGTCCGGTGTTCACCGAGTATCAGGCCAGTGCGTTTG
GGAATGTCAAGCTGGTGGTCCACGACTGTCCCGTCTGGGACATATTTGACAGTGATTGGTACACTTCTCGAAATC
TAATTGGGGGCGCTGACATCATTGTGATCAAATACAACGTTAATGACAAGTTTTTCATTCCATGAAGTAAAGGATA
ATTATATTCCAGTGATAAAAAGAGCATTAAATTCAGTTCAGTAATTATTGCTGCTGTTGGTACCAGACAAAATG
AAGAGTTACCTTGTACATGCCCACTATGTACCTCAGACAGAGGGAGCTGTGTTAGTACAACCTGAAGGGATCCAAC
TTGCAAAAGAACTAGGAGCAACCTATCTTGAACCTCCACAGCCTTGATGACTTCTACATAGGAAAGTATTTTGAG
GAGTGTGGAGTATTTTATGATTCAAGCCTTAAATCAGAAGACAAGTGAAAAATGAAGAAAAGAAAAATGAGCA
ACTCCTTTTCATGGAATTAGACCACCTCAACTTGAACAACCAGAAAAATGCCTGTCTTAAAGGCTGAAGCGTCAC
ATTATAACTCTGACTTAAATAACTTGCTGTTCTGCTGCCAGTGTGTGGACGTGGTATTTTATAACCCCGATTAA
AGAAAGTTGTAGAGGCCCAACAAGATCGTTCTCTGCGTGTAAAGCCATGTTTTCATGCTGCTTTTCAATGTGAAGA
GTCCCACTGACATTCAGGATTCCAGTATCATCCGAACCTACCCAGGATCTTTTTGCTATAAACAGAGATACTGCAT
TTCCAGGTGCTAGCCATGAATCTTCAGGCAACCCACCATTACGAGTCATTGTTAAAGACGCCCTCTTCTGTCTT
GTTTATCAGACATCCTTCGCTTCATTTATTCAGGTGCTTTTTCAGTGGGAAGAATTGGAAGAAGATATCAGGAAGA
AGTTGAAAGATTCTGGGGATGTTTCAAATGTAATCGAGAAAGTTAAATGCATTTTAAAAACACCAGGAAAGATTA
ATTGCCTAAGGAATTGCAAAACCTATCAAGCCAGAAAACCTTTGTGGTTTTATAACACTTCCCTCAAGTTTTTC
TTAATAAGCCGATGCTTGCCGATGTTGTCTTCGAAATTCAAGGTACGACAGTGCCAGCCACAGGGCCATCCTGG
TGGCCCGTTGTGAAGTGATGGCAGCCATGTTAATGGTAATTACATGGAAGCAAAGAGTGTCTGATTCCCGTTT
ATGGTGTTCCAAAGAGACTTTCTTGTCATTTTGAATACCTGTACACAGACTCCTGCTGCCAGCTGGCATAT
TCCAGGCCATGTGTCTCCTGATCTGTGCCGAGATGTACCAAGTGTCAGACTGCAGCACATCTGTGAGCTGTTCA
TCATTACCCAGCTGCAGAGCATGCCAAGCAGGGAACCTGGCATCCATGAACCTTGATATAGTTGACCTGCTTAAAA
AGGCCAAGTTTCACCACTCTGATTGCCTTTCAACCTGGCTACTTCATTTTCATTGCTACTAACTACCTCATCTTCA
GTCAAAAGCCTGAATTTAGGATCTTTCAGTGGGAAGAACGCAGTTTTGTTGAAAAGCACAGATGGCCGTCGAATA
TGTAATTGAAGCAGCTTGCGGAATACAGGAAGTATATTCACTCCCGGAAATGTGTTGCTTAGTAATGTAACCTG
GAGCTTTTATACACTACATTTCTTTTTTATTATTATGAAGAATGGGATACCTCCAGGTTCCAGTAAATTTCTTCT
GACCGAAACCAATGTGGGTGTTAGAAAAATTACCATATAGCTTAATATGTTTATTAGTTCTCTTTGGAAAAAAC
TACCACTGTGGTCTTAAAGGGGAACAAAATATACCATAGGCTAAACCTAAGGCTTTCACTCTAGAAATGCAAAGCT
GTTTTGCAGCTGTTTTCCCTTAAAGATGTCTGTTGCTTTAGTGATATTTAGACCCCTCTCAGTTAAGAAATGCT
TAGATTAAAAAATAAATACGTAGGATTAATACAGAAATTTAATCATGTCTGATTAATTGCTCTATTAAAAATA
AGGGGCATTTAAAGACCCAGCATAACCATTTGTATAATGAGAAATCTAGGGGAAAACCAATCAGTCCAACATGAG
ATTTTAGGAATAGAAATTTGCCGGCCATTTGGAAAGTGAAATGCCACTTAGTTCTCAATTGATGACAGTGTTTGA
ATCATCATAAAAAATAACCTGCTTTTCATCTGGACAACCCAATTGAGCCACTTTATCTCCTTTTGGCAATCTGA
GTAGGCGGGGAACCTAGGCAGGGCTGGCTTTCTTAGCGTGTAACCTTGTTAGTACGACACAGGGCCACACTTAGAA
GGACCCACACTTGGTTCAAGGCTCTGCTATAGCGGAAATCTTAATAATGTTTGAAGAAGGGCCCCATGATTTT
ATTTTGTGCTGAGCCCTCAAAATTATGTCTGTTTCGTGGTGGGAATATCCTATGTTTTCTTGCTCAAACACCTT
TCTCTCTGAAAGCAGAAAAAGGCACTGATATAAAGGGAAGAGAAGGAGGCTCACCGGAGGGAAGAGAACATAGTG
AAGATTCCCGCCTTTGGGGAGGTCTGGACCACCCAGGGCTCCACTGCCACCTTGGCTGGCAAGGGAGAAATGTG
TTGTGTTGTCTTAGCTTTAAACAGTCACAGTTCTTGCTCTATCATAGATGAACAAATACTTTCTTGATCATTCT
GTAAGACCAGGAGGTTGGTAAGAGTGACTAACCAGCCTAACTTTAATACACATGTATAAAGATGTTTACAGAGAA
AGATGCTCTGTAGAGAATTTGCTACCGAAGTTGGCTCAAGAATTTGTTTTAGTGTTATTTACCAAGATTAGGAC
GTCAGTGGCTTAAATCTTTGAATTCTTTTCAAGGACTGCAAGATTATTTGATAAAGAGTAGCATGAATCTTG
CTCTAATATTACACAGTAAGTTCAAAGAAAGGATGTAAGTCAAAGACTTGTTACATAGAGGGAAAATGGACTGGG
ATAGAGGACAGACTGATAGTTTCTTTCTTTCATATCACATGTATAGAGAAATAATTATATCAGAACTCACAAAC

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FIGURE 273B

CTAGACATGGAAAAACAGATTACTGTCTATTGTCAGCATCATTTTCATCTGTAAGTCACTACTGGAATATATTTT
TCTTTTAATTTCCAGTGACTTTAGAAATACACACAGTTTTTCCGACTTTTCAAAAATTTGATTAAATGGTTTTATA
GTATAATATTGGGACCCCATACCGTTAGCCCTTGTATGTATACCAACACTGCCAAAGTAAAACATTAGGTCAGGC
ATGGTGGCTCAGGCCTGTAATCCCAGCATTTTGGGAGGCTGAGGCAAGTGGATAACTTGAGGTCATGAGTTCGAA
ACCAGCCTGGCCAAAACAGTGAAACCCCGTCTCTACTAAAAATACAAAATTAGCCAGATGTGGTGGCGCACACCT
GTAATCCCAGCTACTCAGGAAGCTGAGGCAGGAAAATCGCTTGAACCTGGGAGGTGGAAGTTGCAGTGAGCCGAG
ATCGCACCCTGCACTCCAGCCTGGGTGACAAGAGCGAAACTCCATCTC

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FIGURE 274

MSIHIVALGNEGDTFHQDNRPGLIRTYLGRSPLVSGDESSLLLNAASTVARPVFTEYQASAFGNVKLVVHDCPV
WDIFDSDWYTSRNLIGGADIIVIKYNVNDKFSFHEVKDNYIPVIKRALNSVPVIAAVGTRQNEELPCTCPLCTS
DRGSCVSTTEGIQLAKELGATYLELHSLDDFYIGKYFGGVLEYFMIQALNQKTSEKMKKRKMSNSFHGIRPPQLE
QPEKMPVLKAEASHYNSDLNNLLFCCQCVDVVFYNPDLKKVVEAHKIVLCAVSHVFMLLFNVKSPDTIQDSSIIR
TTQDLFAINRDTAFPGASHSSGNPPLRVIVKDALFCCLSDILRFIYSGAFQWEELEEDIRKKLKDSGDVSNVI
EKVKCILKTPGKINCLRNCKTYQARKPLWFYNTSLKFFLNKPMLADVFEIQGTTVPAHRAILVARCEVMAAMFN
GNYMEAKSVLIPVYGVSKETFLSFLEYLYTDSCCPAGIFQAMCLLICAEMYQVSRLQHICELFIITQLQSMPSRE
LASMNLDIVDLLKKAKFHSDCLSTWLLHFIATNYLIFSQKPEFQDLSVEERSFVEKHRWPSNMYLKQLAEYRKY
IHSRKCRCLVM

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FIGURE 275A

CAGCTGCCAGCCGAGGAGGCGCGGCGGAGAGGGGACTGCGGTCAGCTGCGTCCACTTGGGGCTGTGCGGCGGTCC
CGCGCCCGGCGATGTTCCCGGGCACTCCCTGAGTAGCGGCAGCTTATCCCCGCCCCTAGCCCCGCCCTGGTCCC
CGGCTCGTCTGCTGGCTGGCGCGGCCCGGCCCCGCTCTGCGTCGGCCCCCGCGCGGTGGAGGCGCGAGAGGGG
ACGCGGCCGGGGATGAGCGGATTGCGGGTGAACTCGCCGCCCGGGGGCCCCGGAAGCCGTGAGCCGCTGCTTTT
CTCCGAGTCGCCGCCCTGCCCTTGGATTTGAGATCATGTCCATCCACATCGTGGCGCTGGGGAACGAGGGGGACA
CATTCCACCAGGACAACCGGCCGTCGGGGCTTATCCGCACTTACCTGGGGAGAAGCCCTCTGGTCTCCGGGGACG
AGAGCAGCTTGTTGCTGAACGCGGCCAGCACGGTCGCGCGTCCGGTGTTACCGAGTATCAGGCCAGTGCCTTTG
GGAATGTCAAGCTGGTGGTCCACGACTGTCCCGTCTGGGACATATTTGACAGTGATTGGTACACTTCTCGAAATC
TAATTGGGGGCGCTGACATCATTGTGATCAAATACAACGTTAATGACAAGTTTTTCATTCCATGAAGTAAAGGATA
ATTATATTCCAGTGATAAAAAGAGCATTAAATTCAGTTCCAGTAATTATTGCTGCTGTTGGTACCAGACAAAATG
AAGAGTTACCTTGACATGCCACTATGTACCTCAGACAGAGGGAGCTGTGTTAGTACAACCTGAAGGGATCCAAC
TTGCAAAAGAACTAGGAGCAACCTATCTTGAACCTCCACAGCCTTGATGACTTCTACATAGGAAAGTATTTTGGAG
GAGTGTTGGAGTATTTTATGATTCAAGCCTTAAATCAGAAGACAAGTGAAAAATGAAGAAAAGAAAAATGAGCA
ACTCCTTTTCATGGAATTAGACCACCTCAACTTGAACAACCAGAAAAATGCCTGTCTTAAAGGCTGAAGCGTCAC
ATTATAACTCTGACTTAAATAACTTGCTGTTCTGCTGCCAGTGTTGGACGTGGTATTTTATAACCCCGATTAA
AGAAAGTTGTAGAGGCCCAAGATCGTTCTCTGCGCTGTAAGCCATGTTTTTCATGCTGCTTTTCAATGTGAAGA
GTCCCACTGACATTCAAGATTCCAGTATCATCCGAACCTACCCAGGATCTTTTTGCTATAAACAGAGATACTGCAT
TTCCAGGTGCTAGCCATGAATCTTCAGGCAACCCACCATTACGAGTCATTGTTAAAGACGCCCTCTTCTGTCTT
GTTTATCAGACATCCTTCGCTTCATTTATTCAGGTGCTTTTTCAGTGGGAAGAATTGGAAGAAGATATCAGGAAGA
AGTTGAAAGATTCTGGGGATGTTTCAAATGTAATCGAGAAAGTTAAATGCATTTTAAAAACACCAGGAAAGATTA
ATTGCCTAAGGAATTGCAAAACCTATCAAGCCAGAAAACCTTTGTGGTTTTATAACACTTCCCTCAAGTTTTTCC
TTAATAAGCCGATGCTTGCCGATGTTGTCTTCGAAATTCAAGGTACGACAGTGCCAGCCACAGGGCCATCCTGG
TGGCCCGTTGTGAAGTGATGGCAGCCATGTTAATGGTAATTACATGGAAGCAAAGAGTGTCCTGATTCCCGTTT
ATGGTGTTTTCAAAGAGACTTTCTTGTCATTTTTAGAATACCTGTACACAGACTCCTGCTGCCAGCTGGCATAT
TCCAGGCCATGTGTCTCCTGATCTGTGCCGAGATGTACCAAGTGTCAGACTGCAGCACATCTGTGAGCTGTTCA
TCATTACCCAGCTGCAGAGCATGCCAAGCAGGGAACCTGGCATCCATGAACCTTGATATAGTTGACCTGCTTAAAA
AGGCCAAGTTTCAACCTCTGATTGCCTTTCAACCTGGCTACTTCATTTTCATTGCTACTAACTACCTCATCTTCA
GTCAAAAGCCTGAATTTCAAGATCTTTCAGTGGAAGAACGCAGTTTTGTTGAAAAGCACAGATGGCCGTCGAATA
TGTACTTGAAGCAGCTTGCGGAATACAGGAAGTATATTCACTCCCGGAAATGTCGTTGCTTAGTAATGTAACTG
GAGCTTTTATACACTACATTTCTTTTTTATTATTATGAAGAATGGGATACCTCCAGGTTCCAGTAAATTTCTTCT
GACCGAAACCAATGTGGGTGTTAGAAAAATTACCATATAGCTTAATATGTTTATTAGTTCTCTTTGGAAAAAAC
TACCACTGTGGTCTTAAAGGGGAACAAATATACCATAGGCTAAACTAAGGCTTTCACTCTAGAATGCAAAGCT
GTTTTGCAGCTGTTTTCCCTTAAAGATGTCTGTTGCTTTAGTGATATTTAGACCCCTCTCAGTTAAGAAATGCT
TAGATTAAAAAATAAATACGTAGGATTAATACAGAAATTTAATCATGTCTGATTAAATGCTCTATTAAAAATA
AGGGGCATTTAAAGACCCAGCATAACCATTTGTATAATGAGAAATCTAGGGGAAAAACCAATCAGTCCAACATGAG
ATTTTAGGAATAGAAATTTGCCGGCCATTTGGAAAGTGAAATGCCACTTAGTTCTCAATTGATGACAGTGTTTGA
ATCATCATAAAAAATAACCTGCTTTTCATCTGGACAACCCAATTGAGCCACTTTATCTCCTTTTGGCAATCTGA
GTAGGCGGGGAACCTAGGCAGGGCTGGCTTTCTTAGCGTGTAACCTGTGTAGCAGCACAGGGCCACACTTAGAA
GGACCCACACTTGGTTCAAGGCTCTGCTATAGCGGAAATCTTAATAATGTTTGAAAGAGGGCCCCATGATTTT
ATTTTGTGCTGAGCCCTCAAATATGTCTGTTTCGTGGTGGGAAATATCCTATGTTTTCTTGCTCAAACACCTT
TCTCTCTGAAAGCAGAAAAAGGCATGATATAAAGGGAAGAGAAGGAGGCTCACCGGAGGGAAGAGAACATAGTG
AAGATTCCCGCCTTTGGGGAGGTCTGGACCACCCAGGGCCTCCACTGCCACCTTGGCTGGCAAGGGAGAAATGTG
TTGTGTTGTCTTAGCTTTAAACAGTCACAGTTCTTGCTCTATCATAGATGAACAAATACCTTCTTGATCATTCT
GTAAGACCAGGAGTTGGTAAGAGTGACTAACCAGCCTAACTTTAATACACATGTATAAAGATGTTACAGAGAA
AGATGCTCTGTAGAGAAATTTGCTACCGAAGTTGGCTCAAGAATTTGTTTTAGTGTTATTTACCAAGATTAGGAC
GTCAGTGGCTTAAATCTTTGAATCTTTTCAAGGACTGCAAGATTATTTGATAAAGAGTAGCATGAATCTTGTG
CTCTAATATTACACAGTAAGTTCAAAGAAAGGATGTAAGTCAAAGACTTGTTACATAGAGGGAAAATGGACTGGG
ATAGAGGACAGACTGATAGTTTCTTTCTTTTCATATCACATGTATAGAGAAATAATTATATCAGAACTCACAAAC

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FIGURE 275B

CTAGACATGGAAAAACAGATTACTGTCTATTGTCAGCATCATTTTCATCTGTAAGTCACTACTGGAATATATTTT
TCTTTTAATTTCCAGTGACTTTAGAATACACACAGTTTTTCCGACTTTTCAAAAATTTGATTAAATGGTTTTATA
GTATAATATTGGGACCCCATACCGTTAGCCCTTGTATGTATACCAACACTGCCAAAGTAAACATTAGGTCAGGC
ATGGTGGCTCAGGCCTGTAATCCAGCATTTTGGGAGGCTGAGGCAAGTGGATAACTTGAGGTCATGAGTTCGAA
ACCAGCCTGGCCAAAACAGTGAAACCCGTCTCTACTAAAAATACAAAATTAGCCAGATGTGGTGGCGCACACCT
GTAATCCAGCTACTCAGGAAGCTGAGGCAGGAAAATCGCTTGAACCTGGGAGGTGGAAGTTGCAGTGAGCCGAG
ATCGCACCCTGCACTCCAGCCTGGGTGACAAGAGCGAACTCCATCTC

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FIGURE 276

MSIHIVALGNEGDTFHQDNRPGLIRTYLGRSPLVSGDESSLLLNAASTVARPVFTEYQASAFGNVKLVVHDCPV
WDIFDSDWYTSRNLIGGADIIVIKYNVNDKFSFHEVKDNYIPVIKRALNSVPVIAAVGTRQNEELPCTCPLCTS
DRGSCVSTTEGIQLAKELGATYLELHSLDDFYIGKYFGGVLEYFMIQALNQKTSEKMKKRKMSNSFHGIRPPQLE
QPEKMPVLKAEASHYNSDLNNLLFCCQCVDVVFYNPDLKKVVEAHKIVLCAVSHVFMLLFNVKSPTDIQDSSIIR
TTQDLFAINRDTAFPGASHESGNPPLRVIVKDALFCSCLSDLRFIYSGAFQWEELEEDIRKKLKDSGDVSNVI
EKVKCILKTPGKINCLRNCKTYQARKPLWFYNTSLKFFLNKPM LADVFEIQGTTVPAHRAILVARCEVMAAMFN
GNYMEAKSVLIPVYGVSKEIFLSFLEYLYTDSCCPAGIFQAMCLLICAEMYQVSRLQHICELFIITQLQSMPSRE
LASMNLDIVDLLKKAKFHHSCLSTWLLHFIATNYLIFSQKPEFQDLSVEERSFVEKHRWPSNMYLKQLAEYRKY
IHSRKCRCCLVM

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FIGURE 277

GCGGCCGCGTGGCCAGGCAACCTATGGGTACCACCGGGTTCTCGCGGGTCTTGCGAACGAACTTTTCTTGAAA
CTCTCTGGATTCCCTGTAAACAGTGGGGCTCAGCCCCTCAATGACTGGAGGCTTCGATGGTTCAAAGGGGACCTCC
GGAATCACAGGGCCGGGAGTCGCCATGTCCGGGCCACAGCAGCAGGAGAAAATCGGGACTCCGACCTCAGCCTCC
CGGTGAAGGTCATGAAAGGGCGGGGAAACGAATAAATTGAGCCTTGCTACGCAGGCGCAAATGCTCGTTGCATCC
TGGGAGTCGTAGTGCTCAGCACGGTAGTGCTACAAAAGGACTACATTTCCCCAAATGCCCGCAAAGCCTTGTCGA
CGCCTTCCGGAAGGAGTTTGTACACGAGGTCTGAGAGACAGAGGCAGCGTGTTTGAGCTGCTGGTGCGGTGGTC
AGCGCGATGCCCAAGGCCAAGGGCAAAACCCGGAGGCAGAAGTTTGTTACAGTGTCAACCGAAAGCGTCTGAAC
CGGAATGCTCGACGGAAGGCAGCGCGCGGAATCGAATGCTCCACATCCGACATGCCTGGGACCACGCTAAATCG
GTACGGCAGAACCTGGCCGAGATGGGGTTGGCTGTGGACCCCAACAGGGCGGTGCCCTCCGTAAGAGAAAGGTG
AAGGCCATGGAGGTGGACATAGAGGAGAGGCCCTAAAGAGCTTGACGGAAGCCCTATGTGCTGAATGACCTGGAG
GCAGAAGCCAGCCTTCCAGAAAAGAAAGGAAATACTCTGTCTCGGGACCTCATTGACTATGTACGCTACATGGTA
GAGAACCACGGGGAGGACTATAAGGCCATGGCCCGTGATGAGAAGAATTACTATCAAGATACCCCAAAACAGATT
CGGAGTAAGATCAACGTCTATAAACGCTTTTACCCAGCAGAGTGGCAAGACTTCCTCGATTCTTTGCAGAAGAGG
AAGATGGAGGTGGAGTAACTGGTTTACATCACAGCTGCCCCAGGCTGAGGCGTCCCCCGGACCAGTGAAGCTGGA
GCCAGGGTGTAAGGCAAGGAGGTGCTGTGTGGCTCCAGAGGGGCTGGCCAGGTCCCATGGAATCAGAAGGTTACA
CACACACGTGCACACTCCCCGCTCTGGGGAAGGAAGTGTCTCAGAGGCTCCAATTTATATTCTCTGGGGGTTT
ACGGAAAAGCCAGAACCTGCTGTTTTTCAGGGTGGGTGATGTAAATATAGTGTGTACATAATAAGCAAATATATT
TAAA

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FIGURE 278

MPKAKGKTRRQKFGYSVNRKRLNRNARRKAARGIECSHIRHAWDHAKSVRQNLAEMLAVDPNRAVPLRKRKVK
MEVDIEERPKELVKPYVLNDLEAEASLPEKKGNTLSRDLIDYVRYMVENHGEDYKAMARDEKNYYQDTPKQIRS
KINVYKRFYPAEWQDFLDSLQKRKMEVE

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FIGURE 279A

CGTCCACCGTGGAGTCTCTCCTTGCTTTGGGTCCACTGAGCCCCACACATTGTTGAGTGTCTGATTGTCTCCTTG
 CCCTTACAGGACAGGAAAGCGAAATCTCTGTTCCTTTGTAGGGACCTTTCTTTTGTAGGTGAAAGGGACAGAAAT
 ATGATTCTGGCCTCCTTGATGGTGAATACAGGAACACTTTTCAGATAAATTACAATAGAGAGGAGTCAGCTTATTT
 AAACAAACTGAGGTAAAGCCAGAGATTGCAGTTAACAGTGAAAAAATTTAAAGCAAGTACCTGGATGGATGCAAA
 GCAGTGCCCAGGAGACCCAACTTACGTGACAGAGATGATCATTGTCACTCATTCAATATGTTTTGAGCACCAGCC
 ATGTGCCAGGTCCAGAACTAGAAGAACTTGGGTGTAGGTGAGATCATAGGAACAGTCCCTGCCCCAGCTGAACA
 TCAGGAAGCCAGACTGGGAGCACATGCCGTGGCTGACTAGGACTCCAGCAGGGACCTGGGGTTCCATCAGATCAG
 TGTAAAGCGATGGTTTCCCAAATGAGACCTCTCCAGAGATGGTTCAATCCACCCCGCAATGGCCACCAGAAACAT
 TGTGCTGACCAGAGGGCTTCACTGCCCCAAACCCCAAATCACACTCCAGGATGAGAAACCTAAAAGTCTATCTT
 GATGAGGCTTCATAGCTGGAAACCACCCCTCATGGATCCACAGGCTGCATTTGATGAAAGGAGACTCCAGGAAGT
 CGAGCCATTCCAGGCAGACATGTAGCAAAAGCCCGAGCTGGGGTCCGCCCTCATGCAATAAATAACACCTGTGCA
 CATAAGAGAGGTGACAGGCAGGGCATCCCTGGGGACCTGGGCCTGTGGCACGTGAAGAAACACCCAAGAGAGCAC
 GAAGTCCCAATGCCATGACCAGATATTTTCGGTGCCAGGCATGCTTCTGGGTCCCAGCAAAAGACACACAAATCCG
 TGTCTTGGGGACCCACAGTCTAGTGACCTAGGGCTGGCCGGGTGCGACGCTTCTTTCAAGGGCTCGAAAGCCT
 CTGCATGGATGCAACTTTGGGGGAAAAGTAACCCTAACCTCTGCTTCTCTCATCCTCCCCTCTTCTGTGTATAT
 GTCTGTCTCTTTCTCTCTGTGTGTGCCCTTCCCCACTCCCATTCCCTTTTATTATTATATTTTGGT
 GGTGTGTGGCTCGGTTTCTGTTGGTCCCTCGTGTGGCCCTCCCTGCTGCAGAACTCGTCAGCTCGGGCTCCACCATG
 TCCGAAGCCTCGGAAACCTGCCAGTCAGTGAGCGAGTGACGCTCCCCACCTCTGTCACTCGGGCTCCACCATG
 GGTGCCTGGGTGTCCACAGAGAAGGTGACCGCCCGGGTGGCAGCCACAGCGGCCCTCTCCCTGGTCCCCCTG
 CCTGCTGCTCAGACAGCCCTCACAGCCGCGGCAACCTGGAAGCTCAGAATCGACACCAAGAGTGGGGCTCCTCTT
 GGGGACAGAGGGTGGGACAAGGCTGAGAGCATTTTCTAGAATGAGTGCCTGGCTGCTGGACAATGACCACATGGT
 TGTCTCAAGGGAGAGGAAGGGGTATGGGGAATTTGGAGGTGTGAAGGCTTTCTCCAGACCAGGTGTTGCGTGCC
 TGTCCATCCTCCTCCCTCCCTTCCCGAGCCACCCACCAGACCGTTGGATGAGCCATGTCACTGTGTGAGAGGCTG
 TGTGCTTTTCCGCTTTTTAGTTTGCACCCCCACCCCTTGCCTTGATTGAGAATGTGCTCCTGAGCAATGCGAC
 GATTTTGGAAACCTAGAATGAACAGATTCATTTGAAGATGCTTTGGAATTTTAAATTTGCATAATGAAATGAGC
 AAATCACTATCACCATTAAATGAGGCTTCATTAGTTACATTATCAAAAACCATTGACAAGGCCACAAATTGAGGG
 CACTGATCAATTTCCAACTTCTAAAACGTAGGTCAAACATAGATGCTTATTTGCTGTCAAACCTCATGTGCATTC
 TTTGCACCCCGGCTCTTTTCTCTTGCATCACAGATCATCCGTGAGCAGCAGAGCCCCAATGTTTGTGTTTTATTAT
 AAATATTGAGGTTTCCCTCCCTTGAATGTCAATGCCATTTTGTATCTCCGCACTCATCTGTTATATTAATTTT
 TTTTCCCTTCCCCCCCCCTTTTTTGTGTTTCCAGTTGTCTAACGGGTTTTCTCACTATAGTTTATCAAGTGAG
 TCCACGTGGGGCCACGGGTGCAGGCCTTTTCCCTCATTGCTGCTGCTGCCCTCCCGCTGCTCCCTCGGGTCACC
 TCTGTCCACCTTCCAGACTACGCTCATTATTACACCATTTGGGCCCCGCAATGTTTCCCGTCACTCAGATCCCTAGC
 TGGAAGGACTGGGCTAAGCCTGGGCCCTATGACCAGCCTCTGGTGAACACCCTGCAGCGCCGCAAGAGAAGCGA
 GAACCGGACCCCAACGGGGGAGGACCCACTACCGCCAGCGGCCACCTGCAGCAGCTGAGGAGGCTCAGAGACCA
 CGGAGCATGACTGTATCGGCTGCCACCAGGCCTGGTGAGGAGATGGAGGCTTGTGAGGAGCTGGCCCTGGCCCTG
 TCTCGGGCCTGCAGCTGGACACCCAGAGGAGCAGCCGGGACTCGCTTCAGTGCTCCAGCGGCTACAGCACCCAG
 ACAACCACCCCTGCTGCTCTGAGGACACCATCCCTTCCCAAGTTTCAGATTATGATTATTTCTCTGTAAGTGGT
 GACCAGGAGGCAGATCAGCAGGAGTTCGACAAAGTCCCTCCACCATTTCCAAGAAACAGCGACATCAGCCAGTCTTAC
 CGACGGATGTTCCAAGCCAAGCGTCCAGCCTCAACTGCTGGCCTCCCCACCACCTGGGACCTGCTATGGTCACT
 CCAGGGGTGCAACTATCCGACGGACCCCTTCCACCAAGCCTTCTGTCCGCCGGGAACCATTTGGAGCTGGTCCC
 ATCCCCATCAAGACACCCGTGATCCCTGTCAAGACCCCAACCGTCCAGACCTCCAGGGGTGTTGCCAGCCCT
 CCAGATGGGGCCAGAAGAGCGGGGGGAGCACAGCCCTGAGTCGCCATCTGTGGGTGAGGGCCCCCAAGGTGTCACC
 AGCATGCCCTCCTCAATGTGGAGCGGCCAAGCTTCCGTTAACCTCCACTTCCAGGCCCCAAGCCCAGTATCCCT
 GAGGAGCACAGACAGGCAATTCAGAAAGTGAAGCTGAAGACCAGGAACGGGAACCCCAAGTGCCACTGTCTCC
 CCAGGCCAGATTCCAGAGAGTGACCCTGCAGACCTGAGCCCAAGGGATACTCCACAAGGAGAAGACATGCTGAAC
 GCCATCCGAAGGGGCGTGAAACTGAAGAAGACCACGACAAACGATCGCTCAGCCCTCGCTTTTCTTAGGTTTAC
 AAGAAATGCGCCGGTGGGGAATGAAGTGTTCATTAATAAAACCTAATTTGTCTTGATCCATTCCACTCTATAAT
 AAAACAAAAGATTTTGTAGGCAACTCGGAATATAGCTCTTTTGAAGTACTCGACACCTTTAGATAAGAATTAA

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FIGURE 279B

ACCAACCTATGTAAGTACATAATCTTGATCTTTAATTTGTAAATATTGACAATTTTCTTTCTGCACATTTTAA
TCTTAGTTTCCCTTTTGATTTTTCTGAAGGTGCCAAATTCATTAACTTTTTTACAAGTCTTTGTAAAATTTA
AATGCATAAAGGGGGTTGGGGCAGGGGAACACGAAAGTAGTTAATTTTAGAAAAGGATTTACTATACTTCACTCT
TCTTTTTTTTTTCCCCACAAGCTTTTGTAGATGCATTGTAGTAGTCTAGCTTAGAAGCAAATGCAAGTTATTTTAA
TGTACAACTAAATGGGTAAGAGGTAAAATCTTCATTTAAATATACTATGTTCTGGATGAAAAGAGCAGGAGTAA
CAATTGATGAGCAATATTCAGAGTGAAGTAAATCTGGAAATGGTAGACTGTGTTGGGATTGGGGGGAGGGCCATG
GGAGGGGTACATCGTCAACATAGCCGATCCTGTTACATTTAAGAGTAGCCTCGTAGGTTGAATTTCTTCTGGTAG
CTTCATGGTAAATGCATCCGAATAAGCCATACTGGATTGCAGTGTTTGTCTGTAGGGTGTAAAGGACTTGAC
TTCCTTTCTCCCATGATTCTCTGGACTGCACACAGCACCCACAACCAGCCCCATGCATGCTGCTGCCTCTGGGC
AGTCGTAGAATCTCCCACTTCAGTTTCTCGTTGATTGTACTCACCTTTATGGAATCCAAATACATCCAAAAGGGT
AAGGCAGTTTAAAAATGTGAAAACATTTAAAAATGATAATAGCAGGGAATTCTTAGATTATAGTAAATGCCTTT
TACTTAACTGTGCCAGCAGGCTGGGTGCGTTAAAAAGCCCAAGTATTTGAAAAAACTCGAACAGATTTGACAA
GGGTAGCCAGCTTGAGTCTAGCAACTTGCCAATGTGTTTACCAATCTGGGGGCTTGTTTTCTTTTCTTTCTTTC
AAATAAATGGCAGTTAACTGGCTTTACAGTAAACATTGAAGAGAGGAGGATTTGTTTATTGTCACTGGGAATCTG
ACCACTATACTGTCCTTTTTTTGTATTCTGGGTAAATGTTTTTTGGAAAAGATTTGTCTTTTCTAAGTGAAGTTA
AATTTGTTATACTGCCCATCCCCTAAAGCCAACAGAGATTTGTAGATTTAAAGGGATCACATTTGAAGACAATAG
TGTTTAAGAAAGCAAGCAAGTCCCTTAGCAGTCAGGTCATAACAGGGCACATTTCTGACCGAACCTCTCAAGGC
AGAGGAGGAGTTTGGTGGGTTTCATACACCCTGCAGATTCCTGTTGGCTCTAACCCTCAATTACCTAATCTTATG
CTTTAACACATAACTGCATTGGATGTGAGAGTAACGTACCGTATGGTCATTGTTCTATATATTAACATTGAACAC
TGCTGCGATTGCTCAAGGACATTTTATGTTACGGCTTTAAAGCAAAGGCATGATTATTAGAAACTATTTAAGCTT
TTTTCTTTGAAAAACAAGCTTCTTTTACAGAATATAAACAAACAGTAGTGCCTGTGGTTTAGCCACCAATCTTGA
TGACTAAAAGTAGCTGATGCATTGTGCATATGATGCTTGAGATGGTTTTTGCAAAAGCAGAAATCGCTGCAAGGT
AATCACAAATAGATAAAAAGTGGTATTTTAAACCTTTGAAATAAATGGATGTAAGTGTACCTTGGTACAGCTTTTCA
CTTGTTTAGTTTTTAAACGTTAGTATAATCTGAATAAATAAAATGTTGCCAAATTCATGTAGAAAGAATGTGAC
AACACACCTTGGGTAGTTCTGCTTGTTGTTTTTGCATATTGTAAAAGCAGTGTACAGCTAAAAAGAAAGAAATCG
TTTCTAACAGTAAATTATTGTGCTTTAGTTGCTAGTTTGTACTGAGAGTTGACCTCTCCCTGTGCAGTTTTTTGT
TCTAAACTTGTATAAATAACAATTGTGTAATGTGTCTCCCTCCTACATTGTAACAATTGCTTCAGCCTACGTTAT
AAATAAAGAACCCTAGATT

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FIGURE 280

MFPSSQIPSWKDWAKPGPYDQPLVNTLQRRKEKREPDNPGGGPTTASGPPAAAEAAQRPRSM TVSAATRPGEEME
ACEELALALSRGLQLDTQRSSRDSLQCSSGYSTQTTTPCCSEDTIPSQVSDYDYFSVSGDQEADQQEFDKSSTIP
RNSDISQSYRRMFQAKRPASTAGLP TTLGPAMVTPGVATIR RTPSTKPSVRRGTIGAGPIPIKTPVIPVKTP TVP
DLPGVLPAPPDGPEERGEHSPESP SVGEGPQGVTSMPSSMWSGQASVNPPLPGPKPSIPEEHRQAIP ESEAEDQE
REPPSATVSPGQIPESDPADLSPRDT PQGEDMLNAIRRGVKKLKKTTTNDRSAPRFS

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FIGURE 281

CGTCCTTCCTCAGCCGCGGGTGATCGTAGCTCGGAAATGGCGGGATTTGGTGCTATGGAGAAATTTTTGGTAGAA
TATAAGAGTGCAGTGGAAGAAGAACTGGCAGAGTACAAATGTAACACCAACACAGCAATTGAACTAAAATTAGTT
CGTTTTCTGAAGATCTTGAAAATGACATTAGAACCTTTCTTTCTGAGTATACCCATCAACTCTTTGGGGATGAT
GAAACTGCTTTTGGTTACAAGGGTCTAAAGATCCTGTTATACTATATTGCTGGTAGCCTGTCAACAATGTTCCGT
GTTGAATATGCATCTAAAGTTGATGAGAACTTTGACTGTGTAGAGGCAGATGATGTTGAGGGCAAAATTAGACAA
ATCATTCCACCTGGATTTTGCACAAACACGAATGATTTCTTTCTTTACTGGAAGGAAGTTGATTTCAAGCCA
TTCGGAACCTTACTTCATACCTACTCAGTTCTCAGTCCAACAGGAGGAGAAAACCTTACCTTTCAGATATATAAG
GCTGACATGACATGTAGAGGCTTTCGAGAATATCATGAAAGGCTTCAGACCTTTTGTATGTGGTTTATTGAAACT
GCTAGCTTTATTGACGTGGATGATGAAAGATGGCACTACTTTCTAGTATTTGAGAAGTATAATAAGGATGGAGCT
ACGCTCTTTGCGACCGTAGGCTACATGACAGTCTATAATTACTATGTGTACCCAGACAAAACCCGGCCACGTGTA
AGTCAGATGCTGATTTTGAATCCATTTCAAGGTCAAGGCCATGGTGCTCAACTTCTTGAAACAGTTCATAGATAC
TACACTGAATTTTCTACAGTTCTTGATATTACAGCGGAAGATCCATCCAAAAGCTATGTGAAATTACGAGACTTT
GTGCTTGTGAAGCTTTGTCAAGATTTGCCCTGTTTTTCCCGGGAAAAATTAATGCAAGGATTCAATGAAGATATG
GCGATAGAGGCACAACAGAAAGTTCAAAATAATAAGCAACACGCTAGAAGGGTTTATGAAATTCCTCGACTACTG
GTAAGTACATGAGTGATGCCGAACAATACAGAAGCTACAGACTGGATATTAAAAGAAAGACTAATTAGCCCATAT
AAGAAAAAGCAGAGAGATCTTGCTAAGATGAGAAAATGTCTCAGACCAGAAGAACTGACAAACCAGATGAACCAA
ATAGAAATAAGCATGCAACATGAACAGCTGGAAGAGAGTTTTTCAGGAAGCTAGTGGAAGATTACCGGCGTGTTATT
GAACGACTTGCTCAAGAGTAAAGATTATACTGCTCTGTACAGGAAGCTTGCAAAATTTCTGTACAATGTGCTGTG
AAAAATCTGATGACTTTAATTTTAAAATCTTGTGACATTTTGCTTATACTAAAAGTTATCTATCTTTAGTTGAAT
ATTTTCTTTTGGAGAGATTGTATATTTTAAAATACTGTTTAGAGTTTATGAGCATATATTGCATTTAAAGAAAGA
TAAAGCTTCTGAAATACTACTGCAATTGCTTCCCTTCTTAAACAGTATAATAAATGCTTAGTTGTGAT

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FIGURE 282

MAGFGAMEKFLVEYKSAVEKKLAEYKCNTNTAIELKLVRFPEDLENDIRTFPEYTHQLFGDDETAFGYKGLKIL
LYYIAGSLSTMFRVEYASKVDENFDCVEADDVEGKIRQIIPPGFCTNTNDFLSLLEKEVDFKPFGTLLHTYSVLS
PTGGENFTFQIYKADMTCRGFREYHERLQTFLMWFJETASFIDVDDERWHYFLVFEEKYKNDGATLFATVGYMTVY
NYYVYPDKTRPRVSQMLILTPFQQQGHGAQLLETVHRYYTEFPTVLDITAEDPSKSYVKLRDFVLVKLCQDLPCF
SREKLMQGFNEDMAIEAQQKFKINKQHARRVYEILRLLVTDMSDAEQYRSYRLDIKRRLISPYKKKQRDLAKMRK
CLRPEELTNQMNQIEISMQHEQLEESFQELVEDYRRVIERLAQE

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FIGURE 283A

GAATTCGGCACGAGGCCATTGAATCCCAGTCCTAACAGAAGTACTGCGAATCTTGTGGCCTCATTCTGAACAAAA
GGGATTAGAGAAGAAAAATCTCTTGATATAAGGCTTGAAAGCAAGGGCAGGCAATCTTGGTTGTGAATATTTTCT
GATTTTTCCAGAAATCAAGCAGAAGATTGAGCTGCTGATGTCAGTTAACTCTGAGAAGTCGTCCTCTTCAGAAAG
GCCGGAGCCTCAACAGAAAGCTCCTTTAGTTCTCTCTCCTCCACCGCCACCACCACCACCACCCTTTGCC
AGACCCACACCCCGGAGCCAGAGGAGGAGATCCTGGGATCAGATGATGAGGAGCAAGAGGACCCTGCGGACTA
CTGCAAAGGTGGATATCATCCAGTGAAAATTGGAGACCTCTTCAATGGCCGGTATCATGTTATTAGAAAGCTTGG
ATGGGGGCACTTCTCTACTGTCTGGCTGTGCTGGGATATGCAGGGGAAAAGATTTGTTGCAATGAAAGTTGTAAA
AAGTGCCACGATTATACGGAGACAGCTTGGATGAAAATAAAATTGCTCAAATGTGTTGAGAAAGTGATCCCAG
TGACCCAAACAAAGACATGGTGGTCCAGCTCATTGACGACTTCAAGATTTAGGCATGAATGGGATACATGTCTG
CATGGTCTTCGAAGTACTTGGCCACCACTCTCTCAAGTGGATCATCAAATCCAATATCAAGGCCTCCCAGTACG
TTGTGTGAAGAGTATCATTGCACAGGTCTTCAAGGGTTAGATTACTTACACAGTAAGTGCAAGATCATTACATC
TGACATAAAGCCGAAAATATCTTGATGTGTGTGGATGATGCATATGTGAGAAGAATGGCAGCTGAGCCTGAGTG
GCAGAAAGCAGGTGCTCCTCCTCTTCAAGGCTCTGCAGTGAGTACGGCTCCACAGCAGAAACCTATAGGAAAAAT
ATCTAAAAACAAAAAGAAAAACTGAAAAAGAAAACAGAAGAGGCAGGCTGAGTTATTGGAGAAGCGCCTGCAGGA
GATAGAAGAATTGGAGCGAGAAGCTGAAAGGAAAATAATAGAAGAAAACATCACCTCAGCTGCACCTTCCAATGA
CCAGGATGGCGAATACTGCCCAGAGGTGAAACTAAAAACAACAGGATTAGAGGAGGCGGCTGAGGCAGAGACTGC
AAAGGACAATGGTGAAGCTGAGGACCAGGAAGAGAAAAGATGCTGAGAAAAGAAAACATTGAAAAAGATGAAGA
TGATGTAGATCAGGAACCTGCGAACATAGACCCTACGTGGATAGAATCACCTAAAACCAATGGCCATATTGAGAA
TGGCCCATTTCTACTGGAGCAGCAACTGGACGATGAAGATGATGATGAAGAAGACTGCCCAAATCCTGAGGAATA
TAATCTTGATGAGCCAAATGCAGAAAGTGATTACACATATAGCAGCTCCTATGAACAATTCAATGGTGAATTGCC
AAATGGACGACATAAAATTTCCCGAGTCACAGTTCCAGAGTTTCCACCTCGTTGTTCTCTGGATCCTTAGAACC
TGTGGCCTGCGGCTCTGTGCTTTCTGAGGGATCACCCTTACTGAGCAAGAGGAGAGCAGTCCATCCCATGACAG
AAGCAGAACGGTTTCAGCCTCCAGTACTGGGGATTTGCCAAAAGCAAAAACCCGGGCAGCTGACTTGTGGTGAA
TCCCTTGATCCGCGGAATCGAGATAAAATTAGAGTAAAAATTGCTGACCTGGGAAATGCTTGTGGGTGCATAA
ACACTTCACGGAAGACATCCAGACGCGTCAGTACCGCTCCATAGAGGTTTTAATAGGAGCGGGGTACAGCACCCC
TGCGGACATCTGGAGCAGGCGTGTATGGCATTGTAGCTGGCAACGGGAGATTATTTGTTTGAACCACATTCTGG
GGAAGACTATTCCAGAGACGAAGACCACATAGCCACATCATAGAGCTGCTAGGCAGTATTCCAAGGCACTTTGC
TCTATCTGGAAAATATTCTCGGGAATTCTTCAATCGCAGAGGAGAACTGCGACACATCACCAAGCTGAAGCCCTG
GAGCCTCTTTGATGTACTTGTGAAAAGTATGGCTGGCCCCATGAAGATGCTGCACAGTTTACAGATTTCTTGAT
CCCGATGTTAGAAATGGTTCCAGAAAAACGAGCCTCAGCTGGCGAATGTCGGCATCCTTGGTTGAATTTCTAGCA
AATTCTACCAATATTGCATTCTGAGCTAGCAAATGTTCCCAGTACATTGGACCTAAACGGTGACTCTCATTCTTT
AACAGGATTACAAGTGAGCTGGCTTCATCCTCAGACCTTTATTTTGTCTTGAGGTACTGTTGTTTGACATTTTGC
TTTTTGTGCACTGTGATCCGGGGAAGGGTAGTCTTTTGTCTTCAGCTAAGTAGTTTACTGACCATTTTCTCTG
GAAACAATAACATGTCTCTAAGCATTGTTTCTGTGTTGTGTGACATTCAAATGTCATTTTTTTGAATGAAAAAT
ACTTTCCCTTTGTGTTTTGGCAGGTTTTGTAATATTTATGAAGAAATATTTAGCTGAGTACTATATAATTTA
CAATCTTAAGAAATTATCAAGTTGGAACCAAGAAATAGCAAGGAAATGTACAATTTTATCTTCTGGCAAAGGGAC
ATCATTCTGTATTATAGTGTATGTAAATGCACCTGTAAATGTTACTTTCCATTAAATATGGGAGGGGGACTCA
AATTTAGAAAAGCTACCAAGTCTTGAGTGCTTTGTAGCCTATGTTGCATGTAGCGGACTTTAACTGCTCCAAGG
AGTTGTGCAAACTTTTCATTCCATAACAGTCTTTTCACATTGGATTTTAAACAAAGTGGCTCTGGGTTATAAGAT
GTCATTCTCTATATGGCACTTTAAAGGAAGAAAAGATATGTTTCTCATTCTAAAATATGCATTATAATTTAGCAG
TCCCATTTGTGATTTTGCATATTTTAAAGTACTTTTAAAGAAGAGCAATTTCCCTTTAAAATGTGATGGCTC
AGTACCATGTCTGTTGCCTCCTCTGGGCGCTGTAAGTTAAGCTCTACATAGATTAAATTGGAGAAACGTGTTAA
TTGTGTGGAATGAAAAATACATATATTTTGGAAAAGCATGATCATGCTTGTCTAGAACACAAGGTATGGTATA
TACAATTTGCAGTGCAGTGGGCAGAACTCTCAGAGCTCAAAGATAACAGTGATCACATTCAATCCATAGGTA
GCTTTACGTGTGGCTACAACAAATTTTACTAGCTTTTTCATTGTCTTTCCATGAAACGAAGTTGAGAAAATGATT
TTCCCTTTGCAGGTTGCACACAGTTTTGTTTATGCATTTCTTAAATTAATTGTAGACTCCAGGATACAAACCA
TAGTAGGCAATACAATTTAGAATGTAATATATAGAGGTATATTAGCCTCTTTAGAAGTCAGTGGATTGAATGTCT
TTTTATTTTAAATTTTACATTCATTAAGGTGCCTCGTTTTTGACTTTGTCCATTAACATTTATCCATATGCCTTT

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FIGURE 283B

GCAATAACTAGATTGTGAAAAGCTAACAAGTGTGTGAACAATAATCCATTGTTTGAGGTGCTTGCAGTTGTCTTA
AAAATTAAAGTGTGTTTTGGTTTTTTTTTCCAGAAAAAAAAAAAAAAAAAAAAAAAAAAATTCCTGC

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FIGURE 284

MSVNSEKSSSSSERPEPQQKAPLVPPPPPPPPPPPPPLDPPTPEPEEEILGSDDEEQEDPADYCKGGYHPVKIGD
LFNGRYHVIRKLGWGHFSTVWLCWDMQGKRFVAMKVVKSAQHYTETALDEIKLLKCVRESDPSPDNKDMVVQLID
DFKISGMNGIHVCMVFEVLGHHLLKWI IKSNYQGLPVRCVKSII RQVLQGLDYLSKCKIIHTDIKPENILMCVD
DAYVRRMAAEFEWQKAGAPPPSGSAVSTAPQQKPIGKISKNNKKKKLKKKQKRQAEELLEKRLQEIEELEREAERKI
IEENITSAAPSDNDQGEYCPEVKLKTITGLEEAAEAETAKDNGEAEDQEEKEDAENIEKDEDDVDQELANIDPT
WIESPKTNNGHIENGPFSLQQQLDDEDDDEEDCPNPEEYNLDEPNAESDYTYSSSYEQFN GELPNGRHKIPESQFP
EFSTSLFSGSLEPVACGSVLSEGSPLTEQEESSPSHDSRTVSASSTGDLPKAKTRAADLLVNPLDPRNRDKIRV
KIADLGNACWVHKHFTEDIQTRQYRSIEVLIGAGYSTPADIWSTACMAFELATGDYLFEPHSGEDYSRDEDHIAH
IIELLGSIPRHFALSGKYSREFFNRRGELRHITKLKPWSLFDVLVEKYGWPHEAQAQFTDFLIPMLEMVPEKRAS
AGECRHPWLNS

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FIGURE 285

CCGGTGCGCCCGGCGGAGCGCGCGTGCCTGGCCAGCGCGCTCCCCGCTTCTGCTTGGCTTTCCGGCTTAATTTTC
CTCGGCGGGATTAAAGTTGGAATTGACCGGAGAATTGAGTTGCCGGGGAACAGAGCCCCGGCCGCCGCCAGAGC
GATGTTCCCCGAGAGCCGGCACCCGACGCCGACCAGGCTGCAGGCCAGCCCTTCAAGTTCACTATCCCGGAGTC
CCTGGACCGGATTAAAGAGGAATTCAGTTCTGTCAGGCGCAGTATCACAGCCTTAAATTGGAATGTGAGAACT
GGCAAGTGAAAAGACAGAAATGCAGAGGCACATATGTGATGTATTATGAAATGTCATATGGATTAAACATTGAAAT
GCACAAACAGACTGAAATCGCCAAGAGATTGAATACGATTTGTGCACAAGTCATCCCATTCTGTCTCAGGAACA
TCAACAACAGGTGGCCCAGGCTGTTGAACGTGCCAAACAGGTGACCATGGCAGAGTTGAATGCCATCATCGGGCA
GCAGCAGTTGCAAGCTCAGCATCTTTCTCATGGCCACGGACCCCCAGTTCCCCTTACGCCTCACCTTTCGGGACT
TCAGCCTCCTGGAATCCCGCCCCCTCGGGGGCAGTGCCGGCCTTCTTGCCTGTCCAGTGCTCTGAGTGGGCAGTC
TCACTTGGCAATAAAAGATGACAAGAAGCACACGATGCAGAGCACACAGAGACAGAGAGCCGGGCACAAGTAA
TTCCCTCCTGGTCCCAGACAGTCTAAGAGGCACAGATAAACGCAGAAATGGACCTGAATTTTCCAATGACATCAA
GAAAAGGAAGGTGGATGATAAGGACTCCAGCCACTATGACAGTGATGGTGACAAAAGCGATGACAACTTAGTTGT
GGATGTGTCTAATGAGGACCTTCTTCTCCGCGAGCAAGCCCTGCCCACTCGCCCCGGGAAAATGGAATCGACAA
AAATCGCCTGCTAAAGAAGGATGCTTCTAGCAGTCCAGCTTCCACGGCCTCCTCGGCAAGTTCCACTTCTTTGAA
ATCCAAAAGAAATGAGCTTGCATGAAAAGCCAGCACGCCTGTTCTGAAATCCAGCACACCAACGCCTCGGAGCGA
CATGCCAACGCCGGGCACCAGCGCCACTCCAGGCCTCCGTCCAGGTCTCGGCAAGCCTCCAGCCATAGACCCCCCT
CGTTAACCAAGCGGCAGCTGGCTTGAGGACACCCCTGGCAGTGCCCGGCCCATATCCTGCTCCTTTTGGGATGGT
CCCCCACGCTGGCATGAACGGCGAGCTGACCAGCCCAGGCGCTGCCTACGCCAGTTTACACAACATGTGCCCCCA
GATGAGCGCCGCAGCCGCCGCGGCCCGCTGGTGGCCTACGGGCGCTCCCCATGGTGGGGTTTGATCCTCCCCC
TCACATGAGAGTACCTACCATTCTCCAAACCTGGCAGGAATCCCTGGGGGGAACCTGCATACTCCTTCCACGT
TACTGCAGACGGTCAGATGCAGCCTGTCCCTTTTCCCCCGACGCCCTCATCGGACCCGGAATCCCCGGCATGC
TCGCCAGATCAACACCCTCAACCACGGGGAGGTGGTGTGCGCTGTGACCATCAGCAACCCACGAGACACGTGTA
CACAGGCGGGAAGGGCTGCGTCAAGGTCTGGGACATCAGCCACCCTGGCAATAAGAGCCCTGTCTCCAGCTCGA
CTGTCTGAACAGAGACAATTATATCCGTTCTGTAAATTGCTACCCGATGGCTGCACTCTCATAGTGGGAGGGGA
AGCCAGTACTTTGTCCATTGTTGGACCTGGCGGCTCCAACCCCGCGCATCAAGGCGGAGCTGACGTCTCGGCCCC
CGCCTGTACGCCCTGGCCATCAGCCCCGATTCCAAGGTCTGCTTCTCATGCTGCAGCGACGGCAACATCGCTGT
GTGGGATCTGCACAACCAGACACTAGTGAGGCAATTCCAGGGCCACACAGACGGAGCCAGCTGTATTGACATTC
TAATGATGGCACCAAGCTCTGGACGGGTGGTTTGGACAACACAGTCAGGTCTGGGACCTGCGCGAGGGGCGGCA
GCTGCAGCAGCAGACTTCACCTCCCAGATCTTCTCCCTGGGGTACTGCCCCACGGGGAGTGGCTGGCAGTGGG
CATGGAGAGCAGCAATGTGGAGGTGCTGCACGTGAACAAGCCTGACAAGTACCAGCTGCACCTGCATGAGAGCTG
CGTGCTGTCCCTGAAATTTGCTTACTGTGGTAAATGGTTTGTGAGTACTGGAAGATAACCTCCTCAATGCTTG
GCGGACCCCTATGGAGCCAGCATATTCCAGTCCAAAGAGTCCCTCGTCAGTGCTTAGCTGTGACATCTCTGTGGA
TGATAAGTACATAGTCACTGGCTCGGGGGACAAGAAGGCTACAGTCTATGAAGTCATCTACT**G**AAAACATTATGT
GGTTTAACGTTTATAGTTGAATTGGGCCAAAATGTTTCGAATTTATAGAAATAGAAAAGTTGTAACCTTTAAAAGA
GAAAAAAATTACAAACACCTGTTTCCAAACCTTGACAGAAAACACTTTTGAGTCTACAAAGAGGAGGGCGACAAG
TCCATCAGCAGAAAGTCACCTGTCTACATAGACCAAATGGAGCACCAAGGCCAAGCGACAGAGGGGCCATGGGT
TGTAGGATTGAGGAACGGAATCTGCCGACTCACATGACAGCCATTCTTTCTTTCTGGGTGATCTGGGGATCACG
CCTTGCCCAAGTGTGAGATTACCTTTCTGTTCCCTGTCAGTTCACCTCACTTTCCGTCCTTTGTAGAGCAGTGGTG
TCTCCAATGAACCTGTTTCTGGTTTTGCATCTTGTGAAATGTTTTTTGTATTTTTGTGTAAGGTTAAACATTT
GTATAAATTGTAAATATATTTGGTTTTATTACAGTAAAGGCTTAGTACCAATAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAA

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FIGURE 286

MFPQSRHPTPHQAAGQPFKFTIPESLDRIKEEFQFLQAQYHSLKLECEKLASEKTEMQRHYVMYEYMSYGLNIEM
HKQTEIAKRLNTICAQVIPFLSQEHQQQVAQAVERAQVTMAELNAIIGQQQLQAQHLSHGHGPPVPLTPHPSTGL
QPPGIPPLGGSAGLLALSSALSGQSHLAIKDDKKHHDAEHHRDREPGTSSNLLVPDSLRTDKRRNGPEFSNDIK
KRKVDDKDSHYDSGDGKSDNLLVVDVSNEDPSSPRASPAHSPRENGIDKNRLLKKDASSSPASTASSASSTSLK
SKEMSLHEKASTPVLKSSTPTPRSDMPTPGTSATPGLRPGLGKPPAIDPLVNQAAAAGLRTPPLAVPGPYAPFGMV
PHAGMNGELTSPGAAYASLHNMSFQMSAAAAAAVVAYGRSPMVGFDPFPHMRVPTIPPNLGIPGGKPAYSFHV
TADGQMOPVFPFPPDALIGPGIPRHARQINTLNHGEVVCVAVTISNPTRHVYTGKGKCVKVWDISHPGNKSPVSQLD
CLNRDNYIRSKLLPDGCTLIVGGEASTLSIWDLAAPTPIKAELTSSAPACYALAI SPDSKVCFSCCSDGNIAV
WDLHNQTLVRQFQGHTDGASCIDISNDGTLKLTGGLDNTVRSWDLREGRQLQQHDFTSQIFSLGYCPTGEWLAVG
MESSNVEVLHVNKPKDYQLHLHESCVLSLKFAYCGKWFVSTGKDNLLNAWRTPYGASIFQSKESSSVLSCDISVD
DKYIVTGSGDKKATVYEVY

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FIGURE 287

GGCACGAGGAGGAGAAGAGCAAAGAAAAGCAGTCCGTCTGGATTTGTTTGCCAGGACTGGCGCCGCGCACGCGG
ATCGCCGAGGGGAGTGC GGTCGGAGTCACCGCGCCCCCGCCTCCCCCGCCGGGCAGCTGAGGCCGGGGGTTGGAG
CGCTGCCCCCGCGCACAGTCCCCGAGCGCCCGACGTCTCCGCGCAGGTTCTTGAAGCAGCTGGGCCTGGGGCGCC
CACTAATGTGGCCCTGAGGGCCGGAGCCCGCACCCGACGGGAGCGGGAGCCGGAGCAGCTGCGGGCGCCGAGTGGC
CGGTGCGCCCCGGCGGAGCGCGCTGCGTGGCCAGCGCGCTCCCCGCTTCTGCTTGGCTTTCCGGCTTAATTTTCC
TCGGCGGGATTAAAGTTGGAAATTGACCGGAGAATTGAGTTGCCGGGGAACAGAGCCCCGGCCGCCAGAGCG
ATGTTCCCGCAGAGCCGGCACCCGACGCCGACAGGCTGCAGGCCAGCCCTTCAAGTTCACATATCCCGGAGTCC
CTGGACCGGATTAAAGAGGAATTCCAGTTCCTGCAGGCGCAGTATCACAGCCTTAAATTGGAATGTGAGAACTG
GCAAGTGAAAAGACAGAAATGCAGAGGCACTATGTGATGTATTATGAAATGTCATATGGATTAAACATTGAAATG
CACAAACAGACTGAAATCGCCAAGAGATTGAATACGATTTGTGCACAAGTCATCCCATTTCTGTCTCAGGAACAT
CAACAACAGGTGGCCCAGGCTGTTGAACGTGCCAAACAGGTGACCATGGCAGAGTTGAATGCCATCATCGGGCAG
CAACAGTTGCAAGCTCAGCATCTTTCTCATGGCCACGGACCCCAAGTTCCCTTACGCCTCACCTTCGGGACTT
CAGCCTCCTGGAATCCCCGCCCTCGGGGGCAGTGCCGGCCTTCTTGCGCTGTCTAGTGCTCTGAGTGGGCAGTCT
CACTTGGCAATAAAAGATGACAAGAAGCACACGATGCAGAGCACACAGAGACAGAGAGCCGGGCACAAGTAAT
TCCCTCCTGGTCCCAGACAGTCTAAGAGGCACAGATAAACGCAGAAATGGACCTGAATTTTCCAATGACATCAAG
AAAAGGAAGGTGGATGATAAGGACTCCAGCCACTATGACAGTGATGGTGACAAAAGCGATGACAACCTTAGTTGTG
GATGTGTCTAATGAGGACCCTTCTTCTCCGCGAGCAAGCCCTGCCACTCGCCCCGGGAAAATGGAATCGACAAA
AATCGCCTGCTAAAGAAGGATGCTTCTAGCAGTCCAGCTTCCACGGCCTCCTCGGCAAGTTCCACTTCTTTGAAA
TCCAAAGAAATGAGCTTGCAATGAAAAAGCCAGCACGCCTGTTCTGAAATCCAGCACACCAACGCCTCGGAGCGAC
ATGCCAACGCCGGGCACCAGCGCCACTCCAGGCCTCCGTCCAGGTCTCGGCAAGCCTCCAGCCATAGACCCCTC
GTTAACCAAGCGGCAGCTGGCTTGAGGACACCCCTGGCAGTGCCCGGCCCATATCCTGCTCCTTTTGGGATGGTC
CCCCACGCTGGCATGAACGGCGAGCTGACCAGCCAGGCGCTGCCTACGCCAGTTTACACAACATGTGCCCCAG
ATGAGCGCCGAGCCGCCCGCGGCCGCGCTGGTGGCCTACGGGCGCTCCCCCATGGTGGGGTTTGATCCTCCCCCT
CACATGAGAGTACCTACCATTCCCTCCAAACCTGGCAGGAATCCCTGGGGGGAAACCTGCATACTCCTTCCACGTT
ACTGCAGACGGTCAGATGCAGCCTGTCCCTTTTCCCCCGACGCCCTCATCGGACCCGGAATCCCCGGCATGCT
CGCCAGATCAACACCCTCAACCACGGGGAGGTGGTGTGCGCTGTGACCATCAGCAACCCACAGAGACACGTGTAC
ACAGGCGGGAAGGGCTGCGTCAAGGTCTGGGACATCAGCCACCCTGGCAATAAGAGCCCTGTCTCCAGCTCGAC
TGTCTGAACAGAGACAATTATATCCGTTCTGTAAATTGCTACCCGATGGCTGCACTCTCATAGTGGGAGGGGAA
GCCAGTACTTTGTCCATTTGGGACCTGGCGGCTCCAACCCCGCGCATCAAGGCGGAGCTGACGTCTCGGCCCCC
GCCTGCTACGCCCTGGCCATCAGCCCCGATTCCAAGGTCTGCTTCTCATGCTGCAGCGACGGCAACATCGCTGTG
TGGGATCTGCACAACCAGACACTAGTGAGGCAATTCCAGGGCCACACAGACGGAGCCAGCTGTATTGACATTTCT
AATGATGGCACCAGCTCTGGACGGGTGGTTTGGACAACACAGTCAGGTCCTGGGACCTGCGCGAGGGGCGGCAG
CTGCAGCAGCACGACTTCACCTCCAGATCTTCTCCCTGGGGTACTGCCCCACCGGGAGTGGCTGGCAGTGGGC
ATGGAGAGCAGCAATGTGGAGGTGCTGCACGTGAACAAGCCTGACAAGTACCAGCTGCACCTGCATGAGAGCTGC
GTGCTGTCCCTGAAATTTGCTTACTGTGGTAAATGGTTTGTGAGTACTGGAAAAGATAACCTCCTCAATGCTTGG
CGGACCCCTATGGAGCCAGCATATTCCAGTCCAAAGAGTCTCTGTCAGTGCTTAGCTGTGACATCTCTGTGGAT
GATAAGTACATAGTCACTGGCTCGGGGGACAAGAAGGTACAGTCTATGAAGTCATCTACTGAAAACATTATGTG
GTTTAACGTTTATAGTTGAATTGGGCCAAAATGTTTCGAATTTATAGAAATAGAAAAGTTGTAACTTTAAAAGAG
AAAAAAATTACAAACACCTGTTTCCAAACCTTGACAGAAAATACTTTGAGTCTACAAAGAGGAGGCGACAAGT
CCATCAGCAGAAAGTCACCTGTCTACATAGACCAAATGGAGCACCAAGGCCAAGCGGACAGAGGGGCCATGGGTT
GTAGGATTGAGGAACGGAATCTGCCGACTCACATGACAGCCCCATTCTTTCTTTCTGGGTGATCTGGGGATCACGC
CTTGCCCAAGTGTGAGATTACCTTTCTGTTCCCTTGACAGTTCACCTCACTTTCCGTCTTTGTAGAGCAGTGGTGT
CTCCAATGAACCTGTTTCCCTGGTTTTGTCATCTTGTGAAATGTTTTTTTGTATTTTTGTTGAAGGTTAAACATTTG
TATAAATTGTAAATATATTGGTTTTATTACAGTAAAGGCTTTAGTACCAATAAAAAAAAAAAAAAAAAA

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FIGURE 288

MFPQSRHPTPHQAAGQPFKFTIPESLDRIKEEFQFLQAQYHSLKLECEKLASEKTEMQRHYVMYYEMSYGLNIEM
HKQTEIAKRLNTICAQVIPFLSQEHQQQVAQAVERAQVMTAELNAIIGQQQLQAQHLSHGHGPPVPLTPHP SGL
QPPGIPPLGGSAGLLALSSALSGQSHLAIKDDKKHHDAEHHRDREP GTSNSLLVPDSL RGTDKRRNGPEFSNDIK
KRKVDDKDSSHYDSDGDKSDDNLVVDVSNEDPSSPRASPAHSPRENGIDKNRLLKKDASSSPASTASSASSTSLK
SKEMSLHEKASTPVLKSSTPTPRSDMPTPGTSATPGLRPGLGKPPAIDPLVNQAAAGLRTPLAVPGPYPAFPGMV
PHAGMNGELTSPGAAYASLHNMS PQMSAAAAAAVVAYGRSPMVGFDPFPHMRVPTIPP NLAGIPGGKPAYSFHV
TADGQM QPVFPFPDALIGPGIPRHARQINTLNHGEVVCAVTISNPTRHVYTGKGKCVKVDISHPGNKSPVSQLD
CLNRDNYIRSKLLPDGCTLIVGGEASTLSIWDLAAPT PRIKAELTSSAPACYALAI SPDSKVCFSCCSDGNI AV
WDLHNQTLVRQFQGHTDGASCIDISNDGTKLWTGGLDNTVRSWDLREGRQLQQHDFTSQIFSLGYCPTGEWLAVG
MESSNVEVLHV NKPDKYQLHLHESCVLSLK FAYCGKW FVSTGKDNLLNAWRTPYGASIFQSKESSVLSCDISVD
DKYIVTGSGDKKATVYEVIIY

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FIGURE 289A

CTACTACAGTGGCGGACGTACAGGACCTGTTTCACTGCAGGGGGATCCAAAACAAGCCCCGTGGAGCAACAGCCA
GAGCAACAGCAGCTGCAAGACATTGTTTCTCTCCCTCTGCCCCCCTTCCCCACGCAACCCAGATCCATTTACA
CTTTACAGTTTTTACCTCACAAAACTACTACAAGCACCAAGCTCCCTGATGGAAAGGAGCATCGTGCATCAAGTC
ACCAGGGTGGTCCATTCAAGCTGCAGATTTGTTTGTATCCTTGTACAGCAATCTCTCTCCACTGCCACTACA
GGGAAGTGCATCACATGTGAGCATACTGGAGCATACTGAAAGAGTCTATTTTGAAGCTTCAAACCTTAGTGCTGCT
GCAGACCAGGAACAAGAGAGAAAGAGTGGATTTTACGCTGCACGGATGGTCTTGAACACAAATGGTTTTTGGTC
TAGGCGTTTTTACACTGAGATTCTCCACTGCCACCCCTTCTACTCAAGCAAATCTTCGTGAAAAGATCTGCTGCA
AGGAAGTATAGCTTATGGTTTCTCCATTGTGATGAAAGCACATGGTACAGTTTTTCAAAGAAATTAGACCATTTT
CTTCGTGAGAAAGAAATCGACGTGCTGTTTTTCATAGGGTATTTCTCACTTCTCTGTGAAAGGAAGAAAGAACAG
CCTGAGCCCAAGAGCCCTCAGGAGCCCTCCAGAGCCTGTGGGAAGTCTCCATGGTGAAGTATAGGCTGAGGCTAC
CTGTGAACAGTACGCAGTGAATGTTTATCCAGAGCTGCTGTTGGCGGATTGTACCCACGGGGAGATGATTCTCTCA
TGAAGAGCCTGGATCCCTACAGAAATCAAATGTGACTTTCCGTTTATCAGACTAAAATCAGAGCCATCCAGACA
GTGAAACAGTACCCTGGAGGGGGGACGGCGAAAAATGAAATCCAACCAAGAGCGGAGCAACGAATGCCTGCCTC
CCAAGAAGCGGAGATCCCGGCCACCAGCCGGTCTCCGAGGAGAAGGCCCTACCCTGCCAGCGACAACCACC
GGGTGGAGGGCACAGCATGGCTCCCGGGCAACCCTGGTGGCCGGGGCCACGGGGGCGGGAGGCATGGGCCGGCAG
GGACCTCGGTGGAGCTTGGTTTACAACAGGGAATAGGTTTACACAAAGCATTGTCCACAGGGCTGGACTACTCCC
CGCCAGCGCTCCCAGGTCTGTCCCGTGGCCACCACGCTGCCTGCCGCTACGCCACCCCGCAGCCAGGGACCC
CGGTGTCCCCCGTGCAGTACGCTCACCTGCCGCACACCTTCCAGTTCATTGGGTCTCTCCAATACAGTGAACCT
ATGCCAGCTTCATCCCATCACAGCTGATCCCCCAACCGCCAACCCCGTACCAGTGCAGTGGCCTCGGCCGCAG
GGGCCACCACTCCATCCCAGCGCTCCCAGCTGGAGGCCTATTCCACTCTGCTGGCCAACATGGGCAGTCTGAGCC
AGACGCCGGGACACAAGGCTGAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGC
AGC
CCCCCACCAGCCAGCAGAACAGTACGTCCACATTTCCAGTTCTCCGCAGAACACCGGCCGCACCGCCTCTC
CTCCGGCCATCCCCGTCCACCTCCACCCCAACCAGACGATGATCCACACACGCTCACCTGGGGCCCCCTCCC
AGGTGCTCATGCAATACGCCGACTCCGGCAGCCACTTTGTCCCTCGGGAGGCCACCAAGAAAGCTGAGAGCAGCC
GGCTGCAGCAGGCCATCCAGGCCAAGGAGGTCTGAACGGTGAGATGGAGAAGAGCCGGCGGTACGGGGCCCCGT
CCTCAGCCGACCTGGGCCTGGGCAAGGCAGGCGGCAAGTCGGTTCCTCACCCGTACGAGTCCAGGCACGTGGTGG
TCCACCCGAGCCCCCTCAGACTACAGCAGTCTGTATCCTTCGGGGGTCCGGGCCTCTGTGATGGTCTGCCAACA
GCAACACGCCCCGAGCTGACCTGGAGGTGCAACAGGCCACTCATCGTGAAGCCTCCCTTTCTACCCTCAACGACA
AAAGTGGCCTGCATTTAGGGAAGCCTGGCCACCGGTCTACGCGCTCTCACCCACACGGTCATTACAGCCACAC
ACAGTGCTTCAGAGCCACTCCCGGTGGGACTGCCAGCCACGGCCTTCTACGCAGGGACTCAACCCCTGTATCG
GCTACCTGAGCGGCCAGCAGCAAGCAATCACCTACGCCGCGAGCCTGCCCCAGCACCTGGTGATCCCCGGCACAC
AGCCCCGTGCTCATCCCGGTCCGGCAGCACTGACATGGAAGCGTCGGGGGAGCCCCGGCCATAGTCACGTATCCC
CCCAGTTTGCTGCAGTGCTCACACGTTTCGTACACACCGCCCTTCCCAAGAGCGAGAACTTCAACCTGAGGCCC
TGGTACCCAGGCCGCTACCCAGCCATGGTGCAGGCCAGATCCACCTGCCTGTGGTGCAGTCCGTGGCCTCCC
CGGCGGGCTCCCCCTACGCTGCCTCCCTACTTCATGAAAGGCTCCATCATCCAGTTGGCCAACGGGGAGCTAA
AGAAGGTGGAAGACTTAAAAACAGAAGATTTTATCCAGAGTGCAGAGATAAGCAACGACCTGAAGATCGACTCCA
GCACCGTAGAGAGGATTGAAGACAGCCATAGCCCGGGCGTGGCCGTGATACAGTTTCGCCGTGGGGAGCACCGAG
CCCAGGTACGCGTTGAAGTTTTGGTAGAGTATCCTTTTTTGTGTTTGGACAGGGCTGGTTCATCCTGTCTCCGG
AGAGAACCAGCCAGCTCTTTGATTTGCCGTGTTCCAACTCTCAGTTGGGGATGTCTGCATCTCGCTTACCCTCA
AGAACCTGAAGAACGGCTCTGTAAAAAGGGCCAGCCCGTGGATCCCGCCAGCGTCTGCTGAAGCACTCAAAGG
CCGACGGCCTGGCGGGCAGCAGACACAGGTATGCCGAGCAGGAAAACGGAATCAACCAGGGGAGTGCCAGATGC
TCTCTGAGAATGGCGAACTGAAGTTTCCAGAGAAAATGGGATTGCCTGCAGCGCCCTTCTCACCAAAATAGAAC
CCAGCAAGCCCGCGGCAACGAGGAAGAGGAGGTGGTCCGGCGCCAGAGAGCCGCAAACTGGAGAAGTCAGAAGACG
AACCACCTTTGACTCTTCTAAGCCTTCTCTAATTCTCAGGAGGTTAAGATTTGCATTGAAGGCCGGTCTAATG
TAGGCAAGTAGAGGCAGCGTGGGGGAAAGGAAACGTGGCTCTCCCTTATCATTTGTATCCAGATTACTGTACTGT
AGGCTAAATAACACAGTATTTACATGTTATCTTCTAATTTTAGGTTTCTGTTCTAACCTTGTATTAGAGTTA
CAGCAGGTGTGTCGAGGAGACTGGTGCATATGCTTTTTCCACGAGTGTCTGTAGTGCAGGGGCGGGAGGAAGG

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FIGURE 289B

GCACAGCAGGAGCGGTCCAGGGCTCCAGGCATCCCCGGGGAAGAAAGGAACGGGGCTTCACAGTGCCTGCCTTCTC
TAGCGGCACAGAAGCAGCCGGGGGCGCTGACTCCCGCTAGTGTTCAGGAGAAAAGTCCCCTGGGAAGAGTCCCTGCA
GGGGTGCAGGGTTGCACGCATGTGGGGGTGCACAGGCGCTGTGGCGGCGAGTGAGGGTCTCTTTTTCTCTGCCTC
CCTCTGCCTCACTCTCTTGCTATCGGCATGGGCCGGGGGGGTTTCAGAGCAGTGTCTCTGGGGTTCCCACGTGC
AAAATCAACATCAGGAACCCAGCTTCAGGGCATCGCGGAGACGCGTCAGATGGCAGATTGGAAAGTTAACCATT
TAAAGAACATTTTTCTCTCCAACATATTTTACAATAAAAGCAACTTTTAATTGTATAGATATATATTTCCCCCT
ATGGGGCCTGACTGCACTGATATATATTTTTTTTTTAAAGAGCAACTGCCACATGCGGGATTTCATTTCTGCTTTTT
ACTAGTGCAGCGATGTACCAGGGTGTGTGGTGGACAGGGAAGCCCCTGCTGTTCATGGCCCCACATGGGGTAAG
GGGGTTGGGGGTGGGGGAGAGGGAGAGCGAACACCCACGCTGGTTTCTGTGCAGTGTAGGAAAACCAATCA
GGTTATTGCATTGACTTCACTCCCAAGAGGTAGATGCAAACTGCCCTTCAGTGAGAGCAACAGAAGCTCTTCACG
TTGAGTTTGCAGAAATCTTTTTGTCTTTGAAGTCTAGTACTGTTTATAGTTCATGACTATGGACAACCTCGGGTGCC
ACTTTTTTTTTTTTCAGATTCCAGTGTGACATGAGGAATTAGATTTGAAGATGAGCATATATTACTATCTTTAA
GCATTTAAAAATACTGTTACACTTTATTACCAAGCATCTTGGTCTCTCATTCAACAAGTACTGTATCTCACTTT
AAACTCTTTGGGGAAAAAACAAAAACAAAAAACTAAGTTGCTTTCTTTTTTCAACACTGTAACACTACATTTCA
GCTCTGCAGAATTGCTGAAGAGCAAGATATTGAAAGTTTCAATGTGGTTTAAAGGGATGAATGTGAATTATGAAC
TAGTATGTGACAATAAATGACCACCAAGTACTACCTGACGGGAGGCACCTTTCACTTTGATGTCTGAGAATCAGT
TCAAGGCATATGCAGAGTTGGCAGAGAACTGAGAGAAAAGGGATGGAGAAGAGAATACTCATTTTTGTCCAGTG
TTTTCTTTTTTAAAGATGAACCTTTTAAAGAACCTTGCGATTGTGCACATATTGAGTTTATAACTTGTGTGATATTCC
TGCAGTTTTTATCCAATAACATTGTGGGAAAGGTTTGGGGGACTGAACGAGCATAAATAAATGTAGCAAAATTTTC
TTTCTAACCTGCCTAAACTCTAGGCCATTTTATAAGGTTATGTTCTTTGAAAATTCATTTTGGTCTTTTTACCA
CATCTGTCAAAAAAGCCAGGTCTTAGCGGGCTCTTAGAACTCTGAGAATTTCTTCAGATTTCATTGAGAGAGT
TTTCCATAAAGACATTTATATATGTGAGCAAGATTTTTTTTTTAAACAATTACTTTATTATTGTTGTTATTAATGTT
ATTTTCAGAATGGCTTTTTTTTTCTATTCAAATCAAATCGAGATTTAATGTTTGGTACAAACCCAGAAAGGGTA
TTTCATAGTTTTTTAAACCTTTCACTCCAGAGATCCGAAATATCATTTGTGGGTTTTGAATGCATCTTTAAAGTG
CTTTAAAAAAAAGTTTTATAAGTAGGGAGAAATTTTTTAAATATTCTTACTTGGATGGCTGCAACTAAACTGAACA
AATACCTGACTTTTCTTTTACCCCATTTGAAATAGTACTTTCTTCGTTTCACAAATTAAAAAAAATCTGGTAT
CAACCCACATTTTGGCTGTCTAGTATTCACTTTACATTTAGGGTTACCAGGACTAATGATTTTTATAAACCGTTT
TCTGGGGTGTACCAAAAACATTTGAATAGGTTTGAATAGCTAGAATAGTTCTTGACTTTCCTCGAATTTCACT
ACCCTCTCAGCATGCTTGAGAGAGCTGGGTGGGCTCATTCTTGAGTCATACTGCTTATTTAGTGCTGATTTTT
TTAAACGTTTCTGTTTCAGAGAACTTGCTTAATCTTCCATATATTCTGCTCAGGGCACTTGCAATTATTAGGTTTT
GTTTTCTTTTTGTTTTTTAGCCTTTGATGGTAAGAGGAATACGGGCTGCCACATAGACTTTGTCTCATTAAATA
TCACTATTTACAACCTCATGTGGACTCAGAAAAACACACACCACCTTTTGGCTTACTTCGAGTATTGAATTGACTG
GATCCACTAAACCAACACTAAGATGGGAAAACACACATGGTTTGGAGCAATAGGAACATCATCATAATTTTTGTG
GTTCTATTTCAGGTATAGGAATTATAAAATAAATTGGTTCTTTCTAAACACTTGTCCCATTTCACTCTCTGCTTT
TTTAGCATGTGCAATACTTTCTGTGCCAATAGAGTCTGACCAGTGTGCTATATAGTTAAAGCTCATTCCCTTTTG
GCTTTTCTTGTGTTGGTTGATCTTCCCATTTCTGGCCAGAGCAGGGCTGGAGGGAAGGAGCCAGGAGGGAGAGA
GCCTCCACCTTTCCCTGCTGCGGATGCTGAGTGTGTTGGGGCGGGGAGCCTTCAGGAGCCCCGTGCGTCTGCCGC
CACGTTGCAGAAAGAGCCAGCCAAGGAGACCCGGGGGAGGAACCGCAGTGTCCCCGTGTCACCACACGGAATAGTG
AATGTGGAGTGTGGAGAGGAAGGAGGCAGATTCACTTTCTAAGACGCACTCTGGAGCCATGTAGCCTGGAGTCAAC
CCATTTTCCACGGTCTTTTCTGCAAGTGGGCAGGCCCCCTCCTCGGGGTCTGTGTCCTTGAGACTTGGAGCCCTGC
CTCTGAGCCTGGACGGGAAGTGTGGCCTGTTGTGTGTGTGCGTTCTGAGCGTGTGGCCAGTGGCTGTGGAGGGG
ACCACCTGCCACCCACGGTCACCACTCCCTTGTGGCAGCTTTCTCTTCAAATAGGAAGAACGCACAGAGGGCAGG
AGCCTCCTGTTTGCAGACGTTGGCGGGCCCCGAGGCTCCCAGAGCAGCCTCTGTACCGCTTCTGTGTAGCAAAC
ATTAACGATGACAGGGGTAGAAATTCTTCGGTGCCGTTTCAGCTTACAAGGATCAGCCATGTGCCTCTGTACTATG
TCCACTTTGCAATATTTACCGACAGCCGTCTTTTGTCTTTCTTTCTTCTGTTTCCATTTTTTAAACTAGTAACAGC
AGGCTTTTGCCTTTACAATGGAACACAATCACCAGAAATTAGTCAGGGCGAAAAGAAAAAATAATACTATTA
ATAAGAAACCAACAAACAAGAACCTCTCTTTCTAGGGATTTCTAAATATATAAAATGACTGTTCTTAGAATGTT
TAACTTAAGAATTATTTAGTTTGTCTGGGCCACACTGGGGCAGAGGGGGAGGGAGGGATACAGAGATGGATGC

[illegible]

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FIGURE 290

MKSNQERSNECLPPKKREIPATSRSEEKAPTLPNDHRVEGTAWLPGNPGGRGHGGGRHGPAGTSVELGLQQGI
GLHKALSTGLDYSPPSAPRSVPVATTLPAAYATPQPGTPVSPVQYAHLPHTFQFIGSSQYSGTYASFIPSQQLIPP
TANPVTSAVASAAGATTPSQRSQLEAYSTLLANMGSLSQTPGHKAEQQQQQQQQQQQQHQQQQQQQQQQQQQQ
QHLSRAPGLITPGSPPPAQQNQYVHISSSPQNTGRTASPPAIPVHLHPHQTMIPTLTLGPPSQVVMQYADSGSH
FVPREATKKAESSRLQQAIQAKEVLNGEMEKSRRYGAPSSADLGLGKAGGKSVPHPYESRHVVVHPSPSDYSSRD
PSGVRASVMVLPNSNTPAADLEVQQATHREASPSTLNDKSGHLGKPGHRSYALSPHTVIQTTHSASEPLPVGLP
ATAFYAGTQPPVIGYLSGQQQAITYAGSLPQHLVIPGTQPLLIPVGSTDMEASGAAPAIVTSSPQFAAVPHTFVT
TALPKSENFNPEALVTQAAYPAMVQAQIHLPPVQSVASPAAPPTLPPYFMKGSIIQLANGELKKVEDLKTEDFI
QSAEISNDLKIDSSTVERIEDSHSPGVAVIQFAVGEHRAQVSVEVLVEYPFFVFGQGWSSCCPERTSQLFDLPCS
KLSVGDVCIISLTNLKNGSVKKGQPVDPASVLLKHSKADGLAGSRHRYAEQENGINQGSQAQMLSENGELKFPEK
MGLPAAPFLTKIEPSKPAATRKRWSAPESRKLEKSEDEPPLTLPKPSLIPQEVKICIEGRSNVGK

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FIGURE 291A

CTACTACAGTGGCGGACGTACAGGACCTGTTTCTACTGCAGGGGGATCCAAAACAAGCCCCGTGGAGCAAAGCCA
GAGCAACAGCAGCTGCAAGACATTGTTTCTCTCCCTCTGCCCCCCTTCCCCACGCAACCCAGATCCATTTACA
CTTTACAGTTTTTACCTCACAAAACACTACTACAAGCACCAAGCTCCCTGATGGAAAGGAGCATCGTGCATCAAGTC
ACCAGGGTGGTCCATTCAAGCTGCAGATTTGTTTGTCTCCTGTACAGCAATCTCCTCCTCCACTGCCACTACA
GGGAAGTGCATCACATGTCAGCATACTGGAGCATAGTGAAAGAGTCTATTTTGAAGCTTCAAACCTTAGTGCTGCT
GCAGACCAGGAACAAGAGAGAAAGAGTGGATTTACAGCCTGCACGGATGGTCTTGAAACACAAATGGTTTTTGGTC
TAGGCGTTTTTACACTGAGATTCTCCACTGCCACCCTTTCTACTCAAGCAAAATCTTCGTGAAAAGATCTGCTGCA
AGGAACTGATAGCTTATGGTTCTCCATTGTGATGAAAGCACATGGTACAGTTTTTCCAAAGAAATTAGACCATTTT
CTTCGTGAGAAAGAAATCGACGTGCTGTTTTTCATAGGGTATTTCTCACTTCTCTGTGAAAGGAAGAAAGAACAG
CCTGAGCCCCAAGAGCCCTCAGGAGCCCTCCAGAGCCTGTGGGAAGTCTCCATGGTGAAGTATAGGCTGAGGCTAC
CTGTGAACAGTACGCAGTGAATGTTTCATCCAGAGCTGCTGTTGGCGGATTGTACCCACGGGGAGATGATTCTCTCA
TGAAGAGCCTGGATCCCCCTACAGAAATCAAATGTGACTTTCCGTTTATCAGACTAAAATCAGAGCCATCCAGACA
GTGAAACAGTCACCGTGGAGGGGGGACGGCGAAAAATGAAATCCAACCAAGAGCGGAGCAACGAATGCCTGCCTC
CCAAGAAGCGCGAGATCCCCGCCACCAGCCGGTCTCCGAGGAGAAGGCCCTTACCCTGCCAGCGACAACCACC
GGGTGGAGGGGCACAGCATGGCTCCCGGGCAACCCTGGTGGCCGGGGCCACGGGGGCGGGAGGCATGGGCCGGCAG
GGACCTCGGTGGAGCTTGGTTTACAACAGGGAATAGGTTTACACAAAGCATTGTCCACAGGGCTGGACTACTCCC
CGCCACGCGCTCCAGGTCTGTCCCCGTGGCCACCACGCTGCCTGCCGCGTACGCCACCCCGCAGCCAGGGACCC
CGGTGTCCCCCGTGCAGTACGCTCACCTGCCGCACACCTTCCAGTTTATTGGGTCTCCCAATACAGTGGAACCT
ATGCCAGCTTTCATCCCATCACAGCTGATCCCCCAACCGCCAACCCCGTCACCAGTGCAGTGGCCTCGGCCGAG
GGGCCACCACTCCATCCAGCGCTCCAGCTGGAGGCCTATTCCACTCTGCTGGCCAACATGGGCAGTCTGAGCC
AGACGCCGGGACACAAGGCTGAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGC
AGC
CCCCCCCCACAGCCAGCAGAGAACCAGTACGTCCACATTTCCAGTTCTCCGCAGAACACCGGCCGACCGCCTCTC
CTCCGGCCATCCCCGTCCACCTCCACCCCCACAGACGATGATCCACACACGCTCACCTGGGGCCCCCCTCCC
AGGTGCTCATGCAATACGCCGACTCCGGCAGCCACTTTGTCCCTCGGGAGGCCACCAAGAAAGCTGAGAGCAGCC
GGCTGCAGCAGGCCATCCAGGCCAAGGAGGTCTGAACGGTGAGATGGAGAAGAGCCGGCGGTACGGGGCCCCGT
CCTCAGCCGACCTGGGCCTGGGCAAGGCAGGCGGCAAGTCGGTTCTCACCCTGACGAGTCCAGGCAGTGGTGG
TCCACCCGAGCCCCCTCAGACTACAGCAGTCTGTATCCTTCGGGGGTCCGGGCCTCTGTGATGGTCTGCCCAACA
GCAACACGCCCGCAGCTGACCTGGAGGTGCAACAGGCCACTCATCGTGAAGCCTCCCCCTTCTACCCTCAACGACA
AAAGTGGCCTGCATTTAGGGAAGCCTGGCCACCGGTCTACGCGCTCTCACCCACACGGTCAATCAGACCACAC
ACAGTGCTTCAGAGCCACTCCCGGTGGGACTGCCAGCCACGGCCTTCTACGCAGGGACTCAACCCCTGTCTATCG
GCTACCTGAGCGGCCAGCAGCAAGCAATCACCTACGCCGGCAGCCTGCCCCAGCACCTGGTGATCCCCGGCACAC
AGCCCCTGCTCATCCCGGTGGCAGCACTGACATGGAAGCGTCGGGGGCGAGCCCCGGCCATAGTCACGTCATCCC
CCCAGTTTGCTGCAGTGCCTCACACGTTCTGTCACCACCGCCCTTCCCAAGAGCGAGAACTTCAACCCTGAGGCC
TGGTCACCCAGGCCGCTACCCAGCCATGGTGCAGGCCAGATCCACCTGCCTGTGGTGCAGTCCGTGGCCTCCC
CGGCGGGGCTCCCCCTACGCTGCCTCCCTACTTCATGAAAGGCTCCATCATCCAGTTGGCCAACGGGGAGCTAA
AGAAGGTGGAAGACTTAAAAACAGAAAGATTTTCATCCAGAGTGCAGAGATAAGCAACGACCTGAAGATCGACTCCA
GCACCGTAGAGAGGATTGAAGACAGCCATAGCCCGGGCGTGGCCGTGATACAGTTCCCGTCCGGGGAGCACCGAG
CCCAGGTGAGCGTTGAAGTTTTGGTAGAGTATCCTTTTTTTGTGTTTGGACAGGGCTGGTTCATCCTGCTGTCGGG
AGAGAACCAGCCAGCTCTTTGATTTGCCGTGTTCCAACTCTCAGTTGGGGATGTCTGCATCTCGCTTACCCTCA
AGAACCTGAAGAACGGCTCTGTAAAAAGGGCCAGCCCGTGGATCCCGCCAGCGTCTGCTGAAGCACTCAAAGG
CCGACGGCCTGGCGGGCAGCAGACACAGGTATGCCGAGCAGGAAAACGGAATCAACCAGGGGAGTGCCAGATGC
TCTCTGAGAATGGCGAAGTGAAGTTTCCAGAGAAAATGGGATTGCCTGCAGCGCCCTTCTCACCAAAATAGAAC
CCAGCAAGCCCGCGGCAACGAGGAAGAGGAGGTGGTCCGGCCAGAGAGCCGCAAACTGGAGAAGTCAGAAGACG
AACCACCTTTGACTCTTCTAAGCCTTCTCTAATTCCTCAGGAGGTTAAGATTTGCATTGAAGGCCGGTCTAATG
TAGGCAAGTAGAGGCAGCGTGGGGGAAAGGAAACGTGGCTCTCCCTTATCATTTGTATCCAGATTACTGTACTGT
AGGCTAAAATAACACAGTATTTACATGTTATCTTCTAATTTTAGGTTTCTGTTCTAACCTTGTCTATTAGAGTTA
CAGCAGGTGTGTCGAGGAGACTGGTGCATATGCTTTTTTCCACGAGTGTCTGTCTAGTGAGCGGGCGGGAGGAAGG

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FIGURE 291B

GCACAGCAGGAGCGGT CAGGGCTCCAGGCATCCCCGGGGAAGAAAGGAACGGGGCTTCACAGTGCCTGCCTTCTC
TAGCGGCACAGAAGCAGCCGGGGGCGCTGACTCCCGCTAGTGT CAGGAGAAAAGTCCCGTGGGAAGAGTCCCTGCA
GGGGTGCAGGGTTGCACGCATGTGGGGGTGCACAGGCGCTGTGGCGGCGAGTGAGGGTCTCTTTTTCTCTGCCTC
CCTCTGCCTCACTCTCTTGCTATCGGCATGGGCCGGGGGGGTT CAGAGCAGTGTCTCTCGGGGTTCACAGTGC
AAAATCAACATCAGGAACCCAGCTTCAGGGCATCGCGGAGACGCGTCAGATGGCAGATTTGGAAAGTTAACCATT
TAAAAGAACATTTTTCTCTCCAACATATTTTACAATAAAAGCAACTTTTAATTGTATAGATATATATTTCCCCCT
ATGGGGCCTGACTGCACTGATATATATTTTTTTTAAAGAGCAACTGCCACATGCGGGATTTCAATTTCTGCTTTTT
ACTAGTGCAGCGATGTCACCAGGGTGTGTGGTGGACAGGGAAGCCCCCTGCTGTCATGGCCCCACATGGGGTAAG
GGGGGTGGGGGTGGGGGAGAGGGAGAGAGCGAACACCCACGCTGGTTTTCTGTGCAGTGTAGGAAAACCAATCA
GGTTATTGCATTGACTTCACTCCCAAGAGGTAGATGCAAAGTCCCTTCAGTGAGAGCAACAGAAGCTCTTCACG
TTGAGTTTGGCAAATCTTTTTGTCTTTGAACTCTAGTACTGTTTATAGTTTCATGACTATGGACAACCTCGGGTGCC
ACTTTTTTTTTTTTTCAGATTCCAGTGTGACATGAGGAATTAGATTTTGAAGATGAGCATATATTACTATCTTTAA
GCATTTAAAAATACTGTTCACTTTTATTACCAAGCATCTTGGTCTCTCATTCAACAAGTACTGTATCTCACTTT
AAACTCTTTGGGGAAAAAACAACAAAAAATAAGTTGCTTTCTTTTTTCAACACTGTAACACTACATTTCA
GCTCTGCAGAAATTGCTGAAGAGCAAGATATTGAAAGTTTCAATGTGGTTTAAAGGGATGAATGTGAATTATGAAC
TAGTATGTGACAATAAATGACCACCAAGTACTACCTGACGGGAGGCACTTTTCACTTTGATGTCTGAGAATCAGT
TCAAGGCATATGCAGAGTTGGCAGAGAACTGAGAGAAAAGGGATGGAGAAGAGAATACTCATTTTTTGTCCAGTG
TTTTCTTTTTTAAGATGAACTTTAAAGAACCTTGCGATTGACATATTGAGTTTATAACTTGTGTGATATTCC
TGCAGTTTTTATCCAATAACATTGTGGGAAAGGTTTGGGGGACTGAACGAGCATAAATAAATGTAGCAAAATTTT
TTTCTAACCTGCCTAAACTCTAGGCCATTTTATAAGGTTATGTTCTTTGAAAATTCATTTTGGTCTTTTTTACCA
CATCTGTCACAAAAGCCAGGTCTTAGCGGGCTCTTAGAAACTCTGAGAATTTTCTTCAGATTCATTGAGAGAGT
TTTCCATAAAGACATTTATATATGTGAGCAAGATTTTTTTTAAACAATTACTTTATTATTGTTGTTATTAATGTT
ATTTTCAGAAATGGCTTTTTTTTTTCTATTCAAAATCAAAATCGAGATTTAATGTTTGGTACAAACCCAGAAAGGGTA
TTTCATAGTTTTTAAACCTTTTCACTCCAGAGATCCGAAATATCATTTGTGGGTTTTGAATGCATCTTTAAAGTG
CTTTAAAAAAGTTTTATAAGTAGGGAGAAATTTTTAAATATTCTTACTTGGATGGCTGCAACTAAACTGAACA
AATACCTGACTTTTTCTTTTACCCCATTTGAAATAGTACTTTCTTCGTTTACAAAATTAACAAAAAATCTGGTAT
CAACCCACATTTTGGCTGTCTAGTATTCACTTTAGGGTTCACCAGGACTAATGATTTTTATAAACCGTTT
TCTGGGGTGTACCAAAAACATTTGAATAGGTTTAGAATAGCTAGAATAGTTCCTTGACTTTCTCGAATTTCAAT
ACCCTCTCAGCATGCTTGAGAGAGCTGGGTGGGCTCATCTTGCACTCATACTGCTTATTTAGTGCTGTATTTT
TTAAACGTTTTCTGTTTCAAGAACTTGCTTAATCTTCCATATATTCTGCTCAGGGCACTTGCAATTATTAGGTTTT
GTTTTCTTTTTGTTTTTTTAGCCTTTGATGGTAAGAGGAATACGGGCTGCCACATAGACTTTGTTCTCATTAATA
TCATATTTACAACCTCATGTGGACTCAGAAAAACACACACCACCTTTTGGCTTACTTCGAGTATTGAATTGACTG
GATCCACTAAACCAACACTAAGATGGGAAAACACACATGGTTTGGAGCAATAGGAACATCATCATAATTTTTGTG
GTTCTATTTTCAAGTATAGGAATTATAAAATAATTGGTCTTTCTTAAACACTTGTCCTTTTCACTTCTTTGCTTT
TTTAGCATGTGCAATACTTTCTGTGCCAATAGAGTCTGACCAGTGTGCTATATAGTTAAAGCTCATTTCCCTTTT
GCTTTTTCTTTGTTTGGTTGATCTTCCCCATTCTGGCCAGAGCAGGGCTGGAGGGAAGGAGCCAGGAGGGAGAGA
GCCTCCACCTTTCCCTGCTGCGGATGCTGAGTGTGCGGGCGGGGAGCCTTCAGGAGCCCCGTGCGTCTGCCGC
CACGTTGCAGAAAGAGCCAGCCAAGGAGACCCGGGGGAGGAACCGCAGTGTCCCTGTCACCACACGGAATAGTG
AATGTGGAGTGTGGAGAGGAAGGAGGCAGATTCATTTCTAAGACGCACTCTGGAGCCATGTAGCCTGGAGTCAAC
CCATTTTCCACGGTCTTTCTGCAAGTGGGCAGGCCCTTCTCGGGGTCTGTGTCTTGAGACTTGAGGCCCTGC
CTCTGAGCCTGGACGGGAAGTGTGGCCTGTTGTGTGTGCGTTCTGAGCGTGTGGCCAGTGGCTGTGGAGGGG
ACCACCTGCCACCCACGGTCACCACTCCCTTGTGGCAGCTTTCTCTTCAAATAGGAAGAACGCACAGAGGGCAGG
AGCCTCCTGTTTGCAGACGTTGGCGGGCCCCGAGGCTCCCAGAGCAGCCTCTGTACCGCTTCTGTGTAGCAAAC
ATTAACGATGACAGGGGTAGAAATTCTTCGGTGCCGTTTCAGCTTACAAGGATCAGCCATGTGCCTCTGTACTATG
TCCACTTTGCAATATTTACCGACAGCCGTCTTTTGTCTTTCTTTCTTCTGTTTTCCATTTTTAACTAGTAACAGC
AGGCCTTTTGCGTTTACAATGGAACACAATCACCAGAAATTAGTCAGGGCGAAAAGAAAAAATAATACTATTA
ATAAGAAACCAACAAACAAGAACCTCTCTTTCTAGGGATTTCTAAATATATAAAATGACTGTTCTTAGAATGTT
TAACCTAAGAATTATTTAGTTTGTCTGGGCCACACTGGGGCAGAGGGGGAGGGAGGGATACAGAGATGGATGC

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FIGURE 291C

CACTTACCTCAGATCTTTTAAAGTGGAATCCAAATTGAATTTTCATTTGGACTTTCAGGATAATTTTCTATGTT
GGTCAACTTTTCGTTTTCCCTAACTCACCCAGTTTAGTTTGGGATGATTTGATTTCTGTTGTTGTTGATCCCATT
TCTAACTTGGAATTGTGAGCCTCTATGTTTTCTGTTAGGTGAGTGTGTTGGGTTTTTCCCCCACCAGGAAGTG
GCAGCATCCCTCCTTCTCCCTAAAGGGACTCTGCGGAACCTTTCACACCTCTTCTCAGGGACGGGGCAGGTGT
GTGTGTGGTACACTGACGTGTCCAGAAGCAGCACTTGGACTGCTCTGGAGTAGGGTTGTACAATTTCAAGGAATG
TTTGGATTTCTGTCATCTTGTGGATTACTCCTTAGATACCGCATAGATTGCAATATAATGCTGCATGTTCAAGAT
GAACAGTAGCTCCTAGTAATCATAAAAATCCACTCTTTCACAGTTTTGATCTTTACTGAAATATGTTGCCAAAATT
TATTTTTGTTGTTGTAGCTCTGGATTTTGTGTTTTGTTTTGTTTTTAAAGGAAACGATTGACAATACCCTTTAACAT
CTGTGACTACTAAGGAAACCTATTTCTTTCATAGAGAGAAAAATCTCCAATGCTTTTGAAGACACTAATACCGTG
CTATTTTCAGATATGGGTGAGGAAGCAGAGCTCTCGGTACCGAAGGCCGGGCTTCTTGAGCTGTGTTGGTTGTCAT
GGCTACTGTTTCATGAACCACAAGCAGCTCAACAGACTGGTCTGTTGCCCTTCTGAAACCTTTGCACTTCAATTT
GCACCAGGTGAAAACAGGGCCAGCAGACTCCATGGCCCAATTCGGTTTCTTCGGTGGTGATGTGAAAGGAGAGAA
TTACACTTTTTTTTTTTTTAAGTGGCGTGGAGGCCTTTGCTTCCACATTTGTTTTTAACCCAGAATTTCTGAAAT
AGAGAATTTAAGAACACATCAAGTAATAAATATACAGAGAATACTTTTTTATAAAGCACATGCATCTGCTATT
GTGTTGGGTTGGTTTCTCTCTTTTCCACGGACAGTGTGTTGTTTCTGGCATAGGGAACTCCAAACAACCTTGCA
CACCTCTACTCCGGAGCTGAGATTTCTTTTACATAGATGACCTCGCTTCAAATACGTTACCTTACTGATGATAGG
ATCTTTTCTTGTAGCACTATACCTTGTTGGGAATTTTTTTTTTAAATGTACACCTGATTTGAGAAGCTGAAGAAAAC
AAAATTTTGAAGCACTCACTTTGAGGAGTACAGGTAATGTTTTAAAAAATTGCACAAAAGAAAAATGAATGTCGA
AATGATTCATTCACTGTTTGAAGATATGGCTCTGTTGAAACAATGAGTTTCATACTTTGTTTGTAAAAAATAA
AGCAGAGAAGGGTTGAAAGTTACATGTTTTTTTGTATATAGAAATTTGTCATGTCTAAATGATCAGATTTGTATG
GTTATGGCCTGGAAGAATTACTACGTAAAGGCTCTTAACTATACCTATGCTTATTGTTATTTTTGTTACATAT
AGCCCTCGTCTGAGGGAGGGGAACCTCGGTATTCTGCGATTGAGAATACTGTTCACTTCTATGCTGAAAGTACTT
CTCTGAGCTCCCTTCTTAGTCTAAACTCTTAAGCCATTGCAACTTCTTTTTCTTCAGAGATGATGTTTGACATTT
TCAGCACTTCTGTTTCTTATAAACCACAAAGAAATATAATCTTGAACACGAAGTGTGTTGTAACAAGGATCCAGGCT
ACCAATCAAACAGGACTCATTATGGGGACAAAAAATAAATTTTACCTTCTTTCCCCCACACCTCATT
TAAATGGGGGGAGTAAAAACATGATTTCAATGTAAATGCCTCATTTTATTTTAGTTTTATTTTGATTTTTATTTA
ATATAAAGAGGCCAGAATAAATACGGAGCATCTTCTCAGAATAGTATTCTGTCCAAAAATCAAGCCGGACAGTG
GAACTGGACAGCTGTGGGGATATTAAGCACCCCCACTTACAATTCTTAAATTCAGAATCTCGTCCCTCCCTTC
TCGTTGAAGGCAACTGTTCTGGTAGCTAACTTTCTCTGTGTAATGGCGGGAGGGAACACCGGCTCAGTTTTTC
ATGTCCCATGACTTGATACAAATGGTTCAACTGTATTAAATTAAGTGCATTTGGCCAATAGGTAGTATCTAT
ACAATAACAACATCTCTAAGAATTTCCATAACTTTTCTTATCTGAAAGGACTCAAGTCTTCCACTGCAGATACA
TTGGAGGCTTACCCACGTTTTCTTTCCCTTAGTTTGTTTGCTGTCTGGATGGCCAATGAGCCTGTCTCCTTTT
CTGTGGCCAATCTGAAGGCCTTCGTTGGAAGTGTGTTTACAGTAATCCTTACCAAGATAACATACTGTCCTCCA
GAATACCAAGTATTAGGTGACACTAGCTCAAGCTGTTGTCTTACAGCAGTTACCAAGAAGCTCGGTGCACAGGT
TTTCTCTGTTTCTTACAGGAACCACTACTCTTTCAGTTTTCTGGCCAGGAGTGGGGTAAATCCTTTAGTTAGT
GCATTTGAACCTTGGTACCTGTGCATTGAGTTCTGTGAATACTGCCCTTTTGGCGGGGTTTCTCATCTCCCCAG
CCTGAACCTGCTCAACTCTAAACCCAAATTAGTGTGAGCCGAAAGGAGGTTTCAAGATAGTCTGTGAGTATTTGT
GGTGACCTTCAGATTAGACAGTCTTCAATTTCCAGCCAGTGGAGTCTGGCTCCAGAGCCATCTCTGAGACTCCGT
ACTACTGGATGTTTTAATATCAGATCATTACCCACCATATGCCTCCACAGGCCAAGGGAACAGACACCAGAA
CTTGGGTTGAGGGCACTACCAGACTGACATGGCCAGTACAGAGGAGAACTAGGGAAGGAATGATGTTTTGCACCT
TATTGAAAAGAAAATTTAAGTGCATACATAATAGTTAAGAGCTTTTATTGTGACAGGAGAACTTTTTTCCATAT
GCGTGCATACTCTCTGTAATTCAGTGTAATAATGTTACTTGCAGTCTTTTTTAAACAAATATTAATAAATG
GAAGAATTCATATTCTATTTTCTAATCGTGGTGTGCTATTTGTAGGATACACTCGAGTCTGTTTATTGAATTTT
ATGGTCCCTTTCTTTGATGGTGCTTGAGGTTTTCTAGGTAGAAATTATTTCAATTATTATAATAAACAATGTTT
GATTCAAAATTTGAACAAAATTGTTTTAAATAAATGTTCTGTATACAGTACAAGTTTATTGTTTCAGTATACTC
GTACTAATAAATAACAGTGCCAATTGCAA
AAAAAAAAA

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FIGURE 292

MKSNQERSNECLPPKKREIPATSRSEEKAPTLP SDNHRVEGTAWLPGNPGGRGHGGGRHGPAGTSVELGLQQGI
GLHKALSTGLDYSPPSAPRSVPVATTLPAAAYATPQPGTPVSPVQYAHLPHTFQFIGSSQYSGTYASFIPSQ LIPP
TANPVTSAVASAAGATTPSQRSQLEAYSTLLANMGSLSQTPGHKAEQQQQQQQQQQQQHQHQHQHQHQHQHQHQHQHQ
QHLSRAPGLITPGSPPPAQQNQYVHISSSPQNTGRTASPPAIPVHLHPHQTMIPHTLTTLGPPSQVVMQYADSGSH
FVPREATKKAESSRLQQAIQAKEVLNGEMEKSRRYGAPSSADLGLGKAGGKSVPHPYESRHHVVVHPSPSDYSSRD
PSGVRASVMVLPNSNTPAADLEVQQATHREASPSTLNDKSGHLGKPGHRSYALSPHTVIQTTHSASEPLPVGLP
ATAFYAGTQPPVIGYLSGQQQAITYAGSLPQHLVIPGTQPLLIPVGSTDMEASGAAPAIVTSSPQFAAVPHTFVT
TALPKSENFNPEALVTQAAYPAMVQAQIHLPPVQSVASPAAPPTLPPYFMKGSIIQLANGELKKVEDLKTEDFI
QSAEISNDLKIDSSTVERIEDSHSPGVAVIQFAVGEHRAQVSVEVLVEYPFFVFGQGWSGCCPERTSQLFDLPCS
KLSVGDVCISLTLKNLKNQSVKKGQPVDPASVLLKHSKADGLAGSRHRYAEQENGINQGSQAQMLSENGELKFPEK
MGLPAAPFLTKIEPSKPAATRKRWSAPESRKLEKSEDEPPLTLPKPSLIPQEVKICIEGRSNVGK

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FIGURE 293

GGCGAATGGAGCAGGGGCGCGCAGATAATTAAAGATTTACACACAGCTGGAAGAAATCATAGAGAAGCCGGGCGT
GGTGGCTCATGCCTATAATCCCAGCACTTTTGGAGGCTGAGGCGGGCAGATCACTTGAGATCAGGAGTTCGAGAC
CAGCCTGGTGCCTTGGCATCTCCCAATGGGGTGGCTTTGCTCTGGGCTCCTGTTCCCTGTGAGCTGCCTGGTCCCT
GCTGCAGGTGGCAAGCTCTGGGAACATGAAGGTCTTGCAGGAGCCACCTGCGTCTCCGACTACATGAGCATCTC
TACTTGCAGTGGAAAGATGAATGGTCCCACCAATTGCAGCACCAGCTCCGCTGTTGTACCAGCTGGTTTTTCT
GCTCTCCGAAGCCCACACGTGTATCCCTGAGAACACGGAGGCGCGGGGTGCGTGTGCCACCTGCTCATGGATGA
CGTGGTCAGTGCGGATAACTATACACTGGACCTGTGGGCTGGGCAGCAGCTGCTGTGGAAGGGCTCCTTCAAGCC
CAGCGAGCATGTGAAACCCAGGGCCCCAGGAAACCTGACAGTTCACACCAATGTCTCCGACACTCTGCTGTGAC
CTGGAGCAACCCGTATCCCCCTGACAATTACCTGTATAATCATCTCACCTATGCAGTCAACATTTGGAGTGAAAA
CGACCCGGCAGATTTTCAAGATCTATAACGTGACCTACCTAGAACCCCTCCCTCCGCATCGCAGCCAGCACCCCTGAA
GTCITGGGATTTTCTACAGGGCACGGGTGAGGGCTGGGCTCAGTGTCTATAACACCACCTGGAGTGAGTGGAGCCC
CAGACCAAGTGGCACAACCTCTACAGGGAGCCCTTCGAGCAGCACCTCCTGCTGGGCGTCAGCGTTTCTGTCAT
TGTATCCTGGCCGTCTGCCTGTTGTGTCTATGTCTCAGCATCACCAAGATTAAGAAAGAATGGTGGGATCAGATTCC
CAACCCAGCCCGCAGCCGCTCGTGGCTATAATAATCCAGGATGCTCAGGGGTACAGTGGGAGAAGCGGTCCCG
AGGCCAGGAACAGCCAAGTGGCCACACTGGAAGAATTGTCTTACCAAGCTCTTGCCCTGTTTTCTGGAGCACAA
CATGAAAAGGGATGAAGATCCTCACAAGGCTGCCAAAGAGATGCCTTTCCAGGGCTCTGGAATAATCAGCATGGTG
CCCAGTGGAGATCAGCAAGACAGTCTCTGCCCAGAGAGCATCAGCGTGGTGCATGTGTGGAGTTGTTTGAGGC
CCCGGTGGAGTGTGAGGAGGAGGAGGAGGTAGAGGAAGAAAAGGGAGCTTCTGTGCATCGCCTGAGAGCAGCAG
GGATGACTTCCAGGAGGGAAGGGAGGGCATTGTGGCCCGGCTAACAGAGAGCCTGTTCTGACCTGCTCGGAGA
GGAGAATGGGGGCTTTTGCCAGCAGGACATGGGGGAGTCATGCCCTTCTTCCACCTTCGGGAAGTACGAGTGCTCA
CATGCCCTGGGATGAGTTCCCAAGTGCAGGGCCCCAAGGAGGCACCTCCCTGGGGCAAGGAGCAGCCTCTCCACCT
GGAGCCAAGTCTCTGCCAGCCCGACCCAGAGTCCAGACAACCTGACTTGCACAGAGACGCCCCCTCGTCATCGC
AGGCAACCTGCTTACCGCAGCTTCAGCAACTCCCTGAGCCAGTCACCGTGTCCAGAGAGCTGGGTCCAGACCC
ACTGCTGGCCAGACACCTGGAGGAAGTAGAACCCGAGATGCCCTGTGTCCCCAGCTCTCTGAGCCAACCACTGT
GCCCCAACCTGAGCCAGAAACCTGGGAGCAGATCCTCCGCCGAAATGTCTCCAGCATGGGGCAGCTGCAGCCCC
CGTCTCGGCCCCCACCAGTGGCTATCAGGAGTTTGTACATGCGGTGGAGCAGGGTGGCACCCAGGCCAGTGCGGT
GGTGGGCTTGGGTCCCCCAGGAGAGGCTGGTTACAAGGCCCTTCTCAAGCCTGCTTGCCAGCAGTGCTGTGTCCCC
AGAGAAATGTGGGTTTGGGGCTAGCAGTGGGGAAGAGGGGTATAAGCCTTTCCAAGACCTCATTCTGGCTGCCC
TGGGGACCTGCCCCAGTCCCTGTCCCTTGTTCACCTTTGGACTGGACAGGGAGCCACCTCGCAGTCCGCAGAG
CTCACATCTCCCAAGCAGCTCCCCAGAGCACCTGGGTCTGGAGCCGGGGGAAAAGGTAGAGGACATGCCAAAGCC
CCCACTTCCCCAGGAGCAGGCCACAGACCCCTTGTGGACAGCCTGGGCAGTGGCATTGTCTACTCAGCCCTTAC
CTGCCACCTGTGCGGCCACCTGAAACAGTGTCTATGGCCAGGAGGATGGTGGCCAGACCCCTGTCTATGGCCAGTCC
TTGCTGTGGCTGCTGCTGTGGAGACAGGTCTCGCCCCCTACAACCCCTGAGGGCCCCAGACCCCTCTCCAGG
TGGGGTTCCACTGGAGGCCAGTCTGTGTCCGGCCTCCCTGGCACCTCGGGCATCTCAGAGAAGAGTAAATCCTC
ATCATCCTTCCATCCTGCCCCCTGGCAATGCTCAGAGCTCAAGCCAGACCCCCAAAATCGTGAACCTTTGTCTCCGT
GGGACCCACATACATGAGGGTCTCTTAGGTGTCATGTCTCTTGTGTGCTGAGTCTGCAGATGAGGACTAGGGCTTA
TCCATGCCTGGGAAATGCCACCTCCTGGAAGGCAGCCAGGCTGGCAGATTTCCAAAAGACTTGAAGAACCATGGT
ATGAAGGTGATTGGCCCCACTGACGTTGGCCTAACACTGGGCTGCAGAGACTGGACCCCGCCAGCATTGGGCTG
GGCTCGCCACATCCCATGAGAGTAGAGGGCACTGGGTGCGCGTGCCCCACGGCAGGCCCTGCAGGAAAACCTGAG
GCCCTGGGGACCTCGACTTGTGAACGAGTTGTTGGCTGCTCCCTCCACAGCTTCTGCAGCAGACTGTCCCTGTT
GTAAGCCGAGCCTAGAACTAACACAGCCATCAAGGGAATGACTTGGGCGGCCCTGGGAAATCGATGAGAAATT
GAACCTCAGGGAGGGTGGTCATTGCCTAGAGGTGCTCATTCATTTAACAGAGCTTCCTTAGGTTGATGCTGGAGG
CAGAATCCCGGCTGTCAAGGGGTGTTTCAAGGAGGGAACAGAGGACATGAAAAATTGCTATGACTAAAGCA
GGGACAATTTGCTGCCAAACACCCATGCCAGCTGTATGGCTGGGGGCTCCTCGTATGCATGGAACCCCCAGAAT
AAATATGCTCAGCCACCTGTGGGCGGGGAATCCAGACAGCAGGCATAAGGCACCAGTTACCCTGCATGTTGGC
CCAGACCTCAGGTGCTAGGGGAAGGCGGGAACCTTGGGTTGAGTAATGCTCGTCTGTGTGTTTTAGTTTTCATCACC
TGTTATCTGTGTTTGTCTGAGGAGAGTGGAACAGAAGGGGTGGAGTTTGTATAAATAAAGTTTCTTTGTCTC

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FIGURE 294

MGWLCSGLLFPVSCLVLLQVASSGNMKVLQEPTCVSDYMSISTCEWKMNPTNCSTELRLLYQLVFLLEAHTCI
PENNGGAGCVCHLLMDDVVSADNYTLDLWAGQQLWKGSFKPSEHVKPRAPGNLTVHTNVSDTLLLTWSNPYPPD
NYLYNHLTYAVNIWSENDPADFRIYNVTYLEPSLRIAASTLKSGISYRARVRAWAQCYNNTWSEWSPSTKWHNSY
REPFEQHLLLGVSVCIVILAVCLLCYVSITKIKKEWWDQIPNPARSRLVAIIIQDAQGSQWEKRSRGQEPKCP
HWKNCLTKLLPCFLEHNMKRDEDPHKAAKEMPFQGSKSACWCPVEISKTVLWPESISVVRVCLFEAPVECEEEEE
EVEEEKGSFCASPESSRDDFQEGREGIVARLTESLFLDILGEENGFCQQDMGESCLLPSPSGSTSAHMPWDEFPS
AGPKEAPPWGKEQPLHLEPSPASPTQSPDNLTCTETPLVIAGNPAYRSFSNSLSQSPCPRELGPDP LLARHLEE
VEPEMPCVPQLSEPTTVPQPEPETWEQILRRNVLQHGAAPVSAPTSGYQEFVHAVEQGGTQASAVVGLGPPGE
AGYKAFSSLLASSAVSPEKCGFGASSGEEGYKPFQDLIPGCPGDPAPVPVPLFTFGLDREPPRSPQSSHLPSSSP
EHLGLEPGEKVEDMPKPLPQEQATDPLVDSLGSIVYSALTCHLCGHLKQCHGQEDGGQTPVMASPCCGCCCGD
RSSPPTTPLRAPDPSPGGVPLEASLCPASLAPSGISEKSKSSSSFHPAPGNAQSSSQTPKIVNFVSVGPTYMRVS

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FIGURE 295

ATTGAGTGCTCCGGAGAACAGACCCGCGCCCCGCCGTCCGCGAGCCTCCCGAGAGCCGTCCCTTCGTCCGGCCC
TGGAGCATTGCGTTTGTGCGCCGGTGTGCGAGTGCGAGGATGGCGCCGCGGGTGTAGCGGCTCTCTGCGCAGGCCG
AGTGGGCCCAGAGAAGCGAGGAACCTCCCCAGATCGCCGACACGTCTCGTCTCCTGTCCCAATTCAGGGCTTGGTG
AGGTGACTCGCGGTGCGGGGTGACTCGCCGGCAGGACACTGCCTGGAACGCCTGGAGCGCCTCCCACTGCAGACG
TCTGTCCGCCTCCAGCCGCTCTCCTCTGACGGGTCTGCCTCAGTTGGCGGAATGGCGGCCACGGGAGCCAATGC
AGAGAAAGCTGAAAGTCACAATGATTGCCCCGTGAGACTTTTAAATCCAAACATAGCAAAAATGAAAGAAGATAT
TCTCTATCATTTCATCTCACCCTAGCAGACACAATTTCCCAGCCTTGTTTGGAGATGTGAAGTTTGTGTGTGT
TGGTGGAAGCCCCCTCCCGGATGAAAGCCTTCATCAGGTGCGTTGGTGCAGAGCTGGGCCTTGACTGCCCAGGTAG
AGACTATCCCAACATCTGTGCGGGAACTGACCGCTATGCCATGTATAAAGTAGGACCGGTGCTGTCTGTCTAGTCA
TGGTATGGGCATTCCCTTCTATCTCAATCATGTTGCATGAGCTCATAAAGCTGCTGTACTATGCCCGGTGCTCCAA
CGTCACTATCATCCGCATTGGCACTTCTGGTGGGATAGGTCTGGAGCCCGGCACTGTGGTGCATAACAGAGCAGGC
AGTGGATACCTGCTTCAAGGCAGAGTTTGAGCAGATTGTCTGGGGAAGCGGGTTCATCCGGAAAACGGACCTTAA
CAAGAAGCTGGTGCAGGAGCTGTTGCTGTGTTCTGCAGAGCTGAGCGAGTTTACCACAGTGGTGGGGAACACCAT
GTGCACCTTGGAATTCTATGAAGGGCAAGGCCGTCTGGATGGGGCTCTCTGCTCCTACACGGAGAAGGACAAGCA
GGCGTATCTGGAGGCAGCCTATGCAGCCGGCGTCCGCAATATCGAGATGGAGTCCCTCGGTGTTTGGCGCCATGTG
CAGCGCCTGCGGCCTCCAAGCGGCCGTGGTGTGTGTACCCCTCCTGAACCGCCTGGAAGGGGACCAGATCAGCAG
CCCTCGCAATGTGCTCAGCGAGTACCAGCAGAGGCCGCGAGCGGTGGTGGAGCTACTTCATCAAGAAGAACTGAG
CAAGGCCTGAGCGCTGCCCTGCACCTCCGCAGACCTGCTGTGATGACTTGCCATTAAAAGCATTGTCCAAACCC

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FIGURE 296

MAATGANA EKAESHND CPVRLNPNIAKMKEDILYHFNLTTSRHNF PALFGDVKFVCVGGSPSRMKAFIRCVGAE
LGLDCPGRDYPNICAGTD RYAMYKVGPVLSVSHGMGIPSI SIMLHELIKLLYYARCSNVTIIRIGTSGGIGLEPG
TVVITEQAVDTCFKA EFEQIVLGKRVIRKTD LNKKL VQELLCSAELSEFTTVVGNTMCTLDFYEGQGRLDGALC
SYTEKDKQAYLEAAYAAGVRNIEMESSVFAAMCSACGLQA AVVCVTLLNRLEGDQISSPRNVLSEYQQRPQRLVS
YFIKKKLSKA

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FIGURE 297

GGCACGAGGGCGCGCAAGGCACCGGTGGCAGCGGCGACGGCAGCTGCGACAGCAACCCCTGCTGGGCCGAACTG
GGCAGAGCGGAGCAGACGTCTGAAGCAGCGCGAGTGAGGCGCGAGGGTAGCGCCCGCGCCCGGGAAGACCCCTCG
GCGCGAACC GG CAGCC CAGCCCGGGTCCCGGTTCCCAAGGCCCCGCCTCTAGGGCCTGGGGACTAATCGGATTG
AGAGCGCGCCGGCCCGGGCCGCGAACTCGCCAATTGCGGAGGGCGGTGGCCACCGCCCAATCCGGAGCAGACAGG
TGCGAGGTCCGGAAGGCGGAGGCCAATCGGCGGCGGTTGCGACCTGCTGGGGCAGGTCTCGGCCAATAAGGAGGC
TCGAGTGACATCTTCGCGCACCAATCGGGAGTGAGGGAGCATTTCGTGCCCCGCTCGCCCTTCGGGCCAGACCTCTA
TTTACCAGGGGCGTGCGAGCCCGCTTGCCAATCAGAGCGCGGCTGAGCGGCCCCGCGAGCCAACCCCGAGGAGCGG
CCGGCTGGCGTCCGCCGCGCC CAGGAGTTGGGGATGTCCTACAAACCCATCGCCCCCTGCTCCCAGCAGCACCCCT
GGCTCCAGCACCCCTGGGCCCGGGCACCCCGGTCCCTACAGGAAGCGTCCCGTCGCCGTCGGGCTCAGTGCCAGGA
GCCGGCGCTCCTTTTCAGACCGCTGTTTAACGACTTTGGACCGCCTTCCATGGGCTACGTGCAGGCGATGAAGCCA
CCCGGCGCCCAGGGCTCCCAGAGCACCTACACGGACCTGCTGTCTAGTCATAGAGGAGATGGGCAAAGAGATCCGG
CCTACCTATGCTGGCAGCAAGAGCGCCATGGAGCGCCTGAAGAGAGGTATCATCCATGCCCGGGCCCTAGTCAGA
GAGTGCCCTGGCAGAGACAGAGCGGAACGCCCGCACGTAAACAGGAAGCGCCTCGGCCTCAGCGTCTGGACCTATCC
GGCCACTGCAGAGCACCCGCTTCTCCCTGGCCTTCATCCCGAGTTGCACTAACCATCCTGGGCTTCCTGTCCTGT
GTCCCTTGGTGGGTCCCCCTCAGGAACCAAGGAGTGGCCCTCCAGGTGGCAGCACTAAGGACACCCCCCACAAC
AAGAGTTAGCAGCGAGGTCCCCATGAGTCCCACCCATGACCTGCCGACAGTGTTGCCACCGGAAC TTTTGTGGC
CCCTACCGCTCAGCCCTTCCCAGCACTTCTCCCACTTTGTCCCAGCCTCCTTCTCCCCCAGCAGGGGCACAGGC
CTGGCACCTCCCTGCCTTGTGTCTGAGCCATAGTGACTCTTTTATCTGTGTGTCTTTTGCTAAATATGCCCTTT
TTATATTAATAAAAGATGATTTGGAGTTGTGCTCTCAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 298

MSYKPIAPAPSSTPGSSTPGPGTPVPTGSVPSPSGSVPGAGAPFRPLFNDFGPPSMGYVQAMKPPGAQGSQSTYT
DLLSVIEEMGKEIRPTYAGSKSAMERLKRGI HARALVRECLAETERNART

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FIGURE 299

ATGGCGACTGCGACCCCGTGCCGCCGCGGATGGGCGAGCCGCGCTGGCGGGCCCCACCACGCCGCTGAGCCCCACG
CGCCTGTGCGCGGCTCCAGGAGAAGGAGGAGCTGCGCGAGCTCAATGACCGGCTGGCGGTGTACATCGACAAGGTG
CGCAGCCTGGAGACGGAGAACAGCGCGCTGCAGCTGCAGGTGACGGAGCGCGAGGAGGTGCGCGGCCGTGAGCTC
ACCGGCCCTCAAGGCGCTCTACGAGACCGAGCTGGCCGACGCGCGACGCGCTCGACGACACGGCCCGCGAGCGC
GCCAAGCTGCAGATCGAGCTGGGCAAGTGCAAGGCGGAACACGACCAGCTGCTCCTCAACTATGCTAAGAAGGAA
TCTGATCTTAATGGCGCCAGATCAAGCTTCGAGAATATGAAGCAGCACTGAATTCGAAAGATGCAGCTCTTGCT
ACTGCACTTGGTGACAAAAAAGTTTAGAGGGAGATTTGGAGGATCTGAAGGATCAGATTGCCCAGTTGGAAGCC
TCCTTAGCTGCAGCCAAAAACAGTTAGCAGATGAACTTTACTTAAAGTAGATTTGGAGAATCGTTGTCAGAGC
CTTACTGAGGACTTGGAGTTTCGCAAAAGCATGTATGAAGAGGAGATTAACGAGACCAGAAGGAAGCATGAAACG
CGCTTGGTAGAGGTGGATTCTGGGCGTCAAATTGAGTATGAGTACAAGCTGGCGCAAGCCCTTCATGAGATGAGA
GAGCAACATGATGCCCAAGTGAGGCTGTATAAGGAGGAGCTGGAGCAGACTTACCATGCCAACTTGAGAATGCC
AGACTGTCATCAGAGATGAATACTTCTACTGTCAACAGTGCCAGGGAAGAACTGATGGAAAGCCGCATGAGAATT
GAGAGCCTTTCATCCAGCTTTCTAATCTACAGAAAGAGTCTAGAGCATGTTTGAAAGGATTCAAGAATTAGAG
GACTTGCTTGCTAAAGAAAAAGACAACCTCTCGTCGCATGCTGACAGACAAAGAGAGAGAGATGGCGGAAATAAGG
GATCAAATGCAGCAACAGCTGAATGACTATGAACAGCTTCTTGATGTAAAGTTAGCCCTGGACATGGAAATCAGT
GCTTACAGGAACTCTTAGAAGGCGAAGAAGAGAGGTTGAAGCTGTCTCCAAGCCCTTCTTCCCGTGTGACAGTA
TCCCGAGCATCCTCAAGTCGTAGTGACGTACAACCTAGAGGAAAGCGGAAGAGGGTTGATGTGGAAGAATCAGAG
GCGAGTAGTAGTGTTAGCATCTCTCATTCCGCCCTCAGCCACTGGAAATGTTTGTCATCGAAGAAATTTGATGTTGAT
GGGAAATTTATCCGCTTGAAGAACACTTCTGAACAGGATCAACCAATGGGAGGCTGGGAGATGATCAGAAAAATT
GGAGACACATCAGTCAGTTATAAATATACCTCAAGATATGTGCTGAAGGCAGGCCAGACTGTTACAATTTGGGCT
GCAAACGCTGGTGTACAGCCAGCCCCCAACTGACCTCATCTGGAAGAACCAGAACTCGTGGGGCACTGGCGAA
GATGTGAAGGTTATATTGAAAAATTCTCAGGGAGAGGAGGTTGCTCAAAGAAGTACAGTCTTTAAAACAACCATA
CCTGAAGAAGAGGAGGAGGAGGAAGAAGCAGCTGGAGTGGTTGTTGAGGAAGAAGCTTTTCCACCAGCAGGGAACC
CCAAGAGCATCCAATAGAAGCTGTGCAATTATG**TAA**AATTTTCAACTGTCTTCCTCAAATAAAGAAGTATGGTA
ATCTTTACCTGTATACAGTGCAGAGCCTTCTCAGAAGCACAGAATATTTTTATATTTCTTTATGTGAATTTTTA
AGCTGCAAATCTGATGGCCTTAATTTCTTTTGGACACTGAAAGTTTGTAAAAGAAATCATGTCCATACACTTT
GTTGCAAGATGTGAATTATTGACACTGAACTTAATAACTGTGTACTGTTTCGGAAGGGGTTCCTCAAATTTTTGA
CTTTTTTTGTATGTGTGTTTTTTCTTTTTTTTAAGTTCCTATGAGGAGGGGAGGGTAAATAAACCCTGTGCGT
CTTGGTGTAATTTGAAGATTGCCCCATCTAGACTAGCAATCTCTTCATTATTCTCTGCTATATATAAAACGGTGC
TGTGAGGGAGGGGAAAAGCATTTTTCAATATATTGAACTTTGTACTGAATTTTTTTGTAATAAGCAATCAAGGT
TATAATTTTTTTTTAAATAGAAATTTTGAAGAAGGCAATATTAACCTAATCACCATGTAAGCACTCTGGATGAT
GGATTCCACAAAACCTTGGTTTTATGGTTACTTCTTCTCTTAGATTCTTAATTCATGAGGAGGGTGGGGGAGGGAG
GTGGAGGGAGGGGAAGGGTTTCTCTATTAATAATGCATTCTGTTGTGTTTTTTAAGATAGTGTAACCTTGCTTAAATTT
CTTATGTGACATTAACAAATAAAAAAGCTCTTTT

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FIGURE 300

MATATPVPPRMGSRAGGPTTPLSPTRL SRLQEKEELRELNDRLAVYIDKVR SLETENSALQLQVTEREEVRGREL
TGLKALYETELADARRALDDTARERAKLQIELGKCKAEHDQLLLNYAKKESDLNGAQIKLREYEAALNSKDAALA
TALGDKKSLEGDLEDLKDQIAQLEASLAAAKQLADETLLKVDLENRCQSLTEDLEFRKSMYEEEINETRRKHET
RLVEVDSGRQIEY EYKLAQALHEMREQHDAQVRLYKEELEQTYHAKLENARLSSEMNTSTVNSAREELMESRMRI
ESLSSQLSNLQKESRACLERIQELEDLLAKEKDNSRRMLTDKEREMAEIRDQMQQQLNDYEQLLDVKLALDMEIS
AYRKLEGEERLKLSPSPSSRVTVSRASSRSVRTTRGKRKRVDVEESEASSSVSISHSASATGNVCIEEIDVD
GKFIRLKNTSEQDQPMGGWEMIRKIGDTSVSYKYTSRYVLKAGQTVTIWAANAGVTASPTDLIWKNQNSWGTGE
DVKVILKNSQGEEVAQRSTVFKTTIPEEEEEEEEAAGVVVEELFHQQGTPRASNRSCAIM

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FIGURE 301A

ATCAAATGTGGGGTTTGTACATTCCGCTGCCGCCGCGGACAGTTCTTAAAGGGCCAGCCGCCGGCTGCCGCGCA
GACCCAGCTGCGTCCTGCGCCGCTCCCGCTCCCTGAGGGCCTGGGCCGAGAGAGACTGATCGCGCGTGGGCCTC
GCGAGGCAGACGCCGTGCGGCGGACAACAAAGAGAGAGGCCCGGAAGGAGCCGGGCTGCCCCCGGACCCGGGG
TGGGGAGGGGAGCACATTGTTCCGAGGGCGGGAGCTCTTAAAGGATCCAGACAGGCACCCCCCCCCCTCCCCCGC
CCCCTGCCCAGTTTGGCCGTCTAGATCGGGAAACAAAGGAGTCAACGTTGTGGCCGGGCGGCCAAAGGTTGTGAG
TCCCGGCCAGCCCCCTCCACCCCCCTGCCCCCGGATCGCAGCATGGGCTCTGGCAGTGACTAGGTGGCCACCCT
CCGCCCCCGTGGGCCAGCGGCGATTCTCTGCGGGACCTGGCAGCACCCCGGGCCAGCTCTGGGGAAGCCCTGGCC
TCGAGGGCCCCCTGGCCAGCCCCGCTGCCCCGGGATGAGCGCTTACCCTCCCAGCAGCCGCGCTCCCGACCTCCAC
ACCTCCCCGTAGAGGAGCGCCGAGCCTCGGCTCCTGCCGGCGGGAGCCCCGAATGCTGCACCCAGCCACCAGC
AGAGCCCCGTTTCATGGTTGATCTCCACGAGCAGGTGCACCAGGGACCTGTCCCTCTGTCTACACGGTCACCACAG
TGACGACCCAAGGCTTCCCTTGCCTACAGGCCAGCACATCCCTGGCTGCAGTGCCAGCAGCTCCCAGCATGCT
C'GTGATGTTTCAGTGGGCAGCATTACCCCTCTGTGCTCCCGCCCCGCTTATCCAGGCGTGCACCATGCAGC
AGCTGCCTGTGCCCTATCAGGCCTACCCCCACCTCATCTCCAGTGACCACTACATCCTGCACCCCCCACCACCGG
CCCCACCCCCCAGCCACCCACATGGCGCCCTGGGGCAGTTTGTGTCTCTGCAGACCCAGCACCCCTCGGATGC
CCCTCCAGCGGCTCGACAACGACGTGGACCTGCGTGGGGACAGCCCTCCCTGGGCAGCTTCACTACTCCACCT
CTGCGCCTGGCCAGCCCTTTCCCGTGGTGCCCTGCACTACCTGCCCCACGATCCGCTGCACCAGGAGCTGT
CCTTTGGTGTGCCATATTCTCAGATGATGCCACGGAGACTGAGCACCCAGAGATACCGCTGCAGCAGCCACTGC
CCCCGCCGCCCCACCCCCACCCCACTACTACCCAGCTTCCCTGCCCTACTTCTCTCGATGCTGCCAA
TGTCACCAACAGCAATGGGGCCACCATCAGCCTGGACCTGGACGTGGATGATGTGGAGATGGAGAACTATGAGG
CCCTCCTGAACCTGGCCGAGCGGCTGGGAGATGCCAAGCCCCGGGGTCTACCAAAGCAGACATAGAGCAGCTCC
CGTCGTACCGCTTTAACCCGGACAGCCATCAGTCGGAGCAGACGCTGTGTGTGGTCTGCTTCAGTGACTTCGAGG
CGCGGCAGCTGCTCCGAGTCTCCCTGCAACCATGAGTTCCACACCAAGTGTGTTGACAAGTGGTTGAAGGCCA
ACCGGACGTGTCCATCTGCCGGGCGGACGCTCCGAGGTGCCAGGGAGGCTGAGTGAGGCCACGCAGCCGCT
GCCGGGAGAACCCTGCCTGAAGCTCTGGAAACTTGTGGGTGGGGCCAGGGAGGATGGGGAGGGAGTGGCCAG
GCCTGCCCTTCGCTCCTGCCTGCATTTCCAGAGCTGGTGCCAGGGTCAGCCCAGCGAGGAGTCCCTGCAATAAG
CCCCTGCATTTGCCAAGCTCCAAAGACTCCCTCCCTAGTCTGCCTGCCCGCCCGCCGCGCAGGAGCTGCCTGAG
TGTCCTGATCGGGTCTCCCTCCTGTGCACCCCTCAGGTCCCTCCTTTTCTGCTGGCACTGAGTGCCAGGGTCC
GCTCCCTCAGTGGGGCCGGTGGAGATCCTTGGCCCCAGGATGGGCAGACAGAGCACCATCCTGGGTGAGAAGGTC
TCATGCTCTGAAATGGCGTGCCCTCTGCCCAGGTGGCACTGCCAGGTGCGTAGACAGACGGTGTACGAGCCATT
TCCTGAGCCCCAGGGCTGAATCCCCCTCCTTGACCCCGAACAGTGAACCTCAGGCAGCTGGCTCTGTGTTGGCTG
CTGTGAGGGCTGAGTCTGGTTCCCTAGGGGACCCCTCATCCAGGAACAACATTCCAGCCCCACCCCTCAGGCTGGA
GGGCGTCCAGCCTAATCCCGAGCTGGGGCACACGTATCTGAGGGGCTTGGGCCATACGGGGAGAGGGAGCCCT
GTGTTCCCGGTGGTTGTCCCTCCAGGGATGCAGCCAGACCCGTGCCAATCTCCTCTCCCTCTGTTGTTTTCGA
TGAACGTGAGGAGCAGCAGTTTTTGTTCATTATTGGCCAAAATCACGTGTAGGATTTGGGGATGTGGATATT
TAAGACAATTTCTTTTTCTTTTGGTTTAATAGGGGCGGGTATAGGGACCAACTGGGACCGAGTGCCAGGGGGC
CGAGCACGGTCATGCTGGCCGGCCTGCATGCATGCGTGTGCCGGGCTGGGCTGGGCGGCCGGCGGTGCTGGGGCA
GGGTTGGGGTCTGTGCTCAGCTGATAACTGCCATGCACTGTACTGCACACGTCCCTAGAGCCTACCGGGACCCG
ACGCTTTTCAGGGCATTCTCCCTCCAGCCAGGGCCCAACTCCACCTGCCTGGGCGAATCTCCTCCAAGGAAGT
CCCAGGAGGATGGGGACCAGGAAGGCTGTGGACCCCCATCTCCAGGGGGCCTTCCAGCCTGATCCCTGTCTCC
AAGTTCTGGAGGAGCCGCTGTAGGGTCTGGCTGAGCTTCCACCCACTTCCCTGGTCCCAATCCTTTCTTGTCT
CTATACCCAGCTGGGGTTGCTGCCCTGAACGAACCTGCGTGTGGGGCCGGCACATCCTAGCAGGCAGCCCCCTGGCG
CCTGCTGCCCTCAGGGATGCTCCAACCACCTCGTTCTCCTCGCAGTGGCCCTGGCTCCCACCTCCCGCCCCAGCC
TGCCGTGGGGCCCGTCAGCCTGGTCCCACCCCCATGGAGAACCCAAAGTCTTACTGTATATAACTCCAGGTGACG
TTTCTATATTTATAGCAGTGTGAAAACCCACGTGTTTTACACAGAACCACCCTCTCCAACCCCTCCCTTCCCGA
CCCCAACAAACGTTTTCAAACCCCTTACAGTTCTTGGGGCAGGCGGAAACAGGCTCACAGATTGTGTGTCGGCT
GCAGCAGTGATTCCAACAAGCAGCTATTGGGGGGGAAACACAGCATTTAAAAGATCATCATTAAAAACAAGAT
TTATACAACAATTACTTAGGATGTTTGTGATCCGCCGACCTTGCTATAGATGCCATGTTACCAATGATTTCTGT
GGTGGGGGCTTGCCATTGTTTACTCTCTTATTTACCAACTTCTGGCCTAGGCATGACAGTGGGCACCTTCCCCCA

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FIGURE 301B

GCCCTGGCTGGGCCCAGCGCCTGTGTTCTGTGTTAGAAAGGTTTTATATATATATAAAATTACATATATATGTAG
AAATATATGTAATTTTGGGGGCCCTGTTCCCTGCACATTTTACAGTTACCTCATTITTTCCCATGTATGTATTTGA
GAAAATGCTAATATATAGAGAAAAAATGGTTCTTAAAGCTTAAATGTGTGGTTTTTTCCATTCCATGGGATTCA
CATTGGTTTGTAGCATTTAACATAACTAGTATGTTGTATTATATATATGTGTATACTGATTGAAATTTTAAACAG
ATTTGTACTTTTTTTAAAATGAAAGTTGCTAGTTCTGCTTGACCAAGTAGTGCAATCATTATTTTTTTTAAATATT
GTTGCTGATTTTCAAGAGGATATTCACATAATAAATGTATGATGTATACC

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FIGURE 302

MRPWALAVTRWPPSAPVGQRRFSAGPGSTPGQLWGSPGLEGLASPPARDERLPSQQPPSRPFFHLFVEERRASAP
AGGSPRMLHPATQQSPFMVDLHEQVHQGFVPLSYTVTTVTQGFPLPTGQHIPGCSAQQLPACSVMFSGQHYPLC
CLPPPLIQACTMQQLPVFYQAYPHLISSDHYILHPPPPAPPPQPTHMAPLGQFVSLQTOHPRMPLQRLDNDVDLR
GDQPSLGSFTYSTSAPGPALSPSVPLHYLPHDPLHQELSFQVPYSHMMPRRLSTQRYRLQQPLPPPPPPPPPPY
YPSFLPYFLSMLPMSPTAMGPTISLDLDVDDVEMENYEALLNLAERLGDAKPRGLTKADIEQLPSYRFNPD SHQS
EQTLCVVCFSDFEARQLLRVLP CNHEFHTKCVDKWLKANRTCPICRADASEVPREAE

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FIGURE 303

CGCACCATAACCGGCGCGGGCACCTGGGGAGAAATGGATGGAGAAGGGACCTGGCTGGAAAGCTTTGCCCCGCTGC
TCTGCTCCGCCCATAAGAGGACCCCTGAAATGTCCCGTGCAGTTTGTTCAGTCCCCTGTGTGATGAAATGTGCC
TCTCGCCTTACCCGTGTGAGAATACCTGTGGTGTGGCAGCGAGTATTTTGGTATTTGACCTGTCCAAAGACGACT
TGATACCTCTATAATGTAACAGAAAAGGTCAGAAAATATTAAGCAAGTAGAAGTGTGGAGCATATTAAGCAAGAT
GAACATCTCGGGAAGCAGCTGTGGAAGCCCTAACTCTGCAGATACATCTAGTGACTTTAAGGACCTTTGGACAAA
ACTAAAAGAAATGTCATGATAGAGAAGTACAAGGTTTACAAGTAAAAGTAACCAAGCTAAAACAGGAACGAATCTT
AGATGCACAAAGACTAGAAGAATTCTTCACCAAAAATCAACAGCTGAGGGAAACAGCAGAAAGTCCTTCATGAAAC
CATTAAAGTTTGTAGAAGATCGGTTAAGAGCAGGCTTATGTGATCGCTGTGCAGTAACTGAAGAACATATGCGGAA
AAAACAGCAAGAGTTTGAAGATATCCGGCAGCAGAAATCTTAAACTTATTACAGAACTTATGAATGAAAGGAATAC
TCTACAGGAAGAAAATAAAAAGCTTTCTGAACAACTCCAGCAGAAAATTGAGAATGATCAACAGCATCAAGCAGC
TGAGCTTGAATGTGAGGAAGACGTTATTCCAGATTACCCGATAACAGCCTTCTCATTTTCTGGCGTTAACCGGCT
ACGAAGAAAGGAGAACCCCATGTCCGATACATAGAACAAACACATACTAAATTTGGAGCACTCTGTGTGTGCAAA
TGAAATGAGAAAAGTTTCCAAGTCTTCAACTCATCCACAACATAATCCTAATGAAAATGAAATTTCTAGTAGCTGA
CACTTATGACCAAAGTCAATCTCCAATGGCCAAAGCACATGGAACAAGCAGCTATACCCCTGATAAGTCATCTTT
TAATTTAGCTACAGTTGTTGCTGAAACACTTTGGACTTTGGTGTTCAGAAGAATCTGAACTCAAGGTCCCATGAG
CCCCCTTGGTGATGAGCTCTACCACTGTCTGGAAGGAAATCACAAGAAACAGCCTTTTGAGGAATCTACAAGAAA
TACTGAAGATAGTTTAAAGATTTTTCAGATTCTACTTCAAAGACTCCTCCTCAAGAAGAATTACCTACTCGAGTGTG
ATCTCCTGTATTTGGAGCTACCTCTAGTATCAAAAGTGGTTTAGATTTGAATACAAGTTTGTCCCCTTCTCTTTT
ACAGCCTGGGAAAAAAAACATCTGAAAACACTCCCTTTTAGCAACACTTGATATCTAGATTAGAAAAAAGTAG
ATCAAAATCTGAAGATAGTGCCCTTTTTCACACATCACAGTCTTGGGTCTGAAGTGAACAAGATCATTATCCAGTC
ATCTAATAAACAGATACTTATAAATAAAAATATAAGTGAATCCCTAGGTGAACAGAATAGGACTGAGTACGGTAA
AGATTCTAACTGATAAACATTTGGAGCCCCTGAAATCATTGGGAGGCCGAACATCCAAAAGGAAGAAAAGTGA
GGAAGAAAGTGAACATGAAGTAAGCTGCCCCAAGCTTCTTTTGATAAGAAAATGCTTTCCCTTTTCCAATGGA
TAATCAGTTTTTCCATGAATGGAGACTGTGTGATGGATAAACCTCTGGATCTGTCTGATCGATTTTCAGCTATTCA
GCGTCAAGAGAAAAGCCAAGGAAGTGAAGTCTTAAAAACAAATTTAGGCAAGTGAAGTCTTTATGAGGCTTTGAA
GACCATTCCAAAGGGCTTTTCTCAAGCCGTAAGGCCTCAGATGGCAACTGCACGTTGCCCAAAGATTCCCCAGG
GGAGCCCTGTTTACAGGAATGCATCATCTTCAGCCCTTGAATAAATGCTCTCCAGACAATAAACCATCATTACA
AATAAAGAAGAAAATGCTGTCTTTAAATTCCTCTACGTCCACGTGAAAGTTTGGAGACTGAGAATGTTTTAGA
TGACATAAAGAGTGCTGGTTCTCATGAGCCAATAAAAATACAAACCAGGTGAGACCATGGAGGATGTGAACCTGTC
ATCAGTTCTTCAGTTAAATCCATGTAGAAGTGGTAAAATAAAGTCTCTACAAAACAACCAAGATGTATCCTTTGA
AAATATCCAGTGGAGTATAGATCCGGGAGCAGACCTTTCTCAGTATAAAATGGATGTTACTGTAATAGATACAAA
GGATGGCAGTCAGTCAAAATTAGGAGGAGAGACAGTGGACATGGACTGTACATTGGTTAGTGAAACCGTTCTCTT
AAAAATGAAGAAGCAAGAGCAGAAAGGGAGAAAAAGTTCAAATGAAGAAAGAAAAATGAATGATAGCTTGAAGA
TATGTTTGATCGGACAACACATGAAGAGTATGAATCCTGTTTGGCAGACAGTTTCTCCAAGCAGCAGATGAAGA
GGAGGAATTGTCTACTGCCACAAAGAACTACACACTCATGGTGATAAACAAGACAAAGTCAAGCAGAAAGCGTT
TGTGGAGCCGTATTTTAAAGGTGATGAAAGAGAGACTAGCTTGCAAAATTTTCTCATATTGAGGTGGTTCCGAA
AAAAGAGGAGAGAAGAAAAGTCTTGGGCACACGTGTAAGGAATGTGAAATTTATTATGCAGATATGCCAGCAGA
AGAAAGAGAAAAGAAATTGGCTTCTGCTCAAGACACCGATTCCGCTACATTCCACCCAACACACCAGAGAATTT
TTGGGAAGTTGGTTTTCTTCCACTCAGACTTGTATGGAAAGAGGTTATATTAAGGAAGATCTTGATCCTTGTC
TCGTCCAAAAGACGTGAGCCTTACAACGCAATATTTTCTCCAAAAGGCAAGGAGCAGAAAGACATAGACGTTGAA
ACAGAAACAGAAGGATGAAGGACAGTTTTCCTTCTTAGTTATTTATAGTTAAAGTTGGTACTAAACATTGATT
TTTTTGATCTTCTGTAAATGGATTTATAAATCAGTTTCTATTGAAAATGTTTGTGATATTTTGCTTTTGCACCT
TTAAACAATAAGGCGCTTTTCATTTTGCACCTAACTTAAGAGTTTTTACTTTATGTAGTGATACCTAATACAAT
TTTGAAATACAAAAAAA

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FIGURE 304

MNISGSSCGSPNSADTSSDFKDLWTKLKECHDREVQGLQVKVTKLKQERILDAQRLEEFTKNQQLREQQKVLHE
TIKVLEDRLRAGLCDRCVTEEHMRKKQQEFENIRQQNLKLITELMNERNTLQEENKKLSEQLQOKIENDQQHQA
AELECEEDVIPDSPITAFSFGVNRRLRRKENPHVRYIEQTHTKLEHSVCANEMRKVSKSSTHPQHNPNEILVA
DTYDQSQSPMAKAHGTSSYTPDKSSFNLATVVAETLGLGVQEESETQGPMSPLGDELYHCLEGNHKKQPFEESTR
NTEDSLRFSdstskTPPQEELPTRVSSPVFGATSSIKSGLDLNTSLSPSLLPQGGKKHLKTLPFsNTCISRLEKT
RSKSEDSALFTHHSLGSEVNKII IQSSNKQILINKNISESLGEQNRTEYGKDSNTDKHLEPLKSLGGRTSKRKKT
EEESEHEVSCPQASFDKENAFPPMDNQFSMNGDCVMDKPLDLSDRFSAIQRQEKSQGSETSKNKFRQVTLYEAL
KTIPKGFSSSRKASDGNCTLPKDSPEPCSQECIILQPLNKCSPDNKPSLQIKEENAVFKIPLRPRESLETENVL
DDIKSAGSHEPIKIQTRSDHGGCELASVLQLNPCRGTGKIKSLQNNQDVSFENIQWSIDPGADLSQYKMDVTVIDT
KDGSQSKLGGETVDMCTLVSETVLLKMKKQEQKGEKSSNEERKMNDsledMFDRtTHEEYESCLADSFsQAADe
EEELSTATKKLHthgdkQdkvkQKafVEPYfKGDERETSLQNFPHIEVVRKKEERRKLLGHTCKECEIYYADMPA
EEREKKLASCSRHRFRYIPNTPENfWEVGFPSTQTCMERGYIKEDLDPCPRPKRRQPYNAIFSPKGKEQKT

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FIGURE 305

GGGAAGTGCTGTTGGAGCCGCTGTGGTTGCTGTCCGCGGAGTGGAAGCGCGTGCTTTTGTGTTGTGTCCCTGGCCA
TGGCGCTGCAGCTCTCCCGGGAGCAGGGAATCACCCCTGCGCGGGAGCGCCGAAATCGTGGCCGAGTTCTTCTCAT
TCGGCATCAACAGCATTATATATCAGCGTGGCATATATCCATCTGAAACCTTTACTCGAGTGCAGAAATACGGAC
TCACCTTGCTTGTAAGTACTGATCTTGAGCTCATAAAAATACCTAAATAATGTGGTGGAACAAGTAAAGATTGGT
TATACAAGTGTTTCAGTTTCAGAAACTGGTTGTAGTTATCTCAAATATTGAAAGTGGTGAGGTCTCTGAAAGATGGC
AGTTTGATATTGAGTGTGACAAGACTGCAAAAAGATGACAGTGCACCCAGAGAAAAGTCTCAGAAAGCTATCCAGG
ATGAAATCCGTTTCAGTGATCAGACAGATCACAGCTACGGTGACATTTCTGCCACTGTTGGAAGTTTCTTGTTTCAT
TTGATCTGCTGATTTATACAGACAAAGATTTGGTTGTACCTGAAAAATGGGAAGAGTCGGGACCACAGTTTATTA
CCAATTCTGAGGAAGTCCGCCTTCGTTTCATTTACTACTACAATCCACAAAGTAAATAGCATGGTGGCCTACAAAA
TTCCTGTCAATGACTTGAGGGATGACATGAGGAAAAATAATGTAATTGTAATTTTGAAATGTGGTTTTCTGAAATCA
GGTCATCTATAGTTGATATGTTTTATTTTCATTGGTTAATTTTTACATGGAGAAAACCAAAATGATACTTACTGAA
CTGTGTGTAATTGTTTCCTTTATTTTTTTTGGTACCTATTTGACTTACCATGGAGTTAACATCATGAATTTATGCA
CATTGTTCAAAAGGAACCAGGAGGTTTTTTTGTCAACATTGTGATGTATATTCCTTTGAAGATAGTAACTGTAGA
TGGA AAAACTTGTGCTATAAAGCTAGATGCTTTCCTAAATCAGATGTTTTGGTCAAGTAGTTTGACTCAGTATAG
GTAGGGAGATATTTAAGTATAAAAATACAACAAAGGAAGTCTAAATATTCAGAATCTTTGTTAAGGTCCTGAAAGT
AACTCATAATCTATAAACAATGAAATATTGCTGTATAGCTCCTTTTGACCTTCATTTTCATGTATAGTTTTCCCTA
TTGAATCAGTTTCCAATTATTTGACTTTAATTTATGTAACCTGAACCTATGAAGCAATGGATATTTGTACTGTTT
AATGTTCTGTGATACAGAACTCTTAAAAATGTTTTTTTCATGTGTTTTATAAAATCAAGTTTTAAGTGAAAGTGAG
GAAATAAAGTTAAGTTTGTTTTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 306

MALQLSREQGITLRGSAEIVAEFFSFGINSILYQIRGIYPSETFTRVQKYGLTLLVTTDLELIKYLNNVVEQLKDW
LYKCSVQKLVVISNIESGEVLERWQFDIECDKTAKDDAPREKSQKAIQDEIRSVIRQITATVTFLPLEVSCS
FDLLIYTDKDLVPEKWEESGPQFITNSEEVRLRSFTTTIHKVNSMVAYKIPVND

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FIGURE 307

AGCCGCGGCCTCAACTAAAAGTGGCCATTGACCTTTCAAGCTTTTCGAGCAGTGATGCAATAGAATAGTATTTCAA
AGAAAAATGCTTATCGAAATTTTGGATCCGGTTTTCCCGTGATTGTTAAGGGTTCTTTTAAAAAGTAGGTCACA
TTTCAAGTAGGTCATATTTTCGGGGGCGGGTGCGCAGACAAGGAGATGAGTTTCCACTAAGGCCAGGGGGCCTCCA
ACGGGGTTGGAGGTGAGAATCCCAGGTAGGGTAGAGGTGCCGAGATCCTTCCGAATCCCAGCCCTGGGGCGTCAG
CCCTGCAGGGAATGGCAGAGACACTCTCCGGACTGAGGGAACCGAGGCCAGTCACCAAGCCCTTCCGGGCGCGC
AGGCGATCAGTGGGTGACCGCGGCTGCGAGGGACTTTGTTCATCCGTCTCCAGGATCTGGGGAGAAAGAGCCCCA
TCCCTTCTCTCTCTGCCACCATTTTCGGACACCCCGCAGGGACTCGTTTTGGGATTCGCACTGACTTCAAGGAAGG
ACGCGAACCCCTTCTCTGACCCAGCTCGGGCGGCCACCTGTCTTTGCCGCGGTGACCCCTTCTCTCATGACCCCTGC
GGTGCCTTGAGCCCTCCGGGAATGGCGGGGAAGGGACGCGGAGCCAGTGGGGGACCGCGGGGTGCGCGGAGGAGC
CATCCCCGCGAGGCGGCGCGTCTGGCGAAGGCCCTGCGGGAGCTCGGTGAGACAGGATGGTACTGGGGAAGTATGA
CTGTTAATGAAGCCAAAGAGAAATTAAAAGAGGCACCAGAAGGAACCTTCTTGATTAGAGATAGCTCGCATTGAG
ACTACCTACTAACAATATCTGTATAAACATCAGCTGGACCAACTAATCTTCGAATCGAATACCAAGACGGAAAAT
TCAGATTGGACTCTATCATATGTGTCAAATCCAAGCTTAAACAATTTGACAGTGTGGTTCATCTGATCGACTACT
ATGTTTCAGATGTGCAAGGATAAGCGGACAGGTCCAGAAGCCCCCGGAACGGCACTGTTACCTTTATCTGACCA
AACCCTCTACACGTCAGCACCATCTCTGCAGCATCTCTGTAGGCTCACCATTAAACAAATGTACCGGTGCCATCT
GGGACTGCCTTTACCAACAAGACTAAAAGATTACTTGGAAGAATATAAATTCAGGTATTAATGTTTCTCTTTT
TTTAAACATGTCTCACATAGAGTATCTCCGAATGCAGCTATGTAAAAGAGAACCAAACTTGAGTGCTCTGGATA
ACTATATGGAATGCTTTCTAAGAACAGCTGAAGCTAATCTAATTTAAATTTAACAGCTTGAAGAGGTAGCTAGGT
GTTTAAAGTTCCTCCAGATACTTTTACCTGAGTGATGCTTCCCTTCCTAAGGCTGACCAAGACCTGTTGATCCTT
TTAGATTAAAAATAAAATGTGCGCATGTAAAGGCTGAAGTCGCGTTTTATCAGAATGCCTTGCCTTCTTAGGTTCT
TTTCCATTATGTCAAAGGTCCAGGCTCCAGTAGGAGAGAAAGAACTCCTCATAGGAATACTGAAGAAGTGGGAAG
GAACCAAGCTGACACAGGCCTCACTGCAATTTGATATGCCTGCTGATCAGAGTCTCTTGGGCATTTTATATTTTG
CATTCTGATGTACCTAGGAGTTTTGTAAACAGATGATGTATGTGAGTATTTATCCCATTTTATGCAATTAACCA
AATCAACCAAAAAAAGTGACCATGAAGTCTGTATTTGTCTTTTTTACTACATGTAGGAACCTCTCATGTGAATGAG
TACTGTAGTAATCCATTCTATGGGAGCCTTATTTTCAGAAATATTTCAAACCTGGTGCAAATGGAAAAGACTTTCTC
TTTTCTTTTAAAGCTAAAGACAAGAATATCATGTATACAGGTGCAACTCAATCCCCGTTAATAAAAACCAATGT
AGGTATAGGCATTCTACCTTTTGAATAGCTGTGTCCCAACCTGTTGCCATTGATTTTTTGGAAATGGCTTTAGA
AATATCCAAGTTGTCTTGAATTGTCTAACCATGGACATAAACAGTTGTCTCCCTTCTACTGTGTAGAATACTTT
GACTTAATTTTCTTCCAGATACAGGGGGATACCTGCCTGTTTTTCAAAGTGTTTATTTACTGCTGTTACTATTTG
ATTAGAATGTATTAAATAAAAAAACCTGATTTCT

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FIGURE 308

MTLRCLPSGNGGEGTRSQWG TAGSAEESPQAARLAKALRELGQTGWYWGSM TVNEAKEKLKEAPEGTFLIRDS
SHSDYLLTISVKTSAGPTNLRIEYQDGKFR LDSIICVKSKLKQFDSVVHLIDYYVQMCKDKRTGPEAPRNGTVHL
YLTkPLYTSAPSLQHLCRLTINKCTGAIWGLPLPTRLKDYLEEYKFQV

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FIGURE 309

AGCCGCGGCCTCAACTAAAAGTGGCCATTGACCTTTCAAGCTTTCGAGCAGTGATGCAATAGAATAGTATTTCAA
AGAAAAATGCTTATCGAAATTTTGGATCCGGTTTTCCCGTGATTGTTAAGGGTTTCTTTTAAAAAGTAGGTCACA
TTTCAAGTAGGTCATATTTTCGGGGCGGGTGCGCAGACAAGGAGATGAGTTTCCACTAAGGCCAGGGGGCCTCCA
ACGGGGTTGGAGGTGAGAATCCAGGTAGGGTAGAGGTGCCGAGATCCTTCCGAATCCCAGCCCTGGGGCGTCAG
CCCTGCAGGGAATGGCAGAGACACTCTCCGGACTGAGGGAACCGAGGCCAGTCACCAAGCCCCTTCCGGGCGCGC
AGGCGATCAGTGGGTGACCGCGGCTGCGAGGGACTTTGTCATCCGTCCTCCAGGATCTGGGGAGAAAGAGCCCCA
TCCCTTCTCTCTCTGCCACCATTTCGGACACCCCGCAGGGACTCGTTTTGGGATTTCGCACTGACTTCAAGGAAGG
ACGCGAACCCTTCTCTGACCCAGCTCGGGCGGCCACCTGTCTTTGCCGCGGTGACCCTTCTCTCATGACCCTGC
GGTGCCTTGAGCCCTCCGGGAATGGCGGGGAAGGGACGCGGAGCCAGTGGGGGACCGCGGGGTGCGCGGAGGAGC
CATCCCCGCGAGGCGGCGCTCTGGCGAAGGCCCTGCGGGAGCTCGGTGAGACAGGATGGTACTGGGGAAGTATGA
CTGTTAATGAAGCCAAAGAGAAATTTAAAGAGGCACCAGAAGGAACCTTTCTTGATTAGAGATAGCTCGCATTGAG
ACTACCTACTAACAATATCTGTTAAACATCAGCTGGACCACTAATCTTCGAATCGAATACCAAGACGGAAAAAT
TCAGATTGGACTCTATCATATGTGTCAAATCCAAGCTTAAACAATTTGACAGTGTGGTTTCATCTGATCGACTACT
ATGTTTCAAGTGTGCAAGGATAAGCGGACAGGTCCAGAAGCCCCCGGAACGGCACTGTTACCTTTTATCTGACCA
AACCCTCTACACGTCAGCACCATCTCTGACGATCTCTGTAGGCTCACCATTAAACAATGTACCGGTGCCATCT
GGGGACTGCCTTTACCAACAAGACTAAAAGATTACTTGGAAGAATATAAATTCAGGTATTAAATGTTTCTCTTTT
TTTAAACATGTCTCACATAGAGTATCTCCGAATGCAGCTATGTAAAGAGAACCAAAACCTTGAGTGCTCTGGATA
ACTATATGGAATGCTTTCTAAGAACAGCTGAAGCTAATCTAATTTAAATTTAACAGCTTGAAGAGGTAGCTAGGT
GTTTAAAGTTCCTCCAGATACTTTTACCTGAGTGATGCTTCCCTTCCTAAGGCTGACCAAGACCTGTTGATCCTT
TTAGATTAAAAATAAAATGTGCGATGTAAAGGCTGAAGTCGCGTTTTATCAGAATGCCTTGCCTTCTTAGGTTCT
TTCCATTATGTCAAAGGTCCAGGCTCCAGTAGGAGAGAAAGAACTCCTCATAGGAATACTGAAGAAGTGGGAAG
GAACCAAGCTGACACAGGCCTCACTGCAATTTGATATGCCTGCTGATCAGAGTCTCTTGGGCATTTTATATTTG
CATTCTGATGTACCTAGGAGTTTTGTTAAACAGATGATGTATGTGAGTATTTATCCATTTTATGCAATTAACCA
AATCAACCAAAAAAAGTGACCATGAAGTCCTGTATTTGTCTTTTTACTACATGTAGGAACTCTCATGTGAATGAG
TACTGTAGTAATCCATTCTATGGGAGCCTTATTTCAAGAAATTTTCAAACCTGGTGCAATGGAAAAGACTTTCTC
TTTTCTTTTAAAGCTAAAGACAAGAATATCATGCTATACAGGTGCAACTCAATCCCCGTTAATAAAAAACCAATGT
AGGTATAGGCATTCTACCTTTTGAATAGCTGTGTCCCAACCTGTTGCCATTGATTTTTTGGAAATGGCTTTAGA
AATATCCAAGTTGTCTTGAATTGTCTAACCATGGACATAAACAGTTGTCTCCCTTCTACTGTGTAGAATACTTT
GACTTAATTTTCTTCCAGATACAGGGGGATACCTGCCTGTTTTTCAAAGTGTTTATTTACTGCTGTACTATTTG
ATTAGAATGTATTAAATAAAAAAACCTGATTTCT

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FIGURE 310

MTLRCLEPSGNGGEGTRSQWGTAGSAEESPQAARLAKALRELGQTGWYWGSMTVNEAKEKLKEAPEGTFLIRDS
SHSDYLLTISVKTSAGPTNLRIEYQDGKFRLDSIICVKSKLKQFDSVVHLIDYYVQMCKDKRTGPEAPRNGTVHL
YLTkPLYTSAPSLQHLcRLTINKCTGAIWGLPLPTRLKDYLEEYKFQV

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FIGURE 311

GGGTGAGCAAAGGGGCGGGTCCCTGGCTGCTGTGGCCTCCCTGACCCCTCCCCCGCTGCTGGGGTCCTCGGC
CAAGCCCCCTTCTCACTGGACTGAGACATGAGGCTGAGCTGGTTCCGGGTCCCTGACAGTACTGTCCATCTGCCTG
AGCGCCGTGGCCACGGCCACGGGGGCCGAGGGCAAAGGAAGCTGCAGATCGGGGTCAAGAAGCGGGTGGACCAC
TGTCCCATCAAATCGCGCAAAGGGGATGTCCTGCACATGCACTACACGGGGAAGCTGGAAGATGGGACAGAGTTT
GACAGCAGCCTGCCCCAGAACCAGCCCTTTGTCTTCTCCCTTGCCACAGGCCAGGTCATCAAGGGCTGGGACCAG
GGGCTGCTGGGGATGTGTGAGGGGGAAAAGCGCAAGCTGGTGATCCCATCCGAGCTAGGGTATGGAGAGCGGGGA
GCTCCCCAAAGATTCCAGGCGGTGCAACCCTGGTGTTGAGGTGGAGCTGCTCAAAATAGAGCGACGAAGTGA
CTGTAACCAGACTGGGGAGGGGCAGGGGGAGAGGCCCCCATCAGGGACCAGACTGTTCCAAAAAAAAACAAAA
ACAAAAACAAACAAAAAAACACTTAAAAGCCCAAGGAGTAAGCCTGTGTGTTTGTGGGCCCTGAGAGACTCAGAG
ACCTCAGCTCCAGCATACCCACACCTTCTCCTTTCCC

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FIGURE 312

MRLSWFRVLTVLSICLSAVATATGAEGKRKLQIGVKRVDHCPKSRKGDVLHMHYTGKLEDGTEFDSSLPQNP
FVFSLTGQVIKGWDQGLLGMCEGEKRKLVIPSELGYGERGAPPKIPGGATLVFEVELLKIERRTEL

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FIGURE 313

ACTCAGTGTTCGCGGGAGCCGCACCTACACCAGCCAACCCAGATCCCGAGGTCCGACAGCGCCCGGCCAGATCC
CCACGCCTGCCAGGAGCAAGCCGAGAGCCAGCCGGCCGGCGCACTCCGACTCCGAGCAGTCTCTGTCTTCGACC
CGAGCCCCGCGCCCTTTCCGGGACCCCTGCCCCGCGGGCAGCGCTGCCAACCTGCCGGCC**ATGG**AGACCCCGTCC
CAGCGGCGCGCCACCCGCAGCGGGGCGCAGGCCAGCTCCACTCCGCTGTGCGCCACCCGCATCACCCGGCTGCAG
GAGAAGGAGGACCTGCAGGAGCTCAATGATCGCTTGGCGGTCTACATCGACCGTGTGCGCTCGCTGGAAACGGAG
AACGCAGGGCTGCGCCTTCGCATCACCGAGTCTGAAGAGGTGGTCAGCCGCGAGGTGTCCGGCATCAAGGCCGCC
TACGAGGCCGAGCTCGGGGATGCCCGCAAGACCCCTTGACTCAGTAGCCAAGGAGCGCGCCCGCCTGCAGCTGGAG
CTGAGCAAAGTGCCTGAGGAGTTTAAGGAGCTGAAAGCGCGCAATACCAAGAAGGAGGGTGACCTGATAGCTGCT
CAGGCTCGGCTGAAGGACCTGGAGGCTCTGCTGAACTCCAAGGAGGCCGCACTGAGCACTGCTCTCAGTGAGAAG
CGCACGCTGGAGGGCGAGCTGCATGATCTGCGGGGCCAGGTGGCCAAGCTTGAGGCAGCCCTAGGTGAGGCCAAG
AAGCAACTTCAGGATGAGATGCTGCGGCGGGTGGATGCTGAGAACAGGCTGCAGACCATGAAGGAGGAAGTGGAC
TTCCAGAAGAACATCTACAGTGAGGAGCTGCGTGAGACCAAGCGCCGTCATGAGACCCGACTGGTGGAGATTGAC
AATGGGAAGCAGCGTGAGTTTGAGAGCCGGCTGGCGGATGCGCTGCAGGAAGTGGGGCCAGCATGAGGACCAG
GTGGAGCAGTATAAGAAGGAGCTGGAGAAGACTTATTCTGCCAAGCTGGACAATGCCAGGCAGTCTGCTGAGAGG
AACAGCAACCTGGTGGGGGCTGCCCCAGGAGCTGCAGCAGTCGCGCATCCGCATCGACAGCCTCTCTGCCCAG
CTCAGCCAGCTCCAGAAGCAGCTGGCAGCCAAGGAGGCGAAGCTTCGAGACCTGGAGGACTCACTGGCCCGTGAG
CGGGACACCAGCCGGCGGCTGCTGGCGGAAAAGGAGCGGGAGATGGCCGAGATGCGGGCAAGGATGCAGCAGCAG
CTGGACGAGTACCAGGAGCTTCTGGACATCAAGCTGGCCCTGGACATGGAGATCCACGCCTACCGCAAGCTCTTG
GAGGGCGAGGAGGAGAGGCTACGCCTGTCCCCAGCCCTACCTCGCAGCGCAGCCGTGGCCGTGCTTCCTCTCAC
TCATCCCAGACACAGGGTGGGGGCAGCGTCACCAAAAAGCGCAAAGTGGAGTCCACTGAGAGCCGCAGCAGCTTC
TCACAGCACGCACGCACTAGCGGGCGGTGGCCGTGGAGGAGGTGGATGAGGAGGGCAAGTTTGTCCGGCTGCGC
AACAAGTCCAATGAGGACCAGTCCATGGGCAATTGGCAGATCAAGCGCCAGAATGGAGATGATCCCTTGCTGACT
TACCGGTTCCCAACAAAGTTACCCCTGAAGGCTGGGCAGGTGGTGACGATCTGGGCTGCAGGAGCTGGGGCCACC
CACAGCCCCCTACCGACCTGGTGTGGAAGGCACAGAACCTGGGGCTGCGGGAACAGCCTGCGTACGGCTCTC
ATCAACTCCACTGGGGAAGAAGTGGCCATGCGCAAGCTGGTGCGCTCAGTGAAGTGTGGTTGAGGACGACGAGGAT
GAGGATGGAGATGACCTGCTCCATCACCAACATGTGAGTGGTAGCCGCCGCT**TG**AGGCCGAGCCTGCACTGGGGCC
ACCCAGCCAGGCCTGGGGGCAGCCTCTCCCCAGCCTCCCCGTGCCAAAAATCTTTTCATTAAAGAATGTTTGAA
CTTT

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FIGURE 314

METPSQRRATRSGAQASSTPLSPTRITRLQEKEDLQELNDR LAVYIDRVRSLETENAGLRLRITESEEVVSREVS
GIKAA YEAE LGDARKTLD SVAKERARLQLELSKVREEFKELKARNTKKEGDLIAAQARLKDLEALLNSKEAALST
ALSEKRTLEGELHDLRGQVAKLEAALGEAKKQLQDEMLRRVDAENRLQTMKEELDFQKN IYSEELRETKRRHETR
LVEIDNGKQREFESRLADALQELRAQHEDQVEQYKKELEKTYSAKLDNARQSAERN SNLVGAAHEELQQSRIRID
SLSAQLSQLQQLAAKEAKLRDLED SLARERDTSRLLAEKEREMAEMRARMQQQLDEYQELLDIKLALDMEIHA
YRKLEGE EERLRLSPSPTSQRSRGRASSHSSQTQGGGSVTKKRKLESTESRSSFSQHARTSGRVAVEEVDEEGK
FVRLRNKS NEDQSMGNWQIKRQNGDDPLLTYRFPPKFTLKAGQVVTIWAAGAGATHSPPTDLVWKAQNTWGC GNS
LRTALINSTGEEVAMRKLVR SVTVVEDDEDEDGDDLLHHHHVSGSRR

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FIGURE 315

CCAAGCCCATGAGGGCCGCGCGCCCGGCCGCGGTGCTGACGAGACGGAGCTCCTGGCCCCCGAGGAGGAGCAGA
GGATCAATGCGGTTCAAGAATCGATTCCAGCGGTTTCATGAACCATCGAGCTCCAGCCAATGGCCGCTACAAGCCA
ACTTGCTATGAACATGCTGCTAACTGTTACACACACGCATTCTCATTGTTCCGGCCATCGTGGGCAGTGCCCTC
CTCCATCGGCTGTCTGATGACTGCTGGGAAAAGATAACAGCATGGATTTATGGAATGGGACTCTGTGCCCTCTTC
ATCGCTTCTACAGTATTTACATTGTATCATGGAAAAAGAGCCACTTAAGGACAGCGGAGCATTTGTTTTACATG
TGTGATAGAATGGTTATCTATTTCTTCATTGCTGCTTCTTATGCTCCATGGTTAAATCTTCGTGAACCTGGACCC
CTGGCATCTCATATGCGTTGGTTTATCTGGCTCATGGCAGCTGGAGGAACCATTTATGTATTTCTCTACCATGAA
AAATATAAGGTGGTTGAACTCTTTTTCTATCTCACAATGGGATTCTCTCCAGCCTTGGTGGTGACATCAATGAAC
AACACCGATGGACTTCAGGAACCTGCCTGTGGGGGCTTAATTTATTGCTTGGGAGTTGTGTCTTCAAGAGTGAT
GGCATCATTTCCATTTGCCACGCCATCTGGCACCTGTTTGTGGCCACGGCAGCTGCAGTGCATTACTACGCCATT
TGGAAATACCTTTACCGAAGTCCTACGGACTTTATGCGGCATTTATGACCAATCTGTACTAATTCTCCAAACCAG
TATTATTTCAATTATGGCACTTGGGAGTGGGGTGAGAGCTAAACATTGCACAGGGCAAAGAAAAAAATAACTGC
ACTGACTTTATATCTTTTGAATATAATTACTGTGAAAGTATAAAGGCTGTGTTCTGGAATTTTCTGCCTCACAGC
AAATAAATAAGGTAGTGAATTAATTATTCATTCCATTCCACTATCATGAAGGACTCTGAATAGACTTGGCCAACT
GATGTTTACAAACCAGACTTTTATATTTTAAATTTTACAGATTTTACTACATGATTTTTCTAAATTACTATGTCAG
GTTGTAAAAGTCAGTGCAATAACAAACCTTCCTTTTTAAGAAGAAAATTGTTTCTATTACTTTCCCATTCACTAG
GTAAAGAATCATGGACAGAACTTACACTACTTTTTTACCATGTTTCATCTTGGCATAACATGGTTCTTTTTTAAAT
AGAACTTTTAGTTTTTTGTAAATTTTTAAAAAATATTTTCATTGATATGCATCTCTGCAGGTCCTCATTATGTT
GTAAATTTTTTGGAGCAAGCAGTCAACATTCCACAAACGAACAAACATTATACCTCTTCTGATAGTTTTATTAAGC
ATGGAGAAATTGCCAATTTTTTAAAACTGCAGTTTTTCCAACTTTTCTGCCAACCTCTTACTCTGAATTCAGTGC
TGCTTTGGGACATATACTTGACCTAGCTTGGTTTACCAGTGATGGAAAAGTATTTTGATATCATTAACTTTTTCA
AAAGATCCAACTTTTTCTCTATGCCTTTGCCACATTCTCTTCAGGGTCTCTTTCCACAGCGGATAAATGTTTTTT
CTGTATTATGACAGTATTGTTGTGATGGCCATCTGCTGGAACTCCTGAAGAGCATTATGTATTACAGTGAGCAG
TTGTATTGCCTGTTTGGTGCCCAATGGTTAAGTCATTGTCACTTAGCTTTATATTGTCAGTTTGATATTTATTTT
AAATTGTGGAAGTAGATGCATAAATTCACATTTCTGCCTTTCCCTTTGCATCTTCTCATATATTGTGTTTTTTTTT
TTTTTCTAGAAAAAATATTTAAAGCATTGTTTGACAGGTAGAACTCATGTATCTGTAGTCCATGAGTTATATC
CTGGCTCAGTGGAGTGATATTTATGTATTATTTTTACTTTTCTCTCAGTGTCTTATATTAAGATTAACATGTTGT
TAATAGTTGCTTTGTTGATTAATCTCTCTTGTGGTGTTTTAAATAAATGAAATAGGCTTGCCTTTAGATCGGGTG
CTGATATTGCCTGTTTCCTAGTAATGGGCTGATCAAATGATCAGTGAATTCTTGGTTTGATGATAACCTTATTA
ATTGAAATTTTTTACTGATGTGGCTTTAAAGAGGTTTATTTTGTATATGTTTAGAACTCTCTGATTTTGATGAA
TTATATGGGAGTGAGAAACAGAAGAAGTGGTATTTGCTGGCGAGTTAAATAGGCAAGGTACCCAGTGATAACACC
AACCAAACCACTCCTATCTGCATGATTCTGAACATCTGGATGCCTGTTGTTTTACTGTGTATATTTTATTTTAA
TATATTAACCTTTGTGGATTCAATTAAGGTCTACTCAAAGTAACACTGTCCAAACCACTAATATGTATGTAAAAA
TTGTGCTGTATACTACAATAAAGTTGTTACTTGGATTTGTTCCAAAAA

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FIGURE 316

MRFKNRFQRFMNHRA PANGRYKPTCYEHAANCYTHAFLIVPAIVGSALLHRLSDDCWEKITAWIYGMGLCALFIA
STVFHIVSWKKSHLRTAEHCFHMCDRMVIYFFIAASYAPWLNLR ELGPLASHMRWFIWLMAAGGTIYVFLYHEKY
KVVELFFYLTMGFSPALVVTSMNNTDGLQELACGGLIYCLGVVFFKSDGIIPFAHAIWHLEFVATAAAVHYIAWK
YLYRSPTDFMRHL

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FIGURE 317A

GGGGGAGGGAAACGGAGCAGTAACAAGTATCCCAGAGGGTGCTGCTGAGGCGACGATGGCCGAGGGGCCCCGAGGA
AGCCCCAGGGCCACCTCCCGGGCAGGACGATGGCGGGGGGGACCACGAGCCCCGTCCCTTCCCTGAGAGGCCCTCC
TACCACCGCCGTCCCATGCCCCCGCGACGACCCCCAGGCCGAACCCAGGCCCCGGGCCGCCCCACAGCCCCGGG
CCTCGCGGCTGCCGCCGAGCCGACAAATTGGAGCCGCCGCGGAGCTCAGGAAGCGCGGGGAGGCGGCCTCCGG
CTCCGGTGACAGAGCTGCAGGAGCAGGCGGGCTGCGAGGCGCCCGAAGCCGCGGCCACGAGAGAGACCAGCTCG
GCTGAGCGCCCCGCGAGTACTCCCGGCAAGTGCACGAGTGGCTGTGGCAGTCCTACTGCGGCTACCTCACCTGGCA
CAGCGGCCTGGCCGCCTTCCCAGCCTACTGCAGCCCCCAGCCCTCCCCGCAAAGCTTCCCTTCGGGCGGCGCTGC
AGTCCCCCAGGCCGCGGCGCCGCGCCCGCCCGCAGCTGGGCTATTACAACCCCTTCTACTTCCCTGAGCCCCGGGGC
CGCGGGGCTGACCCGCGGACAGCTGCCGGCATCAGCACCCCTGCTCCAGTCGCGGGCCTGGGACCCCGGGCTCC
TCACGTGCAGGCGTCGGTCCGGGCCACTCCAGTGACGAGGGTAGGATCCGCAGCCCCTTCGCGAAGCCCCGAGCGA
GACCGGGCGACAGGCAGGCAGAGAATATGTTATTCCATCCTTGGCCACAGATTTATGGCAGAGATGGTGGATTT
CTTTATTCTCTTCTTTATAAAGCAACCATTGTCTTAAGCATTATGCACCTCAGTGGGATAAAGGATATCTCTAA
GTTTGCTATGCATTATATAATAGAAGAAATAGATGAAGACACATCAATGGAAGACTTGCAGAAAATGATGGTTGT
GGCACTTATATACAGATTATTAGTTTGTCTTATGAGATAATTTGCATTTGGGGAGCAGGTGGAGCTACCCAGG
GAAGTTCCTGCTGGGGCTTCGAGTTGTGACATGTGATACATCAGTGCTTATTGCACCAAGTCGGGTTTTAGTGAT
TCCTTCTCAAATGTTAGCATTACAACGTCCACTATCCGAGCTTTGATCAAGAATTTTTCAATTGCTTCTTTTTT
CCCTGCTTTTCATCACACTGCTGTTTTTTTCAGCATAATCGAACAGCTTATGACATTGTAGCAGGAACCATTGTGGT
AAAAAGAAATGGGGTCAGATGATGCCCCCAAACCCTGATTTCCACACACTAAGACTAAATTATGTATCAAGGC
CATCAGTATCCCTGGGTTACACTAATTGATGATTTAGAAATTAAAGCAGTCACTCCAGTGTGATGCAGGTGACTA
CTCTGAAAGTATTGATTATACCTGAATGCCAAAGAAGTTGTCCAGAAGAAAAACCTGTTAAATTCAAGTATTAAA
ATTTTTAGATCAAAAAAGGCAAATGATTTTTATAACAATGGACAATATATACCTTTCTTAAGATCTAAGGTACTTTC
TTAAGATCTAAGAATTTGCTGAAAGCATTTCAGCTTTGAAATCTCCAAATGAAACTTTAAATTTATTTTGGTT
TATCCCAAAATAATGGAAAATGTCCAGTTGTGTTTTGTAAACACCTATGTAACCTCATCTTTTAGTTTACACTTCC
TGGGGAAATTTGCTTTGGTGTTTAGAGGAGGGAATGAGAACACAAATTGGATAATCCACTGTCTCCCATCCAGG
AGGTGGTGAGTTGGCTACAAGAGAAAGGGACAAGTGAGGCAGGCCTAGCAGTTCCTTACCTGAAGTTTTCAAAT
CCATACTGCAGTTCCCTCTCGTAATGATGTAACCTTACAACTATTCTTAATGCTTGAACATGTATTTAGGGGCAA
GTTTCTCATGATGATGAAAAAGTATCAAGTCATATTGCTATGTTAATTGGTTTTTTTTTTTAAAGGTAAGTTAG
TGATTACTGTTAATGGTGGGGGAGTAAGTTTTCACTGTAAATTGAACTTATAATTTATGTGCAAGTGTTTTCAGT
GCCCTGAATCAAACCTATAAATGTGGGGAGAAATCACCTCCATCAAACAGTTGCATATTTACTGTAAAAGTATTCC
CAGTATGTGTGCAGCATGAAGAAAGTATTAGTGCTTCTCAGTGTTCTCAGTGTAATTTCTATTTATATACAGCAT
ATTCACATACTACTTTCCTTATATTTTATATAGTTCTATGACTGTTGAAACATCAAGGAGTTAAAAAATCTTAA
TATTTATGATTAACCTAAGTACTATTAATAGCTTGCGAAATATTAGCAATTTCCCATTTAGGACTATCTCTC
TAAAGCAAGAGAGACTAGCATTCCCAGACATCATTCTAGGGTCTTTAAGCTCATTTTGGGCTGCTAAAGTTTGG
GGGAAATGTTACGCAAAGTGATACTGTGTATGTTGCCATTTTGCTTTATTCTTCTGTTGAAGCAAAATTGTGGG
GTTTTATTATGTGTGTGTGCTTTTCTTAGATGTCCAGTTAGCTGTGCTGAGATATACCTGTACTATTTATGGTT
TAAGTTTTGATTCTTAGGTATTTTCTCCAGCTCTGACATTGTTTTCCAAAGACACACTAACTGCATTGCACAGT
TCAAAATTTGATTACTTAAGGGATCAATCTAGGTGGTGTCTTGGTCTTAAATTTAACAGCAAAACACAGCATA
TCTATTATCACTATATTAATTTCAAAGTTTTTCTGTGACGTTTAAACTGTGACAACAGATATTCACATTTGA
TTATAGAACTTAATGTCTATTAATAATTTTAGTACAAAATTTTATAAAACCGTGTTCCTTCAAATAAGTTTATGT
CAAATCCAGCTTCCCAGAAACACTAATAATTAAGTACATCAATGTACTAAATAAATCATTACAGTTGCACCCATGG
GGAAGATTGTGTTACTGCCCTTCACAGTGAAAAAAGAAAAATCTTTTCAATTTTAAATTTAGGAGATGTTACGTA
ACTTGGCACTTTAGTAGTGTATACACTAGCATTAGTTTATACACCCTTTTGCCGCTGGGGATTCAAGTTGAAAT
GTCCCTCAATCATATAGGTCTGGAATACATCTTTCAATTCATAATTTCTGCTCAGATAATTGAATAGTTTGCCATC
GAGATTATTTTCAATTTATACTATAAAACAAAAGCAAACCTAGTCCAGTTTAAATTTTTGTACTTAGAATATTGCAC
ATTTTCTATATATGAGTTATTCAGATTAGTATCTATGTAGGTTTCAATCAGATCCAACCATGGATTTCAGGTATTA
TACTGTATAACCTACAAAATACATAGAAGTATTATTTGCCTTCATAATAGAACCAAGAGTCTGTTTCAATTTA
TGAATTCAGTATTTGCACCGAGATTTTGATTCCCAAAGTTTGAAAAAATGACAAAACAACGAGGGAAGAAGGA
ACCAGACCTTAGTGCCACATATTTTTCTCTTGGGGTTGTAAGGTAGTCTCCTGCTTTCCAGAACACTTTATTATA

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FIGURE 317B

TTTCACTTATAGACCTGATTTTCTGTGTCAAAGTATAATTCTCATGCTGAAGCTGTAGCCTAAAAAGCCAAAAGA
AAGTTGTCTTCATTGTACAAACATATTCATCACTTTAACAATAAGGGAACAAAATTTAGTATTCAAGCTGAGTGA
GAATACTGGTTCAATGGACATGTCCCTAAGATAAACCAGAATTGGCAGTTAATTTAGGCGTCTAGAAAATCTCAG
TTCCCACCAGTAAAAATTATCCTGAGTAGCTAATGCACCTTGAGAAAAATCTGGCATACTGAATAAGTAACATTAA
CTTGGGAGCCAAGAGCTGGGTAAGCCTTACCTTTAGACTACTCTGTGACTACAGAAATAAAGCCAGCACTTTTGG
AACTAATAAGCCTTCACTTGTCAGTATCATAAAGAGTATTGCCCAACTGAACTTTGCTCCCACTGGTTTAATAGT
TACTTATTTCTGCCTAAGCACTCACCTTCCGATTTTACCCAAGTATATATATAGGATAGAAAAAATGCATTATA
TTTGAGAGCTCACTTCGCCCGAATTACAAAATGAGTGTTTTTAGATTCAAGTGACGGTAAAAGGATTTGTTCCCT
TCAGTGACTTGAGTGTTTTAGTTATGCATAAGTATTTCTAGCAAAGGAAGGGTAGAAAGGAATTGAAAATTAATT
TACACTAGTTGCTACTTGGAATAAAGGGCTTTTTGAGGGGGGTATGGATATTAAATGTTTTCGTTATATACTTA
TCCCTATTAAAACAGGCAGTTGTTTCTTTGAATATGCCTAAATAACAGTATTCTTAAAATCTGACAGACAAGTAA
CATGTCAATTACTTGATATTCCTTGTCTCCAGTACCACAGGCCACTCTTGACATCCCATGTTTGCCTGGATAAAG
TTCTCATTTCAAACAGTATACATACTTCTTTGCAGTTCATTATAGTAAGGCTTAACCTGTAAACAGTATCTGAT
GGCCACCTATAAATAAAATTCAGCATTCTATTTTAAATAATTTGTATGCCACCAATTTGTATTATTTGTCTCAA
TAAATACTTAGTCATCGATGCAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 318

MAEGPEEARGHPPGQDDGGGDHEPVPSLRGPPTTAVPCPRDDPQAEPOAPGRPTAPGLAAAAAADKLEPPRELK
RGEAASGSGAELQEQAGCEAPEAAAPRERPARLSAREYSRQVHEWLWQSYCGYLTWHSGLAAFPAYCSPQPSQS
FPSGGAAVPQAAAPPPQLGYNPFYFLSPGAAGDPRTAAGISTPAPVAGLGPRAPHVQASVRATPVTRVGSAA
PSRSPSETGRQAGREYVIPSLAHRFMAEMVDFFILFFIKATIVLSIMHLSGIKDISKFAMHYIIIEIDEDTSMED
LQKMMVVALIYRLLVCFYEIICIWGAGGATPGKFLGLRVVTCDTSVLIAPSRVLVIPSSNVSITTSTIRALIKN
FSIASFFPAFITLLFFQHNRTAYDIVAGTIVVKRNGVR

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FIGURE 319A

GGTAATGCTTAAACTTCCTGCCTCTTTTGCCTCTACAGGAAAGAAGAAAGAACACAAGAAAGTGAAGTCCACTAG
GGATATTGTTTCCTTTTTCTGAACTTGGAACCTACTCCCTCTGGTGGTGGATTTTTTCAGGGTATTTCTTTTCCTGA
AATCTCCACCCGCTCCTCTTTGGGCAGTACCGAACTACAGGCAGCTAAGAAAGTACATACTTCTAAGGGAGACCT
ACCTAGGGAGCCTCTTGTGTCACAACTTGCCTGGCAGGGGACAGTTGCAGAAGTTAGCCTCTGAAAGGAATTT
GTTTATTTTCATGCAAGTCTAGCCATGATAGGTGTTTAGAGAAAAGTTCTTCGTCATCTTCTCAGCCTGAACACAG
TGCCATGTTGGTCTCTACTGCAGCTTCTCCTTCACTGATTAAAGAAACCACCACTGGTTACTATAAAGACATAGT
AGAAAATATTTGCGGTAGAGAGAAAAGTGGAATTCAACCATTATGTCTGAGAGGTCCCATATTTTCAGATCAATC
GCCTCTCTCCAGTAAAGGAAAGCACTAGAAGAGTCTGAGAGCTCACAATAATTTCTCCGCCACTTGCCCAGGC
AATCAGAGATTATGTCAATTCTCTGTTGGTCCAGGGTGGGGTAGGTAGTTTGCTGGAACCTTCTAACTCTATGCC
CCCCTGGATGTAGAAAACATACAGAAGAGAATTGATCAGTCTAAGTTTCAAGAAAAGTGAATTCCTGTCTCCTCC
AAGAAAAGTCCCTAGACTGAGTGAGAAGTCACTGGAGGAAAGGGATTAGGTTTCTTTGTGGCATTTCAGAACAT
ACCTGGATCCGAAGTATGTCTTCTTTTGCCTAACTGTTGTCTCTCATTCACTCACTACCTTAGGTCTAGAAGT
GGCTAAGCAATCAGCATGATAAAATAGATGCCTCAGAACTATCTTTTCCCTTCCATGAATCTATTTTAAAGT
AATTGAAGAAGAATGGCAGCAAGTTGACAGGCAGCTGCCTTCACTGGCATGCAAAATATCCAGTTTCTTCCAGGGA
GGCAACACAGATATTATCAGTTCCAAAAGTAGATGATGAAATCCTAGGGTTTATTTCTGAAGCCACTCCACTAGG
AGGTATTCAAGCAGCCTCCACTGAGTCTTGCAATCAGCAGTTGGACTTAGCACTCTGTAGAGCATATGAAGCTGC
AGCATCAGCATTGCAGATTGCAACTCACACTGCCTTTGTAGCTAAGGCTATGCAGGCAGACATTAGTGAAGCTGC
ACAGATTCTTAGCTCAGATCCTAGTCTGACCCACCAAGCGCTTGGGATTCTGAGCAAAACATATGATGCAGCCTC
ATATATTTGTGAAGCTGCATTTGATGAAGTGAAGATGGCTGCCCATACCATGGGAAATGCCACTGTAGGTCTGTCG
ATACCTCTGGCTGAAGGATTGCAAAATTAATTTAGCTTCTAAGAATAAGCTGGCTTCCACTCCCTTTAAAGGTGG
AACATTATTTGGAGGAGAAGTATGCAAAGTAATTAAGAAAGCGTGGAATAAACACTAGTAAATTAAGGACAAAA
AGACATCTATCTTATCTTTAGGTACTTTATGCCAACATTTTCTTTTCTGTTAAGGTTGTTTTAGTTTCCAGATA
GGGCTAATTACAAAATGTTAAGCTTCTACCCATCAAATTACAGTATAAAAGTAATTGCCTGTGTAGAACTACTTG
TCTTTTCTAAAGATTGCGTAGATAGGAAGCCTGGTACAAACAATTTAACGCTTCTAGATCACATATTAGTCTC
TAAGTTGTTTTCTGTTTCTTGCTTTTACTTATGTTTTTACAATTCTCCAAAAGTAAAGAAATTCTAATTAGGATAT
AAGGAGTATTTACTGTTCAATAGAATAATATGCATCCTCCTTTATACCTAGGACAGAAATTAACATTTGTTACAC
ATTCAGAACAGTGATGTTGTTCTTTTGTATCTTTTATCTCAGTATCTTTTACGTTCCATAAATTGTCCATATT
TTTGCTCATATTTTCTTACTTTTCTTTGTTATTTATTCATGTCTGCAACATCAATCATAGTAGTCTAGATCAATG
CAACTCAAAGCACCAGTCTACAACTGTTACTTATCCACAGGCAAGATAAGCATGCACAAGAATTTAAATCTAGA
GATACTTTTTAGGTCAATGACAGGATTGATTTTTTAGCAAAATTTTATTAATAGCTAAAGCAATGTATTGATTT
ACACTCTGATGCAAGTAATTTATCTCTTCATTGACTGGTAGCAACCAATTCATGGACCAGTACCATGGACCACAC
TTTGAGAAACACTTCTTTGGATAATAATAGATATCCTGGGATAGTGCATGTTTACCATCTATTTTGTCTAGATAAT
GGGGCCTTTTAAAAAATAACTTTTGCTTTTATGATATATTGTATTTTGTGGAAAGTTAAGTTTAGCAATATAGA
CTCTAAAAGCAAAATTAATTTTTTAAAGCCATAAGAAATTATACTATATCCCAGTATCTGTATGTCTGTATAAAG
CAGTGTATTATCATGTTTTTCAATTTCTGTGATTGTAAGTTAAGAGTCTTAAGTGCAGAGGTATTGTGGAAAGTAGT
AGCCTTAAGCATAATAAAATATGGTCTCTTGGGTACTCCCTCTGGCCATTACCACATTCTTAGATTATATGTGTC
CATCTTTGCAGCTTCTGAGAGTAATTTTATTTGTTGTCTTCTGAAATGTACATGTATACATGTACCTACTGAGT
GCTATGTGATTTTTTAAAAATGTATTACTGTAGAATGCTTCTGCAAAATCAATAAAGTTGTTAAATTTGAACAGTG
TTGTGTGGTCTCCAGAAACATGTTGTTCTGTGTGCTTTATCTTGGAGTTGCAACAAGTTAAATATTTGTATATG
AACACCCCTTTTCCATTTTCATCATTGAACTCACTTTGACATTTCACTGGTATAATTGAAAATATTCTGATTATG
GTATGGTTTTTCTTCTGTTTGGAGGACCATGTTTTTATTGACTGTGGAATCTAAATTTATAAGAGGAATTAATCT
GTAACCAGATACCTTATTCGTTTAAACGATTTCTATTCCACTACTAATGGTTTTTTTTTACTTTGTGCTTTCTAGT
TCTTAGATTCTGAGTTAAACAAAGCATAAAATAGATTTTATATTGCTGGGGTGTACCAAACATAGATACATTGA
CAGATCCATTGATAGAAGTGTGGGAGATGGACTTGAAATCTTAGTCCATAAATAAGACTGAACTGTTTAAACTA
ACTTGATAAAAATCACTGTTCTGTTTTTGGGAACCTGCAAGTATTAATAGATTCTGTACTAACTAGTATTAACAC
TGGAAAGTTAGCAAGACACATATAGATGTCTTGACCACTTTTTCACACAAGTTCAGAGTTCATGTAAACTTTAG
AATTGACTTCTTTCTGTCTCTTCAGTAAGAAAGTAATCTAACTTAAATTTTTGGTAGTAGAAGTTTTAGAAATA
ACAACTGACTAATTTTGCTATACCATGATAAATGTCTACAAAAAGGGATTTTTTTTTTTTTGAAATGAAGTTTCG

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FIGURE 319B

CTCTTGTCCTCCCAAAGCTGGAGTGCAATGGTGTGATCTCAGCTCGCTGCAACCTCCGCCTCCCAGGTTCAAGCAAT
TCTCCTGCCTTAGCCTCCTGAGTAGCTGGGATTACAGGTGTCTGCCACCAACCTGGCTAATGTTTGTATTTTTTA
GTAGAGACGGGGTTTTACCATGTTGGCCAGGATGGTCTTAAGCTGACCTCAGGTGATCCGCCACCTCGGCCTTC
CAAAGTGCTGGGATTACAAGCGTGAGCCACCATGCCCTGCCAGGGATGTTAACTAAAATCAGTCTTTTCAAACC
TAGATCTTCAAATGATGATGAATTTAAGACTAGGAGACTGGAATATTGAAGCCTATTAAAAAATACATATCCTTG
CGTGTAGGTTAATAACTATCATGGTGACAAGTGTATAAGTATTGGCTTCTTTTCAAAGAAATGTTATTTTTAT
TATAAGGACTGGGACGAGAAGTGACCTGTGATTGGTCGTATTTTTCTGTGAACAAGATTCTTCTTTACCTGAGT
TGTACCTAGGTTTTTTTATAACTACATCAAAAAGCTTTTATATTGTACTTATTAATGTTATGGCAGTTACTTATA
GAAGCTTGGTACTATATGGATTTTTTTTCATTTTTTAACTTTCCCTTCTATGTTCCAAATTTTAATTTAGTAAGTC
AACCTTTGCTGTACAGTAGTAGTATACTGTATGGACAAAACAATGGTAACAATTGTGTTATTTTAAATGGCCTTT
TTCCACATCTAAATTGTTCTTACTGAAAAGCTTTTCGTGGGAGCATTTTGAACCTCACTTCATGTTCAAAGCTATGA
GTCCCAGATAAAGGAAAGGAGAATAGGTAGGAAGAAGTGGTTGTCAGATGAAAGGGTAAGGGAGATAAGCAAAAA
TGGGATAAATAATGAAACAGTTTTCAAGACAAATTGCAGTTAAACAATTTTGGACTAGTGAGGTATTACCAGTAG
ACTTGTTTTTTACCTTTTTAATGTGCCTAAAACCAGGGTTCCCGATTAATATTAGGATAACATCATCTTTATTGA
GTGTTTCAGAGAGTAATGGTTTTCTCCAATGTTATTTCCAGACTCTAAAATAGAGCTCAAGCTTGAGAAGAGAGAA
CCACTAAAGGGCAGAGCAAAGACTCCAGTAACACTCAAGCAAAGAAGAGTTGAGCACAATCAGGTATCTTTAGTT
TTATTACCACCGTGTACAGGTATAAATAACCTCCTGACAACACTAATCCATGTTTTAGCCTTTAATGGTTGACAC
CCAGATTCCAGCACGCTCAATAAACTTAATTCTGTTGTTAAATGATACTAAAAATCTAAACTTTGTGGGTTTTGT
CAGTAGTGTAGCCTGTGATTACAGCAAAGCAAATTTTTAATGTCTCATTGTGTTTGAGTCTGTGCTAGATGTA
GTTCAAAGCCAGTTATATGGTGTTTTGAAAGAAATATTTTTAAAAGGTGGAATATCTAGACACTTTTGATACAAT
TTCTTTAAAAGGCAATGGAAGGGTTTTATATTTGTGTCTTTGTCTCTAGATTTCTGACTTTGATTTTATGTTTGC
CTGTCTTGCTTTCTGCGATTCTTTCTAAACTCAGAAGCTAGTCTGGTCCTAAGACTACAGTTTTCTTTCTCTTAT
TTCAGATGAAAATTTACCTTTTTCTATTGTGGGAGAGGCGTTTCAGTTTTTCAAAGGGAAATGTAGGAAACTAAG
GAGAAAAATAAGCATAGGTATAAATGAACAGAGAACAAATTATTGACTAACCTAGTATTGTTTACAGAGAACAAAT
TATTGACTAACCTAGTATTGTTTACAGAGAACAAATTATTGACTAACCTAGTATTGTTTACAGAGAACAAATTAT
TGACTAATGCAGCATTGATTGGCTGATGCTTTATAAGACAGCTATTCCTAGAGTCATTTTCTTACCCCTGCTA
TGTCTAGCTGGATGATTTGTCTAGTTGGTTATCTTTCCATCTCCTATTTGTCACTTTGTGTGTTTGTGTTGTGAC
GGAGTTTTGCTCTTGTACCCGGGCTGGAGTGCAGTGGCGTGATCCCATCTCATTGCAACCTCCACCCCTGCTGGG
CTCAAGCGATTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGGCACATGCCACCACGCTCAGCTAATTTT
TGTATTTTTAGTAGAGACGGGGTTTACCCTGTTGGCCAGGCTGGTCTCAAACCTCCTGACCTCAGGTGATCCACC
TGCATTGGCCTCCGAAAGTGCTGGGATTACAGGTGTGAGCCACCGCGCCAGCCTGTTTGTGCTTTTAAAATCAA
ATCCTTAGAGGAATTATTCTTGATTCTTAAGGCAAGTCAGTCTCTCTCTTCATTTGATGTAGTTGATAAGTTGA
ATTTCAGAACGATTTGTTAGAAATGAGCTTTGTGACAAGAACATACAGAGCATTGAATGAATGAAGACTTTGTTA
ACATAGAACCAAATACTGGAATACATGTTTTATTGCCCTTTTATGTAGTAGTCCTAACAAATAGCTTCAGGAGCA
TGCTGAAGAATAAGGAAATAGGCCGGGCGCAGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCGGAGGCGG
GCGGATCACCTGAGGTCCGGAGTTCGAGACGAGCCTGACCAACATGGAGAAACCCTGTCTCTACTAAAAATACAA
AATTAGCCAGGCATGGTGGTGCATGCCTGTAATCCTAGCTACTCCGGAGGCTGAGGCAGGAGAATCGCTTGAACC
TTGGAGGCGGAGGTTGCTGTGAGCCGAGATCGCGCCATTGCACTCTAGCCTGGGCAACAAGAGCGAAACTCTGTC
TCAAAAATAAATAAATAAATAAATAAATAAATAAAGATGGTCTAAGGGATAATTGAGTTGGAGGAATCTAAACTGA
GGAGCAGAATAAATAGTCAAAGGAGTGTAGGTTTAGATGACAGGCAGAATTAGACAGTGGCTTTATTGCAGAAAA
TTTTAAACATGTAGAAGAGTGGAGGGAAGAGTTTAAATGACCCCTCAGTCATAGATGTGCCACAGTTGTGAGTGT
TTACCAGTTTGGTTTCATCACCCACACCCCTCCAGCTTTTTAAATTACTTTTTTTTTTTTTTTTTTTTTTTGAGACA
GAATCTCACTCTGTGCGCCAGGTTGGAGTGCAGTGGCACAATCTCGGCTCACTTGCAACCTCCGCCTCCTGGGTT
CAAGCAGTTCTCCTGCTTCAGCCTCCTGAGTAGCTGGGATTACAGGTTCCCGCCACCATGCCAGCTAGTTTTTG
AATTC

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FIGURE 320A

GCCATTTCTCCTCTTGTGTTTTCACTCCGGATTCTCCATGTTGGACCCAACTGAGGAGCCCGGAGCTGCCGCTGG
GGGATCGGGGCGGGGGCACCCGGGGGAGCCGCTGCCGGGGCCGCCGCCCTTTGTACAGGCCGCTCCCTTCCC
GGTCCGGGGAGGAAACGAGAGGGGGGATGTGAACAGCTGTGGAAGTCGGAGTCTCGGGAGCCGGAGCGGGCCCC
GCCCAGGCCCCCAGCCCAGCCCAGCCGCGCGCCCGCCCGTCTCCCGTCCAGCCAGCCGGGCCCCGCGGGATT
GTTAGATGGAACACGGCTCCATCATCACCCAGGCGCGGAGGGAAGACGCCCTGGTGTCTACCAAGCAAGGCCTGG
TCTCCAAGTCCTCTCCTAAGAAGCCTCGTGGACGTAACATCTTCAAGGCCCTTTTCTGCTGTTTTCGCGCCCAGC
ATGTTGGCCAGTCAAGTTCCCTCCACTGAGCTCGCTGCGTATAAGGAGGAAGCAAACACCATTGCTAAGTCGGATC
TGCTCCAGTGTCTCCAGTACCAGTTCTACCAGATCCAGGGACCTGCCTGCTCCAGAGGTGACAGAGGAAGATC
AAGGAAGGATCTGTGTGGTCATTGACCTCGATGAAACCCTTGTGCATAGCTCCTTTAAGCCAATCAACAATGCTG
ACTTCATAGTGCCTATAGAGATTGAGGGGACCACTCACCAGGTGTATGTGCTCAAGAGGCCTTATGTGGATGAGT
TCCTGAGACGCATGGGGGAACCTTTGAATGTGTTCTCTTCACTGCCAGCCTGGCCAAGTATGCCGACCCCTGTGA
CAGACCTGCTGGACCGGTGTGGGGTGTTCGGGGCCCGCCTATTCCGTGAGTCTTGCGTGTTCACCAGGGCTGCT
ACGTCAAGGACCTCAGCCGCTGGGGAGGGACCTGAGAAAGACCCTCATCCTGGACAACCTCGCCTGCTTCTTACA
TATTCACCCCCGAGAATGCAGTGCCTGTGCAGTCTGGTTTGATGACATGGCAGACACTGAGTTGCTGAACCTGA
TCCCAATCTTTGAGGAGCTGAGCGGAGCAGAGGACGTCTACACCAGCCTTGGGGCAGCTGCGGGCCCCCTTAGCCT
GCCCTGCTTCCAAGCGACGGCCATCCCAGTAGGGGACTTTCCACACTGTGCCTTTACGATCAGCGTGACAGAGT
AGAAGCTGGAGTGCCTCACCACACGGCCCCGAAACAGCGGGAAGTAACTGGAAAGAGCTTTAGGACAGCTTAGAT
GCCGAGTGGGCGAATGCCAGACCAATGATACCCAGAGCTACCTGCCGCCAACTTGTTGAGATGTGTGTTTGACTG
TGAGAGAGTGTGTGTTTGTGTGTGTTTTGCCATGAACTGTGGCCCCAGTGTATAGTGTTCAGTGGGGGAGAA
GCTGAAAGACCAAGACTCTTCCCAAGTTAGCTTGTCTCCTCTCCTGTACCCCTAAGAGCCACTGAGTTGTGTAGG
GATGAARACTATTGAAGACTCCATTGCCAAACCATGGCCTTTCTCAGTGTGTAAGGCCTATGCCAAGGATAAA
GGAAGGGTATGCCTTTGGGTACTCCAGGCATACACCTTTCTGAAATCCTTCTCCAGCCAGCTGTGTCAGACAAAA
GATCACATTTCTGGGAAGATGAGAACTTGTTCAGACCAGCATCCAGTGGCCATCAGGTCTGTGCCCCAAAGG
CTATGCTTGCCTCCGGCTGAGTGCCTGGGATAGGCCTTTTCTATGTCTCCCCAAGGCTGGGGTGCTGAGCCTGCC
TTCTCACCACCTAGCCATAGTCTCAAACCTGTGGGGAAGGAGGTTTTCTCCCTGCCCGGGAAGAGGACAGATAA
CTGATTTCCGTTCTTTTGACTGTGTTTTAAATTCTCTTTCTAAACACAGAGTGTGGGCCTGGTTTGTCTGA
CAAAGTTACAGTCTTGGGCCTGTAATGAATGTGCGCGGCGCTGGGGTTGCAGGGAAAAGACAAATCCTCAAAGCG
TGGACGTGTGTCCCCATGGCTGTGGATCAGCTAAGCTCGGGATCATTTCATAAGTCTGCTTTTCAGGGATTCT
CTGCTGGTGTGTTGCAAGGACTTCTGTTCCAAAGGCTGGGAAAACTAAGCTGTCCCAGCCCCCTCCATTTCTT
GGGCAGGGCTCTTTTCTGTGTGTTCTCCCCAGGGCCTGTCTGTACCGAGCTCTGTCTGTTCCAGCCTACAT
CCTTCTGGGTGTTGCTTTTCTCTTAAGGGCCTCAGAACTCTTGCTCTTCTCTGGGGTGAGGGGGGAATGAGTGT
CTTGACATGTGACAGCCTAATGCGCATGCTTTCTGCCTCTGGTAACAGGAGTGAGTGAGCCCCCTCAGACCTGCAC
TCTGGGTGTCTCTGCTTACAAAGGTTCTTAATAGTGAATGCTTTAAATTAAGTCAACGAAATGGAAGTTT
TCCCAGGGTGGAAAATAAGAGGAAGTGCTGCTGTAATTGGGAGCACAAAGGGGCTCCCAAAAAGGAGCCCCACCT
CAGCATCACTGCCTTAATCGTGGCCTCCCTGGGGTGGGTGGGGTTCTCTCCTCCCTCCCTCCCTCCTCTGGGGT
GGGAGGGCGCTCCTGTTCCCATCTCTGTGTTCCCTGGAGGCAGGTATCACAAAGCATTGTGGAATTGCTTTAGGT
GCAGGGACACCACCACTCAGGACTCTTCCCCATCATCCCTTCCATTGCCACACCCTAGATCCAGCCTCAGGAAC
TAACAAGTTKTGAGAAAAGCAGGTGGTAGAGCAGCAGCTTCGTGCTCTCAGCGGTGGCTGGCTGGCATTGTTCTC
TAGCGTTGTGGTGCCACCTTCCCTTCTTGTTCCCAAGGTTATAAGGCCTTGCTTTCTCTTTGGAATCATAAAGTG
GAACAGAGTCCCCAGAACTCATGTGGHCATTTCGACAGCATCACTCCCCGGTGCCATAGGGGTCCCGGTGTACC
TAAAGGGAGAAGGACCCCATGTGCTAGCCAGAAATATACTGTCTCTTGAAGGAAAGCAGGAGCTCAGACTCTTAG
AGCCAGCTGTGGCTTCGGACCCAAAGGCCTGACCTAGGCTGCTATCCTAATATTGGAGGAGGGGCTCTCTTCCAA
GCCCCACCCTAAGGGTTAGCCCTTGACAAATCTTGTCGCTCTAGGCCAGCCAGGCTTTTCTGACTAAATAAG
CAATAAGAGGCTCTAAGCTGACTGAGTTGCAAGGACCCTTTCCGCCCTCCCTTGGAATCCTATGTTTCTCCAGAT
GGCGGAAGAGCATGTGCCACCCCTTTCTTAACAGACTTGTCCAAGTGCTTGGCGTGGGACCCATGACCAAAGCC
CAGGATGGCTTGGTGGGAGTGTCCCTGCTGCATCTGCATGAAGCCCCTGCTTTTTAGGCCTCACTCCCATCAGAA
CCCTGCTGCCCACCTGCAACTCCCCCAACAATGCCATTCCCCTTGGCCCAGAGAAGCTACTCGGCCAAACC
TAGCCAGGGTCTGTTCTGTGGACCAGAGCCAGCCTAGTCATTATTTGCTGTGCGGGTTCCAGTTTACCCTGTG

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FIGURE 320B

TTAGGGTGAGGGATGATTGTAAAATTTGCTCCTCAAAGGAATCAGGCCAGACTCAATTTTGGGAGGGCAAGACAG
GGAGGAGGCCGCTTCATCCCAGACTCTCTTCTAGGGCTTCCCACCATCAGCCCCCTCCCACTTGAGACTGGTCTTT
GGGAGGCAATAGGCCACCATGCCTGGTCAGCACCAATTCAAGCCATGCCAGGAATCTGCCTACCTGCCAGGTTCA
GTTCTTTTAAGGTGCCTCTTCAGGGACACAGTGTGTCTCTCTGATTGGGCTTCTAAATCAAAGCCTGATGTTTCG
TGTCCCTCTCATAGGGGGAGCTTTGGACACAGGACCAGTTTGAAAAGGGTCAGGTAAGGGTTTCCACTCTGCAC
ATTGTAGAGGGAACACTCTGTAGGCCCATGGGTCCCTTACTAGAGAGGTTGAGTGAATTTGCCTTCAGTTAACAT
GGGACCTTCTGTTTAGCTTCCCTCTTGCTTCCCAAAGATTTTAAGCATTTTGTAAATGTATAAACTCACCTCTGGT
AACAGTGGCCCAGACGCTGCTTTGTGCTAAAAGCATGGGAAATGTAAAGGCAGTCTTCTCTGGGAAATGGATGC
TATTCTATTCTGCTGCCCCCTACCTGTTCCCTGAGGCCTCATTTAGAAAGAAAATCCCCTCAGAAGGCTGTCTGGCA
CCCAGTGTCTAGCCAGGCCAAGTATATGAGAAAGGTAAGTCCATTTTCCCCTTCAGGTCCTCAGTGGATTACTT
AACCCTGCTGTCCCTCGGTCCCTTTTTCTAAACGGGTTTAGTTCTGTCTTTTTTCTCCTTTTTTCTAAATGCT
GGTAAATATTTACATTCAGCCAGGGAAGAGGAGGCCAGAGGTCGGGCCAGCTGCCCCATTCTTTTAACGTTGTAG
GGCCTGCCCATGGAGCGGACCCCTCCTCTTTGGGCCTCGTGAGCTTTTTTGCTTATCATGTTCCATTTCTGCGCGC
TTTTCCCCCTTCAAGATGCCATTTGGAGGGTAGGGGATCTGCTTCCCACTGTGACTGGGCTATGGGATTCTGACTA
CCTTGCTTACAGATTCATGGTTTGATAAATTTGTTGTATTCCAAAACCTTGAAATGCAGGACGCCATTAAGTGTCT
GTTTATATTTTTTGAATATTTGTATTACTTACAATTAATTAATAAAAGTGGGTTTAAAAAACCTTTCAGGAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 321

MEHGSIIITQARREDALVLTKQGLVSKSSPKKPRGRNIFKALFCCFRAQHVGQSSSSTELAAYKEEANTIAKSDLL
QCLQYQFYQIPGTCLLPEVTEEDQGRICVVIDLDETLVHSSFKPINNADFIVPIEIEGTTHQVYVLKRPYVDEFL
RRMGELFECVLFTASLAKYADPVTDLLDRCGVFRARLFRESCVFHQGCYVKDLSRLGRDLRKTILDNPSASYIF
HPENAVPVQSWFDDMADTELLNLIPIFEELSGAEDVYTSLGAAAGPLACPASKRRPSQ

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FIGURE 322

CGTCTGGTTCAGGGGCTAGAAAAGAGCGTCGATGCCGGCGGCAGTGATGAGTCCTAGGAGGCGCTGGCTCTTTGG
CGGCTCGGAGGAGCGGCTGCTGCTGCTGCTGCTGCTGGTGGCCCCCTTTGCAGATGTATTGCTGTCCTTGAAT
ATTAGCCCATTTGAAAACGCCTGGGAAGTTCAGCCATCAGTATGTCCAAGTACAACTTATTATGTTAAGACATG
GAGAGGGTGCTTGGAATAAGGAGAACCGTTTTTGTAGCTGGGTGGATCAGAACTCAACAGCGAAGGAATGGAGG
AAGTCGGAAGTGTGGGAAGCAACTCAAAGCGTTAACTTTGAGTTTGATCTTGATTACATCTGTCCTTAATC
GGTCCATTACACACAGCCTGGCTGATCCTGGAAGAGCTAGGCCAGGAATGGGTGCCTGTGGAAAGCTCCTGGCGTC
TAAATGAGCGTCACTATGGGGCCTTGATCGGTCTCAACAGGGAGCAGATGGCTTTGAATCATGGTGAAGAACAAG
TGAGGCTCTGGAGAAGAAGCTACAATGTAAACCCCGCCTCCATTGAGGAGTCTCATCCTTACTACCAAGAAATCT
ACAACGACCGGAGGTATAAAGTATGCGATGTGCCCTTGATCAACTGCCACGGTCGGAAAGCTTAAAGGATGTTT
TGGAGAGACTCCTTCCCTATTGGAATGAAAGGATTGCTCCCGAAGTATTACGTGGCAAAACCATTCTGATATCTG
CTCATGGAAATAGCAGTAGGGCACTCCTAAAAACACCTGGAAGGTATCTCAGATGAAGACATCATCAACATTACTC
TTCCTACTGGAGTCCCCATTCTTCTGGAATTGGATGAAAACCTGCGTGCTGTTGGGCCTCATCAGTTCCCTGGGTG
ACCAAGAGGCGATCCAAGCAGCCATTAAGAAAAGTAGAAGATCAAGGAAAAGTGAAACAAGCTAAAAAATAGTCTT
TCTCAACTGTTGGCTAAGAAGAAATGCAAAAAGAAGTGGCATAGGAGTGTGTTATGGGTGCTGAACCTCTCTCTCTT
TTTCCCCGATTTTCCAGAGCTAGGCTGTGGAGTAGAGTTTGTATAGGTAAGTGGTAAGTAACTTATTGTGGCCCAGAT
AAGGCTTTAGGATGCCTCAGTGCTTATGTCATAGCCTTATGAGTTAGCTTTCTTGCTAGCCCCCTAGTCGGTCAC
CAAAGTAACTAGTGGGGCTTAATGAAGGTCATAAGTTTCTGAGATGGGAGAGCAACAAGTAGAGATGAAGTT
AAAGGTATTTATCATTCAAGAAATCATTATTGAGTCACCATTGACAGGCACTATTCTAATCAGTAGTTCACTTTA
ATATTTAATAAGATTTTCTGGGATAACAGTAAGGGATATTAGATAATATACCGTATGTATTTATTACTAGTCTTT
TCCTCTAGGAAAAGGGATACTTTGATAATTAAGGCCAGAGGCCCATTAGTTGAGAAAGTCACAGATATATTTCTC
CAAGAAAGCCAACAACCACCACCACAATGACAGAAATGACAACAAGGCCCTTTAACTTGTCTTCTAGTTTAGAGA
CATCCTTCATTTGACATTTAGTAGAATTCCTCTTTGGCCACAAGAATAAGCAGCAAATAAACAACCTATGGCTGTT
GAGGTTCTCATTTTGGTTTGTTTTAATTTTTTGAACCTTGGGTACCTGTAATTAGTTTAAAAATAAAGTTCCTGA
TAATAAAGTGACTGAAAATGGCAAAAAAAAAAAAAAAAAA

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FIGURE 323

MSKYKLIMLRHGEGAWNKENRFCSWVDQKLNSEGMEEARNCGQKALKALNFEFDLVFTSVLNRSIHTAWLILEELG
QEWVPVLESSWRLNERHYGALIGLNREQMALNHGEEQVRLWRRSYNVTPPP I EESHPIYYQEIYNDRRYKVC DVPLD
QLPRSESLKDVLERLLPYWNERIAPEVLRGKTILISAHGSSRALLKHLEGISDEDIINITLPTGVPILLELDEN
LRAVGPHQFLGDQEA IQAAIKKVEDQGKVKQAKK

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FIGURE 324A

GGCGCGGGCGGCCTGGAGCCCCGGGAGCGGCGCGCGGCTCCCGGCCAGCCGGCTCTCCTGGCCTCGCGCTGCA
CATTCTCTCCTGGCGGCGGCGCCACCTGCAGTAGCGTTGCGCCGAACATGGCGACACGGAGCAGCAGGAGGGAGT
CGCGACTCCCGTTCTATTACCCCTGGTCGCACTGCTGCCGCCCGGAGCTCTCTGCGAAGTCTGGACGCAGAGGC
TGCACGGCGGCAGCGCGCCCTTGCCCCAGGACCGGGGCTTCCCTCGTGGTGCAGGGCGACCCGCGCGAGCTGCGGC
TGTGGGCGCGCGGGGATGCCAGGGGGGCGAGCCGCGCGGACGAGAAGCCGCTCCGGAGGAAACGGAGCGCTGCCC
TGCAGCCCGAGCCCATCAAGGTGTACGGACAGGTTAGTCTGAATGATTCCCAATCAGATGGTGGTGCAGTGGG
CTGGAGAGAAAAGCAACGTGATCGTGGCCTTGCCCCGAGATAGCCTGGCATTGGCGAGGCCCAAGAGCAGTGATG
TGTACGTGTCTTACGACTATGGAATAATTCAAGAAAATTTAGACAAGTTAACTTTGGCTTGGGAAATAGGA
GTGAAGCTGTTATCGCCAGTTCTACCACAGCCCTGCGGACAACAAGCGGTACATCTTTGCAGACGCTTATGCCC
AGTACCTCTGGATCACGTTTGACTTCTGCAACACTCTTCAAGGCTTTTCCATCCCATTTCGGGCAGCTGATCTCC
TCCTACACAGTAAGGCCTCCAACCTTCTCTTGGGCTTTGACAGGTCCCACCCCAACAAGCAGCTGTGGAAGTCAG
ATGACTTTGGCCAGACCTGGATCATGATTAGGAACATGTCAAGTCCTTTTCTTGGGGAATTGATCCCTATGACA
AACCATAATACCATCTACATTGAACGACACGAACCTCTGGCTACTCCACTGTCTTCCGAAGTACAGATTTCTTCC
AGTCCCGGGAAAACAGGAAGTGATCCTTGAGGAAGTGAGAGATTTTTCAGCTTCGGGACAAGTACATGTTTGCTA
CAAAGGTGGTGCATCTCTTGGGCAGTGAACAGCAGTCTTCTGTCCAGCTCTGGGTCTCCTTTGGCCGGAAGCCCA
TGAGAGCAGCCAGTTTGTACACAAGACATCCTATTAATGAATATTACATCGCAGATGCCTCCGAGGACCAGGTGT
TTGTGTGTGTCAGCCACAGTAACAACCGCACCAATTTATACATCTCAGAGGCAGAGGGGCTGAAGTTCTCCCTGT
CCTTGGAGAACGTGCTCTATTACAGCCCAGGAGGGGCGCGCAGTGACACCTTGGTGAGGTATTTTGCAAATGAAC
CATTTGCTGACTTCCACCGAGTGGAAGGATTGCAAGGAGTCTACATTGCTACTCTGATTAATGGTTCTATGAATG
AGGAGAACATGAGATCGGTCATCACCTTTGACAAAGGGGGAACCTGGGAGTTTCTTCAGGCTCCAGCCTTCACGG
GATATGGAGAGAAAATCAATTGTGAGCTTTCCAGGGCTGTTCCCTTCACTCTGGCTCAGCGCCTCAGTCAGCTCC
TCAACCTCCAGCTCCGGAAGATGCCATCCTGTCCAAGGAGTCGGCTCCAGGCCCTCATCATCGCCACTGGCTCAG
TGGGAAAGAACTTGGCTAGCAAGACAAACGTGTACATCTCTAGCAGTGCTGGAGCCAGGTGGCGAGAGGCACTTC
CTGGACCTCACTACTACACATGGGGAGACCACGGCGGAATCATCACGGCCATTGCCAGGGCATGGAAACCAACG
AGCTAAAATACAGTACCAATGAAGGGGAGACCTGGAAAACATTCACTCTCTGAGAAGCCAGTGTTTGTGTATG
GCCTCCTCACAGAACCTGGGGAGAAGAGCACTGTCTTACCATCTTTGGCTCGAACAAGAGAATGTCCACAGCT
GGCTGATCCTCCAGGTCAATGCCACGGATGCCTTGGGAGTTCCCTGCACAGAGAATGACTACAAGCTGTGGTTCAC
CATCTGATGAGCGGGGAATGAGTGTTTGTGGGACACAAGACTGTTTTCAAACGGCGGACCCCCCATGCCACAT
GCTTCAATGGAGAGGACTTTGACAGGCCGCTGGTCTGTGTTCAACTGCTCCTGCACCCGGGAGGACTATGAGTGTG
ACTTCGGTTTTCAAGATGAGTGAAGATTTGTCTATTAGAGTTTGTGTTCCAGATCCGGAATTTTCTGGAAAGTCAT
ACTCCCTCCTGTGCCTTGCCCTGTGGGTTCTACTTACAGGAGAACGAGAGGCTACCGGAAGATTTCTGGGGACA
CTTGTAGCGGAGGAGATGTTGAAGCGGACTGGAAGGAGAGCTGGTCCCCTGTCCCCTGGCAGAAGAGAACGAGT
TCATTCTGTATGCTGTGAGGAAATCCATCTACCGCTATGACCTGGCCTCGGGAGCCACCGAGCAGTTGCCCTCTCA
CCGGGCTACGGGCAGCAGTGCCCTGGACTTTGACTATGAGCACAACCTGTTTGTATTGGTCCGACCTGGCCTTGG
ACGTATCCAGCGCCTCTGTTTGAATGGAAGCACAGGGCAAGAGGTGATCATCAATTCTGGCCTGGAGACAGTAG
AAGCTTTGGCTTTTGAACCCCTCAGCCAGCTGCTTTACTGGGTAGATGCAGGCTTCAAAAAGATTGAGGTAGCTA
ATCCAGATGGCGACTTCCGACTCACAATCGTCAATTCTCTGTGCTTGATCGTCCCAGGGCTCTGGTCTCTGTGC
CCCAAGAGGGGGTGATGTTCTGGACAGACTGGGGAGACCTGAAGCCTGGGATTTATCGGAGCAATATGGATGGTT
CTGCTGCCTATCACCTGGTGTCTGAGGATGTGAAGTGGCCCAATGGCATCTCTGTGGACGACCAGTGGATTTACT
GGACGGATGCCTACCTGGAGTGCATAGAGCGGATCACGTTTCAGTGGCCAGCAGCGCTCTGTCAATTCTGGACAACC
TCCCGCACCCCTATGCCATTGCTGTCTTTAAGAATGAAATCTACTGGGATGACTGGTTCACAGCTCAGCATATTCC
GAGCTTCAAATACAGTGGGTCCCAGATGGAGATTCTGGCAAACAGCTCACGGGGCTCATGGACATGAAGATTT
TCTACAAGGGGAAGAACACTGGAAGCAATGCCTGTGTGCCAGGCCATGCAGCCTGCTGTGCCTGCCCAAGGCCA
ACAACAGTAGAAGCTGCAGGTGTCCAGAGGATGTGTCCAGCAGTGTGCTTCCATCAGGGGACCTGATGTGTGACT
GCCCTCAGGGCTATCAGCTCAAGAACAATACCTGTGTCAAAGAAGAGAACACCTGTCTTCGCAACCAGTATCGCT
GCAGCAACGGGAACGTGATCAACAGCAATTTGGTGGTGTGACTTTGACAACGACTGTGGAGACATGAGCGATGAGA
GAACTGCCCTACCACCATCTGTGACCTGGACACCCAGTTTCGTTGCCAGGAGTCTGGGACTTGATCCCAGTGT
CCTATAAATGTGACCTTGAGGATGACTGTGGAGACAACAGTGATGAAAGTCATTGTGAAATGCACCAGTGCCGGA

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FIGURE 324B

GTGACGAGTACAACCTGCAGTTCCGGCATGTGCATCCGCTCCTCCTGGGTATGTGACGGGGACAACGACTGCAGGG
ACTGGTCTGATGAAGCCAACTGTACCGCCATCTATCACACCTGTGAGGCCTCCAACCTCCAGTGCCGAAACGGGC
ACTGCATCCCCCAGCGGTGGGCGTGTGACGGGGATACGGACTGCCAGGATGGTTCCGATGAGGATCCAGTCAACT
GTGAGAAGAAGTGCAATGGATTCCGCTGCCCAAACGGCACTTGTCATCCCATCCAGCAAACATTGTGATGGTCTGC
GTGATTGCTCTGATGGCTCCGATGAACAGCACTGCGAGCCCCCTCTGTACGCACTTCATGGACTTTGTGTGTAAGA
ACCGCCAGCAGTGCTGTTCCACTCCATGGTCTGTGACGGAATCATCCAGTGCCGCGACGGGTCCGATGAGGATG
CGGCGTTTGCAGGATGCTCCCAAGATCCTGAGTTCCACAAGGTATGTGATGAGTTCCGGTTTCCAGTGTCAGAATG
GAGTGTGCATCAGTTTGATTGGAAGTGCGACGGGATGGATGATTGCGGCGATTATTCTGATGAAGCCAACTGCG
AAAACCCACAGAAGCCCCAACTGCTCCCGCTACTTCCAGTTTCGGTGTGAGAATGGCCACTGCATCCCCAACA
GATGGAAATGTGACAGGGAGAACGACTGTGGGGACTGGTCTGATGAGAAGGATTGTGGAGATTACATATTCTTC
CCTTCTCGACTCCTGGGCCCTCCACGTGTCTGCCCAATTACTACCGCTGCAGCAGTGGGACCTGCGTGATGGACA
CCTGGGTGTGCGACGGGTACCGAGATTGTGCAGATGGCTCTGACGAGGAAGCCTGCCCTTGCTTGCAAACGTCA
CTGCTGCCCTCCACTCCCACCAACTTGGGCGATGTGACCGATTGAGTTTGAATGCCACCAACCGAAGACGTGTA
TTCCCAACTGGAAGCGCTGTGACGGCCACCAAGATTGCCAGGATGGCCGGGACGAGGCCAATTGCCCCACACACA
GCACCTTGACTTGATGAGCAGGGAGTTCCAGTGCGAGGACGGGGAGGCCTGCATTGTGCTCTCGGAGCGCTGCG
ACGGCTTCTTGGACTGCTCGGACGAGAGCGATGAAAAGGCCTGCAGTGATGAGTTGACTGTGTACAAAGTACAGA
ATCTTCAGTGGACAGCTGACTTCTCTGGGGATGTGACTTTGACCTGGATGAGGCCCAAAAAATGCCCTCTGCTT
CTTGTGTATATAATGTCTACTACAGGGTGGTTGGAGAGAGCATATGGAAGACTCTGGAGACCCACAGCAATAAGA
CAAACACTGTATTAAAGTCTTGAAACCAGATACCACGTATCAGGTTAAAGTACAGGTTTCAAGTGTCTCAGCAAGG
CACACAACACCAATGACTTTGTGACCTGAGGACCCAGAGGGATTGCCAGATGCCCTCGAAATCTCCAGCTGT
CACTCCCCAGGGAAGCAGAAGGTGTGATTGTAGGCCACTGGGCTCCTCCCATCCACACCCATGGCCTCATCCGTG
AGTACATTGTAGAATACAGCAGGAGTGGTTCCAAGATGTGGGCCTCCAGAGGGCTGCTAGTAACTTTACAGAAA
TCAAGAACTTATTGGTCAACACTCTATACACCGTCAGAGTGGCTGCGGTGACTAGTCGTGGAATAGGAACTGGA
GCGATTCTAAATCCATTACCACCATAAAAGGAAAAGTGATCCACCACCAGATATCCACATTGACAGCTATGGTG
AAAATTATCTAAGCTTACCCTGACCATGGAGAGTGATATCAAGGTGAATGGCTATGTGGTGAACCTTTTCTGGG
CATTTGACACCCACAAGCAAGAGAGGAGAACTTTGAACCTCCGAGGAAGCATATTGTACACAAAGTTGGCAATC
TGACAGCTCATACTCTATGAGATTTCTGCCTGGGCCAAGACTGACTTGGGGGATAGCCCTCTGGCATTGAGC
ATGTTATGACCAGAGGGGTTGCGCCACCTGCACCTAGCCTCAAGGCCAAAGCCATCAACCAGACTGCAGTGGAAT
GTACCTGGACCGGCCCCCGGAATGTGGTTTATGGTATTTTCTATGCCACGTCCTTTCTTGACCTCTATCGCAACC
CGAAGAGCTTGACTACTTCACTCCACAACAAGACGGTCAATTGTGAGTAAGGATGAGCAGTATTTGTTTCTGGTCC
GTGTAGTGGTACCCTACCAGGGGCCATCCTCTGACTACGTTGTAGTGAAGATGATCCCGGACAGAGGCTTCCAC
CCCGTCACCTGCATGTGGTTTCATACGGGCAAAACCTCCGTGGTTCATCAAGTGGGAATCACCGTATGACTCTCCTG
ACCAGGACTTGTGTATGCAATTGCAGTCAAAGATCTCATAAGAAAGACTGACAGGAGCTACAAAGTAAATCCC
GTAACAGCACTGTGGAATACACCCCTTAACAAGTTGGAGCCTGGCGGGAAATACCACATCATTGTCCAACCTGGGGA
ACATGAGCAAAGATTCCAGCATAAAAAATTACCACAGTTTCATTATCAGCACCTGATGCCTTAAAAATCATAACAG
AAAATGATCATGTTCTTCTGTTTTGGAAAAGCCTGGCTTTAAAGGAAAAGCATTTTAATGAAAGCAGGGGCTATG
AGATACACATGTTTGATAGTGCCATGAATATCACAGCTTACCTTGGGAATACTACTGACAATTTCTTTAAATTT
CCAACCTGAAGATGGGTGATAATTACACGTTACCGTCCAAGCAAGATGCCTTTTGGCAACCAGATCTGTGGGG
AGCCTGCCATCCTGCTGTACGATGAGCTGGGGTCTGGTGCAGATGCATCTGCAACGCAGGCTGCCAGATCTACGG
ATGTTGCTGCTGTGGTGGTGGCCATCTTATTCCTGATACTGCTGAGCCTGGGGTGGGGTTTGCCATCCTGTACA
CGAAGCACCGGAGGCTGCAGAGCAGCTTACCGCCTTCGCCAACAGCCACTACAGCTCCAGGCTGGGGTCCGCAA
TCTTCTCCTCTGGGGATGACCTGGGGGAAGATGATGAAGATGCCCTATGATAACTGGATTTTTCAGATGACGTCC
CCATGGTGATAGCCTGAAAGAGCTTTCTCTACTAGAAACCAAATGGTGTAAATATTTTATTTGATAAAGATAGTT
GATGGTTTATTTTAAAGATGCACCTTGAGTTGCAATATGTTATTTTTATATGGGCCAAAAACAAAAACAAAAA
AAAAAA

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FIGURE 325

MATRSSRRESRLPFLFTLVALLPFGALCEVWTQRLHGGSAPLPQDRGFLVVQGDPRELRLWARGDARGASRADEK
PLRRKRSAAALQPEPIKVYGOVSLNDSHNQMVVHWAGEKSNVIVALARDSLALARPSSDVYVSYDYGKSFKKISD
KLNFGGLNRSEAVIAQFYHSPADNKRYIFADAYAQYLWITFDFCNTLQGF SIPFRAADLLLHASKASNLLGLFDRS
HPNKQLWKSDDFGQTWIMI QEHVKSFSW GIDPYDKPNTIYIERHEPSGYSTVFRSTDFQSRNQEVILEEVRDF
QLRDKYMFATKVVHLLGSEQSSVQLWVSFGRKPMRAAQFVTRHPINEYYIADASEDQVFVCVSHSNNRNTLYIS
EAEGLKFSLSLENVLYYSPGGAGSDTLVRYFANEFPADFHRVEGLQGVYIATLINGSMNEENMRSVITFDKGGTW
EFLQAPAFGTGYGEKINCELSQGC SLHLAQRSLQLLNQLRRMPILSKESAPGLI IATG SVGKNLASKT NVYISS
AGARWREALPGPHYTWGDHGGIITAI AQMETNELKYSTNEGETWKTFIFSEKPVFVYGLLTFEGEKSTVFTIF
GSNKENVHSWLILQVNATDALGVPCTENDYKLWSPSDERGNECLLGHKTVFKRRTPHATCFNGEDFDRPVVSN
SCTREDYECDFGFKMSEDLSLEVCPDPEFSGKSYSPVPCPVGSTYRRTRGYRKISGDTCSGGDVEARLEGELV
PCPLAEENEFILYAVRKSIIYRYDLASGATEQLPLTGLRAAVALDFDYEHNC LYWSD LALDVIQRLCLNGSTGQEV
I INSGLETVEALAFEPLSQLLYVWDAGFKKIEVANPDGDFRLTIVNSSVLDRPRALVLVPQEGVMFWTDWGD LKP
GIYRSNMDGSAAYHLVSEDVKWPNGISVDDQWIYWTDAYLECIERITFSGQQRSVILDNLPHPYAIAVFKNEIYW
DDWSQLSIFRASKYSGSQMEILANQLTGLMDMKIFYKGKNTGSNACVPRPCSLCLPKANNRSRSCPCPEDVSSSV
LP SGDL MCD CPQGYQLKNNTCVKEENTCLRNQYRCSNGNCINSIWWCDFDND CGDMSDERNCPTTICDLDTQFRC
QESGTCIPLSYKCDLEDDCGDNSDESHCEMHQCRSDEYNCSSGMCIRSSWVCDGDND CRDWSDEANCTAIYHTCE
ASNFQCRNGHCIPQRWACDGD TDCQDGSDEDPVNCEKKCNGFRCPNGTCIPSSKHCDGLRDCSDGSDEQHCEPLC
THFMD FVCKNRQQCLFHS MVCDGIIQCRDGSDEDAFAFAGCSQDPEFHKVCDEF GFGQCQNGVCISLIWKCDGMDDC
GDYSDEANCENPTEAPNCSRYFQFRCENGHCIPNRWKCDREND CGDWSDEKDCGDSHILPFSTPGPSTCLPNYYR
CSSGTCVMDTWVCDGYRDCADGSDEEACPLLANVTAASTPTQLGRCDRFEFECHQPKTCIPNWKRC DGHQDCQDG
RDEANCPTHSTLTTCMSREFQCEDEGEACIVLSERCDFGLDCSDESDEKACSDELTVYKVQNLQWTADFSGDVTLTW
MRPKKMP SASC VYNVYYRVVGESIWKTLETHSNKTN TVLVKLPD TTYQVKVQVQCLSKAHNTNDFVTLRTPEGL
PDAPRNQLSLPREAEGVIVGHWAPP IHTHGLIREYI VEYSRSGSKMWASQRAASNFTEIKNLLVNTLYTVRVAA
VTSRGIGNWSDSKSITTIGKVIPPD IHIDSYGENYLSFTLT MESDIKVNGYV VNLFWAFDTHKQERRTLNFRG
SILSHKVGNLTAHTSYEISAWAKTDLGDSPLAFEHVMTRGVRPPAPSLKAKAINQTAVECTWTGPRNVVYGIFYA
TSFLDLRYRNPKSLTTS LHNKTVIVSKDEQYLF LVRVVVPYQGPSSDYVVVKMIPDSRLPPRHLHVHTGKTSVVI
KWESPYDSPDQDLLYAI AVKDLIRKTD RSYKVKS RNSTVEYTLNKLEPGG

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FIGURE 326A

CACGTTGGGTGACATAATGGGGTTTTTTTAATTATAGATTACACTGCATTTATTTCATCACCCCTGTCCTCTCAT
CCATAACTCAAATTTACTACCAGCAACACAAAATACAAAGATGTGTCCAGTTTCTACTACAGCTCTTCGCGTTTAC
AAGTGTCGAGCGCTTGCTTTTCGGAACGCCCTTGTGATTGGCCGAGCCAATGCCAGTGACATCAACCAACTTACTT
TTGATTGGAAGGCTGGTTGCTGGGACTGTAGCGTTTGCAGGAAGTCACTTAACTGTTTGGGAGCTGGAAAACCGA
AGCTGAAGTTCTCTTTTGCCATAGGAACGAGCGCAACTGACTAGGAAAGATGTGTCCAAAGCTCCGCAAGCTGG
AACGTGAGCCAGGAGGCCCGGACCGGCCACGGGACCGCGAGGCACTCCGAAAGTGTGCGGCTGCCCTTCCCTGC
CTCCCAGCTGTTACCCTTTTAAATGTCAGTGTTTCGAGGCTGTAGGGGTAGCACGAGGCAGCGAAAACGGAAACAGTC
GGATTGGCCGCACGCCTCAGTTCTAGACGCACCTCTCCACCGAAGCCGTTCTGACTGGCAGGGGGAGAAAAGTAAA
CAGAGTTGAATCACCTCCCCACTGGCCAATTGGAGGGGGTTTGGTTTGTGACGTGATGGGATTCTGCGAAATTG
TTACTGAGCAAGAGAATGCCGGAACGTGCGGACCGGCCGAGCAGGGGTTTCTAGAAGCCGTCAGTGGACTCGGGAA
AAAGTGTCTCTTAGACCTGGCGCTCGGCGGGGCCCTCGCCACCCGCGTCGGGGTGATCGGGTGAATGTCCTGGGG
CTTTGGCTCGACGGCGAGGCGGCCGAGGGCGTGCACCTCTCTTGACGTTTCTCTCCCAGCGCCTCGGGGGCGTT
TTCAGTCGAATAAATTGCGACCGCCACGTGTGGCATCTTTCCAAGGGAGCCGGCTCAGAGGGGCCGGCGCGCCC
GTCGGGGGATCGCGGCCGGCGCGGGGCAGGGGCGGCGGCTAGAGGCGGCGGCGCGGCGGAGCCCGGGGCCGTGGA
TGCTGCGTGCGGAGGCGCTGCGGTTACGTAAAGATGAGGGGCTGAGGTGCGCTCGGCGCTCTGCGAGTCGGAA
GCGCCCCGCGCCCCGCCCCCTTGGCCGCGCGCGCGTGCCTGGGCGGGCGGGTCTGCTCGTCCGAGGCCAGGGAGGGC
GAGCCGAACCTCCGAGCCACCGCCAAGTTTGTCCGCGCCGCTGGGCTGCCGTGCCCGCACCATGTCGCGGC
CGCTACATGGACTTCGTGGCTGCCAGTGTCTGGTTTCCATTTTGAACCGCGCTGCGGTGCCGGAGCATGGGGT
CGCTCCGGACGCCGAGCGGCTGCGACTACCTGAGCGCGAGGTGACCAAGGAGCACGGTGACCCGGGGGACACCTG
GAAGGATTACTGCACACTGGTCACCATCGCCAAGAGCTTGTGGACCTGAACAAGTACCGACCCATCCAGACCCC
CTCCGTGTGCAGCGACAGTCTGGAAGTCCAGATGAGGATATGGGATCCGACAGCGACGTGACCACCGAATCTGG
GTGAGTCCCTTCCCACAGCCCGGAGGAGAGACAGGATCCTGGCAGCGCGCCAGCCGCTCTCCCTCCTCCATCC
TGGAGTGGCTGCGAAGGGGAAACACGCCTCCGAAAAGAGGCACAAGTGCCCTACAGTGGCTGTGGGAAAGTCTA
TGGAAAATCCTCCCATCTCAAAGCCCATTACAGAGTGCATACAGGTGAACGGCCCTTCCCCTGCACGTGGCCAGA
CTGCCTTAAAAAGTTCTCCCGCTCAGACGAGCTGACCCGCCACTACCGGACCCACACTGGGGAAAAGCAGTTCCG
CTGTCCGCTGTGTGAGAAGCGCTTCATGAGGAGTGACCACTCACAAAGCACGCCCCGGCGGCACACCGAGTTCCA
CCCCAGCATGATCAAGCGATCGAAAAAGGCGCTGGCCAACGCTTTGTGAGGTGCTGCCCGTGGAAGCCAGGGAGG
GATGGACCCCGAAAGGACAAAAGTACTCCCAGGAAACAGACGCGTGAAAACTGAGCCCCAGAAGAGGCACACTTG
ACGGCACAGGAAGTCACTGCTCTTTGGTCAATATTCTGATTTTCTCTCCCTGCATTGTTTTTAAAAAGCACATT
GTAGCCTAAGATCAAAGTCAACAACACTCGGTCCCTTTGAAGAGGCAACTCTCTGAACCCGCTCTCTGACTGTTGG
AGGGAAGGCAAATGCTTTTGGGTTTTTTGGTTTTTTGTTTTTTTCTCCTTTTATTTTTTTGCGGGGGA
GGGTAGGGAGTGGGTGGGGGGGAGGGGGTAAGGCCAAGACTGGGTAGATTTTAAAGATTCAACACTGGTGTACAT
ATGTCCGCTGGGTGAGTTGACCTGTGGCCTCGCACAGTGATTCTAGGCCCTTTATGCTTGCTGTCTCTCAGAATT
GTTTTCTTACCTTTTAAATGTAATGACGAGTGTGCTTCAGTTTGTTTAGCAAAACCACTCTCTTGAATCACGTTAA
CTTTTGAGATTAACAAAAAAGCCATAGCACAGCTGTCTTTATGCAAGCAAGAGCACATCTACTCCAGCATGA
TCTGTCTATAAGACTTGAAAACAAAAACAGTTACTTATAGTCAATGGGTAAGCAGAGTCTGAATTTATACTA
ATCAAGACAAACCTTTGAAAGGTTACACTAAGTACAGAACTTTTAAACCTTGCTTTGTATGAGTTGTACTTTTTG
AACATAAGCTGCACCTTTATTTTCTAATGCAGAGGATGAATAAGTTAAATACATGCTTTGAGGATAGAAGCAGAT
GTTCTGTTTGGCACCAGTTATAATCTGCTTATTTTACAATATACACGTTTCCCTAAGAAATCATGCGCAGAGAT
GTGAGGGCAGAATATACACAACAGATGCTGAAGGAGAAGGAGGGTAGTGTTTTGCAAAAGAAAAAGAAAGAACCC
AACAGAATTTTAACTCTATTAACCTTTTCCAAATTTTCCCTATGCTTTTAGTTAACATCATTATTGTATCCTAATGC
CACTAGGGGAGAGAGCTTTTACTCTGTTGGGTTTTATTTGAATGTGTGCATAACAGTAATGAGATCTGGAAACA
CCTATTTTTTGGGGAAAAAGGTTTGTGGTCTCCTTCTGTGTTCTTACAAAACCTCCCACTCTCAGGTGCAAGAG
TTATGTAGAAGGAAAGGGAGCTGAAATAGGAACAGAAAATCAACCCCTATAACTAGTGAACACCAAGGGAAAAAT
ACCACAATGATTTAGAGGAGACTCTGCAAAATCGTCCCTTGTGGAGAATGCAGGCAACATGGAATACTACGAAT
GAAATCACATCACTGTATCTTTTACATCAATAGCCTCACCCTAATATATCTTGTATCTAGGTGTCTATAATGGC
TGAAACCACTACATCCATCTATGCCATTTACCTGAAAACCTTAAGTGTGGCCTTTATGAGGCCAGAAAAGTGAAC
GAGTTTTGTAGTTAAGACCTCAAATGAGGGGAGTCAGCAGTGATCATGGGGGAAATGTTTACATTTTTTTTTTCT

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FIGURE 326B

TCAGAAGTAACGCTTTCTGATGATTTTATCTGATATTTAAAACAGGGAGCTATGGTGCACTCTAGTTTATACTTG
CGCTCTGAAATGTGTAAACATAGGGTGCCTACCTATTTACCTGACCCATACTCGTTTCTGATTCAGAATCAGTG
TGGGCTCCTGCAGTGGGCGCGGGTCACGGCTGACTCCAACCTCCAATACAACAGCCATCACTAGCACAGTGTTTT
TTTGTTTAACCAACGTAGTGTTATTAGTAGTTCTATAAAGAGAACTGCTTTTAACATTAGGGACTGGGAGCAGTC
CATGGGATAAAAAAGGAAAGTGTTTTCTCACGAGAAAACATGTCAGGAAAAATAAAGAACACTTTCTACCTCTGTT
TCAGATTTTTGAAACACTTATTTTAAACCAATTTTAAATTTCTGTGTCCAAAAATAAGTTTTAAGGACATCTGTTC
TTCCATACGAAATAGGTTAGGCTGCCTATTTCTCACTGAGCTCATGGAATGGTTCTGCTTATGATACTCTGCACG
CTGCCTTTTAGTGAGTGAGGAGTTTGGGGTTGCCTAGCACTTGCTAACTTGTAAGAAAGTCATCTTTCCCTCACAG
AAAGAAACGAAAGAAAGCAAAGCAAAGTCAGTGAAAGACAATCTTTATAGTTTCAGGAGTAAATCTAAATGTGGC
TTTTGTCAAGCACTTAGATGGATATAAATGCAGCAACTTGTTTTAAAAAATGCACATTTACTTCCCAAAAAGT
TGTTACTTGCCTTTTCAAGTGTGACAAACTCACATTTGATATTCTCTTATATGTTATAGTAATGTAACGTATAAA
CTCAAGCCTTTTTATTCTTTGTGATTAAATCCTGTTTTAAATGTCACAAAACAGGAACCAGCATTCTAATTAGA
TTTACTATATCAAGATATGGTTCAAATAGGACTACTAGAGTTCATTGAACACTAAAACATGAAACAATTACTTT
TTATATTAAAAAGACCATGGATTTAACTTATGAAAATCCAAATGCAGGATAGTAATTTTTGTTTACTTTTTTAAC
CAAACGAATTTTGAAAGACTATTGCAGGTGTTTTAAAAAGAAAGAAAGTTGTTTTATCTAATACTGTAAGTAG
TTGTCATATTCTGGAATAATTAATAGTTTTAGAGTTAAGATATCTCCTCTCTTTGGTTAGGGAAGAAGAAAGCCC
TTCACCATTGTGGAATGATGCCCTGGCTTTAAGGTTTAGCTCCACATCATGCTTCTCTT

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FIGURE 327

MSAAAYMDFVAAQCLVSI SNRAAVPEHGVAPDAERLRLPEREVTKEHGDPGDTWKDYCTLVTIAKSLLDLNKYRP
IQTPSVCSDSLESPDEDMGSDSDVTTESGSSPSHSPEERQDFGSAPSPLSLLHPGVAAGKHASEKRHKCPYSGC
GKVYGKSSHLKAHYRVHTGERPFPCTWPDCLKKFSRSDELTRHYRTHTG EKQFRCPLCEKRFMRSDHLTKHARRH
TEFHPSMIKRSKKALANAL

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FIGURE 328A

CACGTTGGGTGACATAATGGGGTTTTTTTAATTATAGATTACACTGCATTTATTTCATCACCCCTGTCTCTCAT
CCATAACTCAAATTTACTACCAGCAACACAAAATACAAAGATGTGTCCAGTTTCTACTACAGCTCTTCGCGTTTAC
AAGTGTGAGCGCTTGCTTTTCGGAACGCCCTTGTGATTGGCCGAGCCAATGCCAGTGACATCAACCAACTTACTT
TTGATTGGAAGGCTGGTTGCTGGGACTGTAGCGTTTGCAGGAAGTCACTTAAGTGTGTTGGGAGCTGGAAAACCGA
AGCTGAAGTTCTCTTTTGCCATAGGAACGAGCGCAACTGACTAGGAAAGATGTGTCCAAAGCTCCGCAAGCTGG
AACGTGAGCCAGGAGGCCCGGACCGGCCACGGGACCGCGAGGCACTCCGAAAGTGTGCGGCTGCCCTTCCCTGC
CTCCCAGCTGTTACCCTTTTAAATGTCAGTGTTCGAGGCTGTAGGGGTAGCACGAGGCAGCGAAACGGAAACAGTC
GGATTGGCCGCACGCCTCAGTTCTAGACGCACCTCTCCACCGAAGCCGTTCTGACTGGCAGGGGGAGAAAAGTAAA
CAGAGTTGAATCACCTCCCCACTGGCCAATTGAGGGGGTGTGGTTTGTGACGTGATGGGATTCTGCGAAAATTG
TTACTGAGCAAGAGAATGCCGGAACGTGCGGACCGGCCGAGCAGGGGTTCAGAAGCCGTCAGTGGACTCGGGAA
AAAGTGTCTCTTAGACCTGGCGCTCGGCGGGGCCCTCGCCACCCGCGTCGGGGTGATCGGGTGAATGTCCTGGGG
CTTTGGCTCGACGGCGAGGCGGCCGAGGGCGTGCACCTCTCTGACGTTTCTCTCCCAGCGCCTCGGGGGCGTT
TTCAGTCGAATAAACTTGCAGCCGCCACGTGTGGCATCTTTCCAAGGGAGCCGGCTCAGAGGGGCCGGCGCGCCC
GTCGGGGGATCGCGGCCGGCGCGGGGCAGGGGCGGCGGCTAGAGGCGGCGGCGCGGCGGAGCCCGGGGCCGTGGA
TGCTGCGTGCAGGAGCGCTGCCGTTACGTAAAGATGAGGGGCTGAGGTCGCTCGGCGCTCCTGCGAGTCGGAA
GCGCCCCGCGCCCCCGCCCCCTTGCCGCGCGCGCGTGCCTGGGCGGGCGGGTCTGCTCGTAGGCGAGGGAGGGC
GAGCCGAACCTCCGACGCCACCGCCAAGTTTGTCCGCGCGCCTGGGCTGCCGTCGCCCCGACCATGTCGCGGC
CGCTACATGAGCTTCTGTTGGCTGCCAGTGTCTGGTTTCCATTTGAAACCGCGCTGCGGTGCCGAGCATGGGGT
CGCTCCGACGCCGAGCGGCTGCGACTACCTGAGCGCGAGGTGACCAAGGAGCACGGTGACCCGGGGACACCTG
GAAGGATTACTGCACACTGGTCACCATCGCCAAGAGCTTGTGGACCTGAACAAGTACCGACCCATCCAGACCCC
CTCCGTGTGCAGCGACAGTCTGGAAGTCCAGATGAGGATATGGGATCCGACAGCGACGTGACCCGGAATCTGG
GTCGAGTCTTCCCACAGCCCGGAGGAGAGACAGGATCCTGGCAGCGCGCCAGCCGCTCTCCCTCTCTCCATCC
TGGAGTGGCTGCGAAGGGGAAACACGCCTCCGAAAAGAGGCACAAGTGCCCTACAGTGGCTGTGGGAAAGTCTA
TGGAAAATCCTCCCATCTCAAAGCCCATTACAGAGTGCATACAGGTGAACGGCCCTTCCCCTGCAGTGGCCAGA
CTGCCTTAAAAAGTTCTCCCGCTCAGACGAGCTGACCCGCCACTACCGGACCCACACTGGGGAAAAGCAGTTCCG
CTGTCCGCTGTGTGAGAAGCGCTTCATGAGGAGTGACCACTCACAAAGCACGCCCGGCGGCACACCGAGTTCCA
CCCCAGCATGATCAAGCGATCGAAAAGGCGCTGGCCAACGCTTTGTGAGGTGCTGCCCGTGGAAGCCAGGGAGG
GATGGACCCCGAAAGGACAAAAGTACTCCCAGGAAACAGACGCGTGAAAAGTGAAGCCAGAGGCACACTTG
ACGGCACAGGAAGTCACTGCTCTTTGGTCAATATTCTGATTTTCTCTCCCTGCATTGTTTTTAAAGCACATT
GTAGCCTAAGATCAAAGTCAACAACACTCGGTCCCCTTGAAGAGGCAACTCTCTGAACCCGCTCTCTGACTGTTGG
AGGGAAGGCAAATGCTTTTGGGTTTTTGGTTTTTGGTTTTTCTCCTTTTATTTTTTGGCGGGGA
GGGTAGGGAGTGGGTGGGGGGGAGGGGTAAGGCCAAGACTGGGTAGATTTTAAAGATTCAACACTGGTGTACAT
ATGTCCGCTGGGTGAGTTGACCTGTGGCCTCGCACAGTGATTCTAGGCCCTTATGCTTGCTGTCTCTCAGAATT
GTTTTCTTACCTTTTAAATGTAATGACGAGTGTGCTTCAGTTTGTTTAGCAAAACCACTCTCTTGAATCACGTTAA
CTTTTGAGATTAAAAAAGCCATAGCACAGCTGTCTTATGCAAGCAAGAGCACATCTACTCCAGCATGA
TCTGTCTATAAGACTTGAAAACAAAAACAGTTACTTATAGTCAATGGGTAAGCAGAGTCTGAATTTATACTA
ATCAAGACAAACCTTTGAAAGGTTACACTAAGTACAGAACTTTTAAACCTTGCTTTGTATGAGTTGTACTTTTTG
AACATAAGCTGCACCTTTTATTTCTAATGCAGAGGATGAATAAGTTAAATACATGCTTTGAGGATAGAAGCAGAT
GTTCTGTTTGGCACCAGTTATAATCTGCTTATTTTACAATATACACGTTTCCCTAAGAAATCATGCGCAGAGAT
GTGAGGGCAGAATATACACAACAGATGCTGAAGGAGAAGGAGGGTAGTGTGTTTGCAAAAGAAAAAGAAAGAACCC
AACAGAAITTTAACTCTATTAACCTTTCCAAATTTTCCATGCTTTTAGTTAACATCATTATTGTATCTTAATGC
CACTAGGGGAGAGAGCTTTTACTCTGTGTTGGGTTTTATTGTAATGTGTGCATAACAGTAATGAGATCTGAAACA
CCTATTTTTTGGGGAAAAAGGTTTGTGGTCTCCTTCTGTGTTCTTACAAAACCTCCACTCTCAGGTGCAAGAG
TTATGTAGAAGGAAAGGGAGCTGAAATAGGAACAGAAAAATCAACCCCTATAACTAGTGAACACCAAGGGAAAT
ACCACAATGATTTAGAGGAGACTCTGCAAAATCGTCCCTTGTGGAGAATGCAGGCAACATGGAATACTACGAAT
GAAATCACATCACTGTATCTTTTACATCAATAGCCTCACCCTAATATATCTTGTATCTAGGTGTCTATAATGGC
TGAAACCACTACATCCATCTATGCCATTTACCTGAAAACCTTAAGTGTGGCCTTTATGAGGCCAGAAAAGTGAAC
GAGTTTTGTAGTTAAGACCTCAAATGAGGGGAGTCAGCAGTGATCATGGGGGAAATGTTTACATTTTTTTTTCT

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FIGURE 328B

TCAGAAGTAACGCTTTCTGATGATTTTATCTGATATTTAAAACAGGGAGCTATGGTGCACTCTAGTTTATACTTG
CGCTCTGAAATGTGTAAACATAGGGTGCCTACCTATTTACCTGACCCATACTCGTTTCTGATTTCAGAAATCAGTG
TGGGCTCCTGCAGTGGGCGCGGGTCACGGCTGACTCCAACCTCCAATACAACAGCCATCACTAGCACAGTGTTTT
TTTGTTTAACCAACGTAGTGTTATTAGTAGTTCTATAAAGAGAACTGCTTTTAACATTAGGGACTGGGAGCAGTC
CATGGGATAAAAAGGAAAGTGTTTTCTCACGAGAAAACATGTCAGGAAAAATAAAGAACACTTTCTACCTCTGTT
TCAGATTTTTGAAACACTTATTTTAAACCAAATTTTAATTTCTGTGTCCAAAATAAGTTTTAAGGACATCTGTTC
TTCCATACGAAATAGGTTAGGCTGCCTATTTCTCACTGAGCTCATGGAATGGTTCTGCTTATGATACTCTGCACG
CTGCCTTTTAGTGAGTGAGGAGTTTGGGGTTGCCTAGCACTTGCTAAGTTGTAAAAAGTCATCTTTCCCTCACAG
AAAGAAACGAAAGAAAGCAAAGCAAAGTCAGTGAAAGACAATCTTTATAGTTTCAGGAGTAAATCTAAATGTGGC
TTTTGTCAAGCACTTAGATGGATATAAATGCAGCAACTTGTTTTAAAAAATGCACATTTACTTCCCCAAAAAGT
TGTTACTTGCCTTTTCAAGTGTGACAACTCACATTTGATATTCTCTTATATGTTATAGTAATGTAACGTATAAA
CTCAAGCCTTTTTATTCTTTGTGATTAAATCCTGTTTTAAATGTCAAAAACAGGAACCAGCATTCTAATTAGA
TTTACTATATCAAGATATGGTTCAAATAGGACTACTAGAGTTCATTGAACACTAAACTATGAAACAATTACTTT
TTATATTAAAAAGACCATGGATTTAACTTATGAAAATCCAAATGCAGGATAGTAATTTTTGTTTACTTTTTTAAC
CAAAGTGAATTTTTGAAAGACTATTGCAGGTGTTTTAAAAAGAAAGAAAGTTGTTTTATCTAATACTGTAAGTAG
TTGTCATATTCTGGAAAATTTAATAGTTTTAGAGTTAAGATATCTCCTCTCTTTGGTTAGGGAAGAAGAAAGCCC
TTCACCATTTGTGGAATGATGCCCTGGCTTTAAGGTTTAGCTCCACATCATGCTTCTCTT

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FIGURE 329

MSAAAYMDFVAAQCLVSI SNRAAVPEHGVAPDAERLRLPEREVTKEHGDPGDTWKDYCTLVTIAKSLLDLNKYRP
IQTPSVCSDSLESPDEDMGSDSDVTTESGSSPSHSPEERQDPGSAPSPLSLLHPGVAAGKXHASEKRHKCPYSGC
GKVYGKSSHLKAHYRVHTGERPFPCTWPDCLKKFSRSEDLTRHYRTHTG EKQFRCPLCEKRFMRSDHLTKHARRH
TEFHPSMIKRSKKALANAL

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FIGURE 330

CACCGCGCAAGCGCATCCTGGCCTTTCTTCAGTCCCCACGTGCGATCCTTCCCGGCAACTTTTTTCGAGAAAAATG
CCCAAATTCAAGGCGGCCCCGTGGGGTGGGGGGTCAGGAAAAACATGCGCCCCCTGGCCGATCAGATCCTGGCTGGG
AATGCGGTGCGGGCGGGGGTCCGGGAGAAGCGGCGGGGTGCGGGACAGGAGAAGCGGAGGAAGAGTATGTGGGG
CCCCGGCTGAGCCGACGGATTTTGCAGCAAGCACGGCAGCAACAGGAGGAACTCGAGGCCGAGCATGGGACTGGG
GACAAGCCCCGCGGCGCCGCGGGAACGCACCACGCGGCTGGGTCCAAGAATGCCTCAGGATGGATCAGATGACGAG
GACGAGGAGTGGCCACCCCTGGAGAAGGCTGCCACAATGACAGCAGCGGGCCATCATGCAGAGGTGGTTGTGGAC
CCTGAGGATGAGCGTGCCATAGAGATGTTCAATGAACAAGAACCCTCCTGCCAGGCGCACCCCTGGCTGACATCATC
ATGGAGAAGCTGACTGAGAAGCAGACAGAGGTTGAGACAGTCATGTGAGAGGTGTCGGGCTTCCCTATGCCCCAG
CTGGACCCCCGGGTCTAGAAGTGTACAGGGGGGTCCGGGAGGTATTATCTAAGTACCGCAGTGGA AAACTGCC
AAGGCATTTAAGATCATCCCTGCACTCTCCA ACTGGGAGCAAATCCTCTACGTACAGAGCCGGAGGCCTGGACT
GCAGCTGCCATGTACCAGGCCACCAGGATTTTTGCTCTAACCTGAAGGAACGCATGGCCCAGCGCTTCTACAAC
CTTGCTCTGCTCCCTCGAGTACGAGATGACGTTGCTGAATACAAACGACTCAACTTCCATCTCTACATGGCTCTC
AAGAAGGCCCTTTTCAAACCTGGAGCCTGGTTTCAAAGGGATCCTGATTCCACTGTGCGAGTCTGGCACTTGTACC
CTCCGGGAAGCCATCATTTGTGGTAGCATCATCACCAAGTGCTCCATCCCTGTGTTGCACTCCAGTGCGGCCATG
CTGAAAATTGCTGAGATGGAATACAGCGGTGCCAACAGCATCTTCTGCGACTGCTGCTGGATAAGAAGTATGCA
CTGCCTTACCGGTGCTGGATGCCCTAGTCTTCCACTTCTGCGGTTCCGGACAGAGAAGCGTGA ACTGCCTGTG
CTGTGGCACCAGTGCCTCCTGACTTTGGTCCAGCGCTACAAGGCCGACTTGGCCACAGACCAGAAAGAGGCCCTC
TTAGAACTGCTCCGGCTGCAGCCCCATCCACAGCTATCGCCCCGAAATCAGGCGTGAGCTTTCAGAGTGCAGTCCCC
CGCGATGTGGAAGATGTTCCCATCACCGTGGAGTAGAGGAAAACAGTCAGCTGTCCTGGCCAAAGGGGTTTGAAG
GACACCAAGACCCCCGTTGGTGA CTGAAGATGACACTGAGCTTTAATGGCTGAAGACCCAGATCAGGGCAGTGAC
AGATCACAGGGACATCTGTGGCTCCCAGTCCAGGACAGGAAGGACTGAGGGTCTGGCTGGTTCCCTCTTCCATTC
TAGGCCCTTATCCCTGTTTGTGAGAGCCAACTTGAGATACCATATGCTAGCATTCCCAGTCCCCAGCTGGG
GCTTGGTGTGAGTACTTTTTCTATGGCTATTGTGTCAGGTCACTGTGATAAAGGCAAAGACAGATATTTATTGA
AAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 331

MNKNPPARRTLADIIMEKLTEKQTEVETVMSEVSGFPMPQLDPRVLEVYRGVREVLISKYRSGKLPKAFKIIPALS
NWEQILYVTEPEAWTAAAMYQATRIFASNLKERMAQRFYNLVLLPRVRDDVAEYKRLNFHLYMALKKALFKPGAW
FKGILIPLCESGTCTLREAIIVGSIITKCSIPVLHSSAAMLKIAEMEYSGANSIFLRLLLDKKYALPYRVLDALV
FHFILGFRTEKRELPVLWHQCLLTLVQRYKADLATDQKEALLELLRLQPHPLSPEIRRELQSAVPRDVEDVPITV
E

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FIGURE 332A

GTGGCCCCCGTTACTTTTCTCTGGGAAATATGGCGCACGCTGGGAGAACAGGGTACGATAACCGGGAGATAGT
GATGAAGTACATCCATTATAAGCTGTGCGAGAGGGGCTACGAGTGGGATGCGGGAGATGTGGGCGCCGCGCCCC
GGGGGCCGCCCCGCGCCGGGCATCTTCTCCTCGCAGCCCGGGCACACGCCCCATACAGCCGCATCCCGGGACCC
GGTCGCCAGGACCTCGCCGCTGCAGACCCCGGCTGCCCCCGGCGCCGCGGGGCTGCGCTCAGCCCGGTGCC
ACCTGTGGTCCACCTGACCCTCCGCCAGGCCGGCGACGACTTCTCCCGCCGCTACCGCCGCGACTTCGCCGAGAT
GTCCAGGCAGCTGCACCTGACGCCCTTACCGCGCGGGGACGCTTTGCCACGGTGGTGGAGGAGCTCTTCAGGGA
CGGGGTGAAC TGGGGGAGGATTGTGGCCTTCTTTGAGTTTCGGTGGGGT CATGTGTGTGGAGAGCGTCAACCGGGA
GATGTCGCCCC TGGTGGACAACATCGCCCTGTGGATGACTGAGTACCTGAACCGGCACCTGCACACCTGGATCCA
GGATAACGGAGGCTGGGATGCCTTTGTGGAACGTACGGCCCCAGCATGCGGCCTCTGTTTGATTTCTCCTGGCT
GTCTCTGAAGACTCTGCTCAGTTTGGCCCTGGTGGGAGCTTGCAATCACCCTGGGTGCCTATCTGGGCCACAAGTG
AAGTCAACATGCCTGCCCCAAACAAATATGCAAAAGGTTCACTAAAGCAGTAGAAATAATATGCATTGTCTAGTGA
TGTTCCATGAAACAAAGCTGCAGGCTGTTTAAAGAAAAATAACACACATATAAACATCACACACACAGACAGACA
CACACACACACAACAATTAACAGTCTTCAGGCAAAACGTGCAATCAGCTATTTACTGCCAAAGGGAAATATCATT
TATTTTTTACATTATTAAGAAAAAAGATTTATTTATTTAAGACAGTCCCATCAAACCTCCTGTCTTTGGAAATC
CGACCACTAATTGCCAAGCACCGCTTCGTGTGGCTCCACCTGGATGTTCTGTGCCTGTAAACATAGATTTCGCTTT
CCATGTTGTTGGCCGGATCACCATCTGAAGAGCAGACGGATGGAAAAAGGACCTGATCATTGGGGAAGCTGGCTT
TCTGGCTGCTGGAGGCTGGGGAGAAGGTGTTTCACTTGCATTTCTTTGCCCTGGGGGCTGTGATATTAACAG
AGGGAGGGTTCTGTGGGGGGAAGTCCATGCCTCCCTGGCCTGAAGAAGAGACTCTTGCATATGACTCACATGA
TGCATACCTGGTGGGAGGAAAAGAGTTGGGAACCTCAGATGGACCTAGTACCCACTGAGATTTCCACGCCGAAGG
ACAGCGATGGGAAAAATGCCCTTAAATCATAGGAAAGTATTTTTTAAAGCTACCAATTGTGCCGAGAAAAGCATT
TTAGCAATTTATACAATATCATCCAGTACCTTAAAGCCCTGATTGTGTATATTCATATATTTTGGATACGCACCCC
CCAACTCCCAATACTGGCTCTGTCTGAGTAAGAAACAGAATCCTCTGGAACCTTGAGGAAGTGAACATTTCCGGTGA
CTTCCGCATCAGGAAGGCTAGAGTTACCCAGAGCATCAGGCCGCCACAAGTGCTTTTAGGAGACCGAAGTC
CGCAGAACCTGCCTGTGTCCCAGCTTGGAGGCCTGGTCTGGAACCTGAGCCGGGGCCCTCACTGGCCTCCTCCAG
GGATGATCAACAGGCGAGTGTGGTCTCCGAATGTCTGGAAGCTGATGGAGCTCAGAATTCACCTGTCAAGAAAGA
GCAGTAGAGGGGTGTGGCTGGGCCTGTACCCTGGGGCCCTCCAGGTAGGCCCGTTTCACGTGGAGCATGGGAG
CCACGACCCCTTCTTAAGACATGTATCACTGTAGAGGGAAGGAACAGAGGCCCTGGGGCCCTTCCATCAGAAGGAC
ATGGTGAAGGCTGGGAACGTGAGGAGAGGCAATGGCCACGGCCCATTTTGGCTGTAGCACATGGCACGTTGGCTG
TGTGGCCTTGGCCACCTGTGAGTTTAAAGCAAGGCTTTAAATGACTTTGGAGAGGGTCACAAATCCTAAAGAA
GCATTGAAGTGAGGTGTATGGATTAATTGACCCCTGTCTATGGAATTACATGTAACATTATCTTGTCACTGT
AGTTTGGTTTTATTTGAAAACCTGACAAAAAAAAGTTCCAGGTGTGGAATATGGGGGTATCTGTACATCCTGG
GGCATTAAAAAAAATCAATGGTGGGGAACCTATAAAGAAGTAACAAAAGAAGTGACATCTTCAGCAAATAAAT
AGGAAATTTTTTTTTCTTCCAGTTTGAATCAGCCTTGAAACATTGATGGAATAACTCTGTGGCATTATTGCATT
ATATACATTTATCTGTATTAACCTTTGGAATGTACTCTGTTCAATGTTTAAATGCTGTGGTTGATATTTGAAAGC
TGCTTTAAAAAATACATGCATCTCAGCGTTTTTTTTGTTTTTAAATGATTTAGTTATGGCCTATACACTATTTG
TGAGCAAAGGTGATCGTTTTCTGTTTGAGATTTTTATCTCTTGATTCTTCAAAGCATTCTGAGAAGGTGAGATA
AGCCCTGAGTCTCAGCTACCTAAGAAAAACCTGGATGTCACCTGGCCACTGAGGAGCTTTGTTTCAACCAAGTCAT
GTGCATTTCCACGTCAACAGAATTGTTTATTGTGACAGTTATATCTGTTGTCCCTTTGACCTTGTCTTGAAGG
TTTCTCGTCCCTGGGCAATTCCGCATTTAATTCATGGTATTCAGGATTACATGCATGTTTGGTTAAACCCATGA
GATTCATTCAAGTTAAAAATCCAGATGGCAAATGACCAGCAGATTCAAATCTATGGTGGTTTGACCTTTAGAGAGT
TGCTTTACGTGGCCTGTTTCAACACAGACCCACCCAGAGCCCTCCTGCCCTCCTTCCGCGGGGGCTTTCTCATGG
CTGTCTTTCAGGGTCTTCTGAAATGCAGTGGTGTACGCTCCACCAAGAAAGCAGGAAACCTGTGGTATGAAG
CCAGACCTCCCCGGCGGGCCTCAGGGAACAGAAATGATCAGACCTTTGAATGATTCTAATTTTTAAGCAAAATATT
ATTTTATGAAAGGTTTACATTGTCAAAGTGATGAATATGGAATATCCAATCCTGTGCTGCTATCCTGCCAAAATC
ATTTTAATGGAGTCAGTTTGCAGTATGCTCCACGTGGTAAGATCCTCCAAGCTGCTTTAGAAGTAACAATGAAGA
ACGTGGACGCTTTTAAATATAAAGCCTGTTTTGTCTTCTGTTGTTGTTCAAACGGGATTACAGAGTATTTGAAAA
ATGTATATATATTAAGAGGTCACGGGGGCTAATTGCTGGCTGGCTGCCTTTTGCTGTGGGGTTTTGTTACCTGGT
TTTAATAACAGTAAATGTGCCAGCCTCTTGCCCCAGAAGTGTACAGTATTGTGGCTGCACTTGCTCTAAGAGT

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FIGURE 332B

AGTTGATGTTGCATTTTCCTTATTGTTAAAAACATGTTAGAAGCAATGAATGTATATAAAAGCCTCAACTAGTCA
TTTTTTTCTCCTCTTCTTTTTTTTTCATTATATCTAATTATTTTGCAGTTGGGCAACAGAGAACCATCCCTATTTT
GTATTGAAGAGGGATTACATCTGCATCTTAAGTCTCTTTATGAATGAAAAACAGTCTCTGTATGTACTCCT
CTTTACACTGGCCAGGGTCAGAGTTAAATAGAGTATATGCACCTTCCAAATTGGGGACAAGGGCTCTAAAAAAG
CCCCAAAAGGAGAAGAATCTGAGAACCTCCTCGGCCCTCCAGTCCCTCGCTGCACAAATACTCCGCAAGAGA
GGCCAGAATGACAGCTGACAGGGTCTATGGCCATCGGGTCGTCTCCGAAGATTTGGCAGGGGCAGAAAACCTCTGG
CAGGCTTAAGATTTGGAATAAAGTCACAGAATCAAGGAAGCACCTCAATTTAGTTCAAACAAGACGCCAACATTC
TCTCCACAGCTCACTTACCTCTCTGTGTTTCAGATGTGGCCTTCCATTTATATGTGATCTTTGTTTTATTAGTAAA
TGCTTATCATCTAAAGATGTAGCTCTGGCCAGTGGGAAAAATTAGGAAGTGATTATAAATCGAGAGGAGTTATA
ATAATCAAGATTAATGTAAATAATCAGGGCAATCCCAACACATGTCTAGCTTTACCTCCAGGATCTATTGAGT
GAACAGAATTGCAAATAGTCTCTATTTGTAATTGAACCTTATCCTAAAACAAATAGTTTATAAATGTGAACCTAAA
CTCTAATTAATTCCAACTGTACTTTTAAAGGCAGTGGCTGTTTTTAGACTTTCTTATCACTTATAGTTAGTAATGT
ACACCTACTCTATCAGAGAAAAACAGGAAAGGCTCGAAATACAAGCCATTCTAAGGAAATTAGGGAGTCAGTTGA
AATTCATTCTGATCTTATTCTGTGGTGTCTTTTGCAGCCAGACAAATGTGGTTACACACTTTTTAAGAAATAC
AATTCATACATTGTCAAGCTTATGAAGGTTCCAATCAGATCTTTATTGTTATTCAATTTGGATCTTTCAGGGATTT
TTTTTTTAAATTATTATGGGACAAAGGACATTTGTTGGAGGGGTGGGAGGGAGGAACAATTTTTAAATATAAAAC
ATTCCCAAGTTTGGATCAGGGAGTTGGAAGTTTTGAGAATAACCAGAACTAAGGGTATGAAGGACCTGTATTGGG
GTCGATGTGATGCCTCTGCGAAGAACCTTGTGTGACAAATGAGAAACATTTTGAAGTTTGTGGTACGACCTTTAG
ATTCCAGAGACATCAGCATGGCTCAAAGTGCAGCTCCGTTTGGCAGTGCAATGGTATAAATTTCAAGCTGGATAT
GTCTAATGGGTATTTAAACAATAAATGTGCAGTTTTAACTAACAGGATATTTAATGACAACCTTCTGGTTGGTAG
GGACATCTGTTTCTAAATGTTTATTATGTACAATACAGAAAAAAATTTTATAAAATTAAGCAATGTGAACTGAA
TTGGAGAGTGATAATACAAGTCCTTTAGTCTTACCCAGTGAATCATTCTGTTCCATGTCTTTGGACAACCATGAC
CTTGGACAATCATGAAATATGCATCTCACTGGATGCAAAGAAAAATCAGATGGAGCATGAATGGTACTGTACCGGT
TCATCTGGACTGCCCCAGAAAAATAACTTCAAGCAAACATCCTATCAACAACAAGGTTGTTCTGCATACCAAGCT
GAGCACAGAAGATGGGAACACTGGTGGAGGATGGAAAGGCTCGCTCAATCAAGAAAATTCTGAGACTATTAATAA
ATAAGACTGTAGTGTAGATACTGAGTAAATCCATGCACCTAAACCTTTTGGAAAATCTGCCGTGGGCCCTCCAGA
TAGCTCATTTCATTAAGTTTTTCCCTCCAAGGTAGAATTTGCAAGAGTGACAGTGGATTGCATTTCTTTTGGGGA
AGCTTCTTTTGGTGGTTTTGTTTTATTATACCTTCTTAAGTTTTCAACCAAGGTTTGCTTTTGTGTTTGAAGTTACT
GGGTTATTTTTGTTTTAAATAAAAAATAAGTGACAATAAGTGTTTTTGTATTGAAAGCTTTTGTATCAAGATT
TTCATACTTTTACCTTCCATGGCTCTTTTAAAGATTGATACTTTTAAAGAGGTGGCTGATATTCTGCAACACTGTA
CACATAAAAAATACGGTAAGGATACTTTACATGGTTAAGGTAAAGTAAGTCTCCAGTTGGCCACCATTAGCTATA
ATGGCACTTTGTTTGTGTTGTTGGAAAAAGTCACATTGCCATTAAACTTTCCTTGTCTGTCTAGTTAATATTGTG
AAGAAAAATAAAGTACAGTGTGAGATACTG

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FIGURE 333

MAHAGRTGYDNREIVMKYIHYKLSQRGYEWDA GDVGAAPPGAAPAPGIFSSQPGHTPHPAASRDPVARTSPLQTP
AAPGAAAGPALSPVPPVVHLALRQAGDDFSRRYRGDFAEMSSQLHLTPFTARGREATVVEELFRDGVNWGRIVAF
FEFGGVMCVESVNREMSPLVDNIALWMTEYLNRLHTWIQDNGGWVGASGDVSLG

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FIGURE 334

GAGTGA CTCCACCGCCCGGAGCAGCGGTGCAGGACGCGCGTCTCCGCCGCCCGCGGTGACTTCTGCCTGCGCTCC
TTCTCTGAACGCTCACTTCCGAGGAGACGCCGACGATGAAGACACCGTGGAAGGTTCTTCTGGGACTGCTGGGTG
CTGCTGCGCTTGTACCATCATCACCGTGCCCGTGGTTCTGCTGAACAAAGGCACAGATGATGCTACAGCTGACA
GTCGCAAACTTACACTCTAACTGATTACTTAAAAATACTTATAGACTGAAGTTATACTCCTTAAGATGGATTT
CAGATCATGAATATCTCTACAAACAAGAAAATAATATCTTGGTATTCAATGCTGAATATGGAACAGCTCAGTTT
TCTTGGAGAACAGTACATTTGATGAGTTTGGACATTCTATCAATGATTATTCAATATCTCCTGATGGGCAGTTTA
TTCTCTTAGAATACAACACTACGTGAAGCAATGGAGGCATTCTACACAGCTTCATATGACATTTATGATTTAAATA
AAAGGCAGCTGATTACAGAAGAGAGGATTCCAAACAACACACAGTGGGTCACATGGTCACCAGTGGGTCATAAAT
TGGCATATGTTTGGAACAATGACATTTATGTTAAATTTGAACCAATTTACCAAGTTACAGAATCACATGGACGG
GGAAAGAAGATATAATATATAATGGAATACTGACTGGGTTTATGAAGAGGAAGTCTTCAGTGCCTACTCTGCTC
TGTGGTGGTCTCCAAACGGCACTTTTTTAGCATATGCCCAATTTAACGACACAGAAGTCCCACTTATTGAATACT
CCTTCTACTCTGATGAGTCACTGCAGTACCCAAAGACTGTACGGGTTCCATATCCAAAGGCAGGAGCTGTGAATC
CAACTGTAAAGTTCTTTGTTGTAAATACAGACTCTCTCAGCTCAGTCACCAATGCAACTTCCATACAAATCACTG
CTCCTGCTTCTATGTTGATAGGGGATCACTACTTGTGTGATGTGACATGGGCAACACAAGAAAAGATTTCTTTGC
AGTGGCTCAGGAGGATTGAGAACTATTCGGTCATGGATATTTGTGACTATGATGAATCCAGTGGGAAGATGGAACT
GCTTAGTGGCACGGCAACACATTGAAATGAGTACTACTGGCTGGGTTGGAAGATTTAGGCCCTTCAGAACCTCATT
TTACCCCTTGATGGTAATAGCTTCTACAAGATCATCAGCAATGAAGAAGGTACAGACACATTTGCTATTTCCAAA
TAGATAAAAAAGACTGCACATTTATTACAAAAGGCACCTGGGAAGTCATCGGGATAGAAGCTCTAACCACTGATT
ATCTATACTACATTAGTAATGAATATAAAGGAATGCCAGGAGGAAGGAATCTTTATAAAATCCAACTTAGTGACT
ATACAAAAGTGACATGCCTCAGTTGTGAGCTGAATCCGGAAAGGTGTGAGTACTATTCTGTGTCATTTCAGTAAAG
AGGCGAAGTATTATCAGCTGAGATGTTCCGGTCTGGTCTGCCCTCTATACTCTACACAGCAGCGTGAAATGATA
AAGGGCTGAGAGTCTTGGAAAGACAATTCAGCTTTGGATAAAATGCTGCAGAATGTCCAGATGCCCTCCAAAAAC
TGGACTTCATTATTTTGAATGAAACAAAATTTTGGTATCAGATGATCTTGCCTCCTCATTTTGGATAAATCCAGA
AATATCCTCTACTATTAGATGTGTATGCAGGCCCATGTAGTCAAAAAGCAGACACTGTCTTCAGACTGAACTGGG
CCACTTACCTTGCAAGCACAGAAAACATTATAGTAGCTAGCTTTGATGGCAGAGGAAGTGGTTACCAAGGAGATA
AGATCATGCATGCAATCAACAGAAGACTGGGAACATTTGAAGTTGAAGATCAAATTGAAGCAGCCAGACAAATTT
CAAAAATGGGATTTGTGGACAACAAACGAATTGCAATTTGGGGCTGGTCATATGGAGGGTACGTAACCTCAATGG
TCCTGGGATCGGGAAGTGGCGTGTTCAGTGTGGAATAGCCGTGGCGCCTGTATCCCGGTGGGAGTACTATGACT
CAGTGACACAGAACGTTACATGGGTCTCCAACTCCAGAAGACAACCTTGACCATTACAGAAATTCAACAGTCA
TGAGCAGAGCTGAAAATTTTAAACAAGTTGAGTACCTCCTTATTCATGGAACAGCAGATGATAACGTTCACTTTC
AGCAGTCAGCTCAGATCTCCAAAGCCCTGGTTCGATGTTGGAGTGGATTCCAGGCAATGTGGTATACTGATGAAG
ACCATGGAATAGCTAGCAGCACAGCACACCAACATATATATACCCACATGAGCCACTTCATAAAACAATGTTTCT
CTTTACCTTAGCACCTCAAAAATACCATGCCATTTAAAGCTTATTAAGCTCATTGTTTTGTTTTATTATCTCAAAA
CTGCACTGTCAAGATGATGATGATCTTTAAATAACACACTCAAATCAAGAACTTAAGGTTACCTTTGTTCCCAA
ATTTACATACCTATCATCTTAAGTAGGGACTTCTGTCTTCACAACAGATTATTACCTTACAGAAGTTTGAATTATC
CGGTGGGTTTTTATTGTTTAAATCATTCTGTCATCAGCTGCTGAAACAACAAATAGGAATTGTTTTATGGAGG
CTTTGCATAGATTCCCTGAGCAGGATTTTAACTTTTTCTAACTGGACTGGTTCAAATGTTGTTCTCTTTTAA
AGGGATGGCAAGATGTGGGCAGTGATGTCACTAGGGCAGGGACAGGATAAGAGGGGATTAGGGAGAGAAGATAGCA
GGGCATGGCTGGGAACCCAAGTCCAAGCATACCAACACGAGCAGGCTACTGTGAGCTCCCTCGGAGAAGAGCTG
TTCACAGCCAGACTGGCACAGTTTCTGAGAAAGACTATTCAAACAGTCTCAGGAAATCAAATATGCAAAGCACT
GACTTCTAAGTAAACCACAGCAGTTGAAAAGACTCCAAAGAAATGTAAGGGAACTGCCAGCAACGCAGGCCCC
CAGGTGCCAGTTATGGCTATAGGTGCTACAAAACACAGCAAGGGTGATGGGAAAGCATTGTAAATGTGCTTTTA
AAAAAAATACTGATGTTTCTAGTGAAAGAGGCAGCTTGAAACTGAGATGTGAACACATCAGCTTGCCCTGTAA
AAGATGAAAATATTTGTATCAAAATCTTAACTTGAAGGAGTCTTGCATCAATTTTCTTATTTCAATTTCTTTG
AGTGTCTTAATTAAGAATATTTTAACTTCCCTGGACTCATTTTAAAAAATGGAACATAAAATACAATGTTATG
TATTATTATCCATTCTACATACTATGGAATTTCTCCAGTCATTTAATAAATGTGCCTTCATTTTTTC

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FIGURE 335

MKTPWKVLLGLLGAAALVTIIITVPVLLNKGTDATADSRKTYTLTDYLNKNTYRLKLYSLRWISDHEYLYKQENN
ILVFNAEYGNSSVFLENSTFDEFGHSINDYSISPDGQFILLEYNVVKQWRHSYTASYDIYDLNKRQLITEERIPN
NTQWVTWSPVGHKLAYVWNNDIYVKIEPNLPSYRITWTGKEDI IYNGITDWVYEEVFSAVSALWWSPNGTFLAY
AQFNDTEVPLIEYSFYSDSLQYPKTVRVFPYKAGAVNPTVKFFVNTDSLSSVTNATSIQITAPASMLIGDHYL
CDVTWATQERISLQWLRRIQNYSVMDICDYDESSGRWNCLVARQHIEMSTTGWVGRFRPSEPHFTLDGNSFYKII
SNEEGYRHICYFQIDKKDCTFITKGTWEVIGIEALTSYLYYISNEYKGMPPGGRNLYKIQLSDYTKVTCLSCELN
PERCQYYSVSFSKEAKYYQLRCSGPGLPLYTLHSSVNDKGLRVLEDNSALDKMLQNVQMPSKKLDFIILNETKFW
YQMILPPHFDKSKKYPLLLDVYAGPCSQKADTVFRLNWATYLASTENIIVASFDRGSGYQGDKIMHAINRRLGT
FEVEDQIEAARQFSKMGFVDNKRIAIWGSYGGYVTSMVLGSGSGVFKCGIAVAPVSRWEYDVSYTERYMGLPT
PEDNLDHYRNSTVMSRAENFKQVEYLLIHGTADDNVHFQQAQISKALVDVGVDVFQAMWYTDEDHGIASSTAHQH
IYTHMSHFQKCFSLP

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FIGURE 336

CGCGCGTCTCCGCCGCCCGCTGACTTCTGCGCTGCGCTCCTTCTCTGAACGCTCACTTCCGAGGAGACGCCGACG
ATGAAGACACCGTGGAAAGATTCTTCTGGGACTGCTGGGTGCTGCTGCGCTTGTACCATCATCACCGTGCCCCGTG
GTTCTGCTGAACAAAGGCACAGATGATGCTACAGCTGACAGTCGAAAACCTTACACTCTAACTGATTACTTAAAA
AATACTTATAGACTGAAGTTTATACTCCTTAAGATGGATTTTCAGATCATGAATATCTCTACAAACAAGAAAATAAT
ATCTTGGTATTCAATGCTGAATATGGAAACAGCTCAGTTTTCTTGGAGAACAGTACATTTTGATGAGTTTGGACAT
TCTATCAATGATTATTCAATATCTCCTGATGGGCAGTTTATTCTCTTAGAATACAACCTACGTGAAGCAATGGAGG
CATTCTACACAGCTTCATATGACATTTATGATTTAAATAAAAGGCAGCTGATTACAGAAGAGAGGATTCCAAAC
AACACACAGTGGGTACATGGTCACCACTGGGTGCTAAATTGGCATAATGTTTGGAAACAATGACATTTATGTTAA
ATTGAACCAAATTTACCAAGTTACAGAATCACATGGACGGGGAAGAAGATATAATATATAATGGAATAACTGAC
TGGGTTTATGAAGAGGAAGTCTTCAGTGCCTACTCTGCTCTGTGGTGGTCTCCAAACGGCACTTTTTTTAGCATAT
GCCCAATTTAACGACACAGAAGTCCCACTTATTGAATACTCCTTCTACTCTGATGAGTCACTGCAGTACCCAAAG
ACTGTACGGGTTCCATATCCAAAGGCAGGAGCTGTGAATCCAACCTGTAAAGTTCTTTGTTGTAAATACAGACTCT
CTCAGCTCAGTCACCAATGCAACTTCCATACAAATCACTGCTCCTGCTTCTATGTTGATAGGGGATCACTACTTG
TGTGATGTGACATGGGCAACACAAGAAAGAAATTTCTTTGCAGTGGCTCAGGAGGATTGAGAACTATTTCGGTCATG
GATATTTGTGACTATGATGAATCCAGTGGAAAGATGGAACCTGCTTAGTGGCACGGCAACACATTGAAATGAGTACT
ACTGGCTGGGTTGGAAGATTTAGGCCTTCAGAACCTCATTTTACCCTTGATGGTAATAGCTTCTACAAGATCATC
AGCAATGAAGAAGGTTACAGACACATTTGCTATTTCCAAATAGATAAAAAAGACTGCACATTTATTACAAAAGGC
ACCTGGGAAGTCATCGGGATAGAAGCTCTAACCACTGATTATCTATACTACATTAGTAATGAATATAAAGGAATG
CCAGGAGGAAGGAATCTTTATAAAATCCAACCTTATTGACTATACAAAAGTGACATGCCTCAGTTGTGAGCTGAAT
CCGGAAGGTGTGAGTACTATTCTGTGTCATTTCAGTAAAGAGGCGAAGTATTATCAGCTGAGATGTTCCGGTCTCT
GGTCTGCCCCCTCTATACTCTACACAGCAGCGTGAATGATAAAGGGCTGAGAGTCTGGAAGACAATTCAGCTTTG
GATAAAATGCTGCAGAATGTCCAGATGCCCTCCAAAAAACTGGACTTCATTATTTTGAATGAAACAAAATTTTGG
TATCAGATGATCTTGCTCCTCATTTTGATAAAATCCAAGAAATATCCTCTACTATTAGATGTGTATGCAGGCCCA
GTAGTCAAAAAGCAGACACTGTCTTCAGACTGAACTGGGCCACTTACCTTGCAAGCACAGAAAACATTATAGTA
GCTAGCTTTTGATGGCAGAGGAAGTGGTTACCAAGGAGATAAGATCATGCATGCAATCAACAGAAGACTGGGAACA
TTTGAAGTTGAAGATCAAATTGAAGCAGCCAGACAATTTTCAAAAATGGGATTGTGGACAACAAACGAATTGCA
ATTTGGGGCTGGTCATATGGAGGGTACGTAACCTCAATGGTCTGGGATCGGGAAGTGGCGTGTTCAGTGTGGA
ATAGCCGTGGCGCCTGTATCCCGGTGGGAGTACTATGACTCAGTGTACACAGAACGTTACATGGGTCTCCCAACT
CCAGAAGACAACCTTGACCATTACAGAAATTC AACAGTCATGAGCAGAGCTGAAAATTTTAAACAAGTTGAGTAC
CTCCTTATTTCATGGAACAGCAGATGATAACGTTCACTTTCAGCAGTCAGCTCAGATCTCCAAAGCCCTGGTCGAT
GTTGGAGTGGATTTCCAGGCAATGTGGTATACTGATGAAGACCATGGAATAGCTAGCAGCACAGCACACCAACAT
ATATATACCCACATGAGCCACTTCATAAAACAATGTTTCTCTTTACCTTAGCACCTCAAAAATACCATGCCATTTA
AAGCTTATTA AAACTCATTTTTGTTTTTATTATCTCAAACTGCACTGTCAAGATGATGATGATCTTTAAATAC
ACACTCAAATCAAGAACTTAAGGTTACCTTTGTTCCCAAATTTTCATACCTATCATCTTAAGTAGGGACTTCTGT
CTTCACAACAGATTATTACCTTACAGAAGTTTGAATTATCCGGTGGGTTTTATTGTTTTAAATCATTTCTGCAT
CAGCTGCTGAAACAACAAATAGGAATTGTTTTTATGGAGGCTTTGCATAGATTCCCTGAGCAGGATTTTAAATCTT
TTTCTAACTGGACTGGTTCAAATGTTGTTCTCTTCTTTAAAGGGATGGCAAGATGTGGGCAGTGTGCTACTAGG
GCAGGGACAGGATAAGAGGGATTAGGGAGAGAAGATAGCAGGGCATGGCTGGGAACCCAAGTCCAAGCATACCAA
CACGAGCAGGCTACTGTGCTCAGCTCCCCTCGGAGAAGAGCTGTTACACCAGGAGACTGGCACAGTTTTCTGAGAAAGA
CTATTCAAACAGTCTCAGGAAATCAAATATCGAAAGCACTGACTTCTAAGTAAACCACAGCAGTTGAAAGACTCC
AAAGAAATGTAAGGGAACTGCCAGCAACGCAGCCCCCAGGTGCCAGTTATGGCTATAGGTGCTACAAAAACACA
GCAAGGGTGATGGGAAGCATTGTAAATGTGCTTTTAAAAAAAATACTGATGTTCTTAGTGAAAGAGGCAGCTT
GAAACTGAGATGTGAACACATCAGCTTGCCCTGTTAAAGATGAAAATATTTGTATCACAAATCTTAACTTGAAG
GAGTCTTGCATCAATTTTTCTTATTTTCAATTTCTTTGAGTGTCTTAATTAAAGAATATTTTAACTTCTTGGAC
TCATTTTAAAAAATGGAACATAAAATACAATGTTATGTATTATTATCCATTCTACATACTATGGAATTTCTCC
CAGTCATTTAATAAATGTGCCTTCATTTTTTC

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FIGURE 337

MKTPWKILLGLLGAAALVTIITVPVLLLNKGTDDATADSRKTYTLTDYLNKNTYRLKLYSLRWISDHEYLYKQENN
ILVFNAEYGNSSVFLENSTFDEFGHSINDYSISPDGQFILLEYNVVKQWRHSYTASYDIYDLNKRQLITEERIPN
NTQWVTWSPVGHKLAYVWNNDIYVKIEPNLPSYRITWTGKEDIYNGITDWVYEEEFVSAYSALWWSPNGTFLAY
AQFNDTEVPLIEYSFYSDSLQYPKTVRVPYPKAGAVNPTVKFFVVNTDSLSSVTNATSIQITAPASMLIGDHYL
CDVTWATQERISLQWLRRIQNYSVMDICDYDESSGRWNCLVARQHIEMSTTGWVGRFRPSEPHTLDGNSFYKII
SNEEGYRHICYFQIDKKDCTFITKGTWEVIGIEALTSYLYYISNEYKGMPPGGRNLYKIQILIDYTKVTCLSCELN
PERCQYYSVSFSKEAKYYQLRCSGPGLPLYTLHSSVNDKGLRVLEDNSALDKMLQNVQMPSSKLDFFIILNETKFW
YQMILPPHFDKSKKYPLLLDVYAGPCSQKADTVFRLNWATYLASTENIIVASFDRGSGYQGDKIMHAINRRLGT
FEVEDQIEAARQFSKMGFVDNKRIAIWGWSYGGYVTSMLVLSGSGVFKCGIAVAPVSRWEYDSDVYTERYMGLPT
PEDNLDHYRNSTVMSRAENFKQVEYLLIHGTADDNVHFQQSAQISKALVDVGVDVFQAMWYTDDEHGIASSTAHQH
IYTHMSHFIKQCFSLP

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FIGURE 338

AAGTGCTGCGAGCCCTGGGCCACGCTGGCCGTGCTGGCAGTGGGCCGCCTCGATCCCTCTGCAGTCTTTCCCTTG
AGGCTCCAAGACCAGCAGGTGAGGCCTCGCGGCGCTGAAACCGTGAGGCCCGGACCACAGGCTCCAGATGGACCC
TGGGAAGGACAAAGAGGGGGTGCCCCAGCCCTCAGGGCCGCCAGCAAGGAAGAAATTTGTGATACCCCTCGACGA
GGATGAGGTCCCTCCTGGAGTGGCCAAGCCCTTATTCCGATCTACACAGAGCCTTCCCAGTGTGGACACCTCGGC
CCAGGCGGGCCCTCAGACCTACGCCGAATATGCCATCTCACAGCCTCTGGAAGGGGCTGGGGCCACGTGCCCCAC
AGGGTCAGAGCCCTGGCAGGAGAGACGCCCAACCAGGCCCTGAAACCCGGGGCAAAATCCAACAGCATCATTGT
GAGCCCTCGGCAGAGGGGCAATCCCGTACTGAAGTTCGTGCGCAACGTGCCCTGGGAATTTGGCGACGTAATTCC
CGACTATGTGCTGGGCCAGAGCACCTGTGCCCTGTTCCCTCAGCCTCCGCTACCACAACCTGCACCCAGACTACAT
CCATGGGCGGCTGCAGAGCCTGGGGAAGAACTTCGCCTTGCGGGTCCTGCTTGTCCAGGTGGATGTGAAAGATCC
CCAGCAGGCCCTCAAGGAGCTGGCTAAGATGTGTATCCTGGCCGACTGCACATTGATCCTCGCCTGGAGCCCCGA
GGAAGCTGGGCGGTACCTGGAGACCTACAAGGCCTATGAGCAGAAACCAGCGGACCTCCTGATGGAGAAGCTAGA
GCAGGACTTCGTCTCCCGGGTGACTGAATGTCTGACCACCGTGAAGTCAGTCAACAAAACGGACAGTCAGACCCCT
CCTGACCACATTTGGATCTCTGGAACAGCTCATCGCCGCATCAAGAGAAGATCTGGCCTTATGCCCAGGCCTGGG
CCCTCAGAAAGCCCGGAGGCTGTTTGATGTCTGCACGAGCCCTTCTTGAAAGTACCCTTGATGACCCAGCTGCC
AAGGAAACCCCAAGTGTAAATAATAAATCGTCTCCAGGCCAGGCTC

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FIGURE 339

MDPGKDKEGVPPQPSGPPARKKFVIPLDEDEVPPGVAKPLFRSTQSLPTVDTSAQAAPQTYAEYAI SQPLEGAGAT
CPTGSEPLAGETPNQALKPGAKSNSIIIVSPRQRGNPVLKFVRNVWFEFGDVIPDYVLGQSTCALFLSLRYHNLHP
DYIHGRLQSLGKNFALRVLLVQVDVKDPQQALKELAKMCILADCTLILAWSPEEAGRYLETYKAYEQKPADLLME
KLEQDFVSRVTECLTTVKS VNKTDSQTLLTTFGSLEQLIAASREDLALCPGLGPQKARRLFDVLHEPFLKVP

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FIGURE 340A

GCCAGCGATCAGAGCAGCGCTGGGTGTTTCAGGGGCCAAGATGGCGGCGCGCCGGGGACGGAGAGACGGAGTCGCG
CCGCCCCCAGTGGGGCCCCGGTCCGGACCCTGGCGGGGGAGCCCGCGGCAGTGGTTGGCGAAGTCGAAGCCAA
GCGCCGTATGGGACTTTGGGCGCTGTGAGCGGCGGCGAGCAGGTGCTGCTGCATGAGGAGGCGGGTGATTCTGGC
TTTGTCACTCTCTCTCGGCAGGGCCCATCTCTGAGGGACAAGGACCTGGAAATGGAGGAGCTAATGCTGCAGGAT
GAGACACTGCTGGGGACCATGCAGAGCTACATGGATGCCTCCCTTATCTCCCTCATTGAGGATTTTGGGAGCCTT
GGAGAGAGCAGGTTATCTCTGGAGGACCACAATGAAGTGTGCTGCTCACGGCTCTGACGGAGATCTTGGACAAT
GCAGATTCTGAGAACCTTTCTCCATTGACAGCATTCTGATTGCGAGCTGCTTGTGTACCCCCGGGAGGGCTCC
TCTCTGCACAAGCTGCTTACTCTCTCTCGGACACCCCCAGAACGTGACCTCATCACCCCAGTTGACCCACTGGGG
CCCAGTACGGGCAGCAGTAGAGGGAGTGGGGTTGAAATGTCTCTTCCAGATCCCTCTTGGGACTTCTCCCCACCC
TCTTTCTTAGAGACCTCTTCCCCCAAGCTTCCTAGCTGGAGACCCCCAAGATCAAGACCACGCTGGGGCCAAATCC
CCACCTCCCCAGCAGCGCAGTGATGGAGAAGAAGAGGAGGAGGTGGCCAGCTTCAGTGGCCAGATTCTTGCCGGG
GAGCTTGACAACCTGTGTGAGCAGTATCCCGGACTTCCCCATGCATTTGGCCTGCCCTGAGGAGGAAGATAAAGCA
ACAGCAGCAGAGATGGCAGTGCCAGCAGCTGGTGATGAGAGCATCTCCTCCCTGAGTGAGCTGGTGCGGGCCATG
CACCCATACTGCCTGCCCAACCTCACCCACCTGGCATCATTGAGGATGAGCTTCAGGAGCAGCCAGATGATTTG
ACACTGCCTGAGGGCTGCGTAGTGCTGGAGATTGTGGGGCAGGCAGCCACAGCTGGCGATGACCTGGAGATCCCA
GTTGTGGTGCGACAGGTCTCTCCTGGACCCCGGCTGTGCTCCTGGATGACTCGCTAGAGACTAGTTCTGCCTTG
CAGCTGCTTATGCCTACACTGGAGTCAGAGACAGAGGCTGCTGTGCCCAAGGTAACCTCTGCTCTGAGAAAGAG
GGGTTGTCAATTGAACCTCAGAGGAGAAGCTGGACTCAGCCTGCTTATTGAAGCCAGGGAGGTGCTGGAGCCGGTG
GTGCCCAAGGAGCCTCAGAACCACCTGCCAATGCAGCACCAGGTTCCAGAGAGCTCGAAAGGGCAGGAAGAAG
AAGAGCAAGGAGCAGCCAGCAGCCTGTGTGGAAGGCTATGCCAGGAGGCTGAGGTCATCTTCTCGCGGGCAGTCT
ACTGTAGGTACAGAAGTGACCTCTCAGGTAGACAACCTGCAGAAACAGCCTCAGGAAGAACCTCAAAAAGAGTCT
GGGCCTCTCCAGGGTAAGGGGAAGCCCCGGGCTTGGGCTCGGGCCTGGGCAGCTGCCTTGGAGAATTCTAGCCCT
AAGAACCTTGAGAGAAGTGCTGGACAAAGTAGTCTGCTAAAGAAGGCCCTCTAGACCTCTACCCAAAGCTGGCT
GACACTATCCAAACCAATCCTATACCAACCCATCTCTCATTGGTCGACTCTGCCCAAGCCAGCCCCATGCCAGTT
GACTCTGTTGAAGCTGATCCCACTGCAGTTGGCCCTGTTCTAGCTGGCCCTGTACCTGTTGACCTGGGTTGGTT
GACCTTGCTTCAACCAGCTCAGAACTGGTTGAGCCTCTCCCGGCTGAGCCAGTGCTGATCAACCCAGTCCTGGCT
GACTCAGCAGCAGTTGACCTGCAGTGTTCCCATCTCAGATAACTTGCCACCAGTTGATGCTGTCCCGTCTGGC
CCAGCACCAGTTGATCTAGCACTGGTTGACCCTGTTCTAATGACCTGACTCCAGTTGACCCAGTGCTAGTTAAG
TCCAGACCAACTGATCCCAGACGTGGTGAGTGTATCAGCCCTGGGGGGTTTACGACCCCCAGCTCCTCGTGGAG
TCAGAGTCCTTGACCCACCAAAGACCATCATCCCTGAAGTCAAAGAGGTTGTGGATTCTCTGAAAATTGAAAGT
GGTACCAGTGCTACAACCCATGAAGCCAGACCTCGGCCTCTCAGCTTATCTGAGTACCGGCGACGAAGGCAGCAA
CGCCAAGCAGAAACAGAAGAGAGAAGTCCACAGCCCCCAACTGGGAAGTGGCCTAGCCTTCCAGAGACTCCCACA
GGGCTGGCAGACATCCCTTGCTTGTCTATCCACCAGCCCCAGCCAAGAAGACAGCTCTGCAGAGAAGCCCTGAA
ACACCCCTTGAGATTTGCCTTGTGCCTGTAGGTCCAGCCCTGCTTCTCCTAGTCTCTGAGCCACCTGTAAGCAAA
CCTGTGGCCTCATCTCCCACTGAGCAGGTGCCATCCCAGGAGATGCCACTGTTGGCGAGACCTTCCCTCCTGTG
CAGTCTGTGTCCCTGCTGTGCCCCACACCTCCCTCGATGTCTGCTGCCCTGCCCTTCCCTGCAGGTGGGCTTGGC
ATGCCCCCAGTCTGCCCCACCTCCCTTGACGCTCCTAGTCTTCCATTGTCTATGGGGCCAGTACTACCTGAT
CCGTTTACTCACTATGCCCCCTTGCCATCCTGGCCTTGTTATCCTCATGTGTCCCTTCTGGCTATCCTTGCCCTG
CCCCCCCCACCAACGGTGCCCCCTAGTGTCTGGTACTCCTGGTGCTATGCCGTGCCCTCCCACTGCAGTGTGCCT
TGGGCACCCCCCTCTGCCCCAGTCTCACCTTACAGTTCCACATGTACCTATGGGCCCTTGGGATGGGGCCAGGG
CCTCAACATGCTCCATTCTGGTCTACTGTTCCCCACCTCCTTTGCCCTCCAGCCTCCATTGGGAGAGCTGTTCCC
CAACCTAAATGGAGTCTAGGGGCACTCCAGCTGGCCCTCCTGAAAATGTACTTCCCTTGTCGATGGCTCCTCCC
CTCAGTCTTGGGCTACCTGGCCATGGAGCTCCTCAGACAGAGCCTACCAAGGTGGAGGTCAAGCCAGTGCTGCA
TCTCCCCATCCGAAACACAAGGTGTCTGCCCTGGTGCAAAGTCCCCAGATGAAGGCTCTAGCATGTGTGTCTGCT
GAAGGTGTGACTGTTGAGGAGCCTGCATCAGAGAGGCTAAAGCCTGAGACCCAAGAGACCAGGCCAGGGAGAAG
CCCCCTTGCCCTGCTACCAAGGCTGTTCCACACCAAGGCAGAGCACTGTCCCAAGCTGCCTGCTGTCCACCCA
GCCCGTCTAAGGAAGCTGTCTTCCCTGCCTACCCACGTACTCAGGGTTCTGAAGATGTGGTACAGGCTTTTCATC
AGTGAGATTGGAATTGAGGCATCGGACCTGTCCAGTCTGCTGGAGCAGTTTGAGAAATCAGAAGCCAAAAAGGAG

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FIGURE 340B

TGTCCTCCTCCGGCTCCTGCTGACAGCTTGGCTGTAGGAAACTCAGGCGGCGTTGACATTCCCCAGGAGAAGAGG
CCCTAGACCGGTTACAAGCCCCAGAAGCTGGCCAACGTGGCAGGGCTCACCCCTCCAGCTACCCCTCCCCACCAG
TTATGGAAGCCCTGGCTGCTGTCTCACTGCTGGCCAAAGCCAAATCTCCTAAGTCCACGCCCAGGAGGGAACC
CTGAAGCCTGAAGGAGTTACGGAGGCCAAACATCCAGCTGCAGTTCGCCTCCAAGAAGGGGTCCATGGCCCTAGT
CGAGTCCATGTGGGCTCTGGGGACCATGACTATTGTGTCCGGAGCAGGACCCCCCAAAAAGATGCCTGCCCTA
GTCATTCCAGAGGTGGGCTCCCGATGGAATGTCAAGCGCCATCAGGACATCACCATCAAACCTGTCTTGTCTTG
GGCCAGCTGCCCCCTCCGCCCCATGCATAGCTGCCTCCCGGGAGCCGCTTGATCACAGGACTAGCAGTGAGCAG
GCAGATCCCTCAGCACCTGCCTTGCCCCATCCAGCTTGCTGTCCCTGAGGCCTCACCTGCCGGAATGACATG
AACACTAGGACTCCCCCTGAACCCTCAGCCAAGCAGCGGTCAATGCGCTGTTACCGAAAAGCCTGCAGGTCAGCC
AGCCCCCAAGCCAGGGCTGGCAGGGCCGCGAGGCCGCAACAGCCGTTCTGTTCAGCTCTGGGTCCAACCGGACT
AGCGAAGCATCTTCCTCATCCTCATCATCGTCTTCCCTCATCCCGATCTCGGTCCAGGTCCCTCTCCCCCCCACAC
AAGAGGTGGCGAAGGTCCAGCTGTAGTTCTCTGGACGTTCTCGAAGATGCTCTTCCTCTTCTTCGTCATCATCT
TCCTCTTCGTCTTCCTCATCCTCATCATCCAGTTCTCGAAGCCGCTCACGATCCCCATCCCCCGCCGGAGAAGT
GACAGGAGGCGGCGGTACAGCTCTTATCGTTTACATGACCATTACCAAAGGCAAAGAGTGCTACAAAAGGAGCGT
GCAATAGAAGAAAGAAGGGTGGTCTTCATTGGAAAGATACCTGGCCGCATGACTCGATCAGAGCTGAAACAGAGG
TTCTCCGTTTTTGGAGAGATTGAGGAGTGACCATCCACTTCCGTGTCCAAGGGGACAACACTACGGCTTCGTCACT
TATCGCTATGCTGAGGAGGCATTTGCAGCCATTGAGAGTGGCCACAAGCTGCGGCAGGCAGATGAGCAGCCCTTT
GATCTCTGCTTTGGGGGCCGAAGGCAGTTCTGCAAGAGGAGCTATTCTGATCTTGACTCCAACCGGGAAGACTTT
GACCCAGCACCTGTAAAGAGCAAATTTGATTCTCTTGACTTTGACACATTGTTGAAACAGGCCCAGAAGAACCTC
AGGAGGTAAACCTTGGGCCCTTCCCTGCTATCCTTTTTCTCCTTTGGAGGTGCCAACCTCCTCCACCCCCCTTCCC
CTACTCTAGGGGAGAGAGCTGCTAGTGAGATGACTGTTTTATAAAGAAATGGAAAAAAGTGAAATAAAAAATATG
TTGAATCAGATTTTTTAAAGGGGTATTTGTTTTTTTATAACAGGTATTGAAACAAGTTAACTTGCAATCCTATG
TAAGATAGGAGGGGCTGAGGGGATCCCCAGTGTGGAACATAAGTCACTATGCAGACTAATAAACATCAACTAG
AGAGAGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 341

MAARRGRRDGVAPPPSGGPGDPGGGARGSGWRSRSQAPYGTILGAVSGGEQVLLHEEAGDSGFVSLSRQGPSLRD
KDLEMEELMLQDETLLGTMQSYMDASLISLIEDFGSLGESRLSLEDHNEVSLLTALTEILDNADSENLSPFDSIP
DSELLVSPREGSSSLHKLTLTSLRTPPERDLITPVDPLGPSTGSSRSGSVEMSLPDPSPWDFSPPSFLETSSPKLP
RPPRSRPRWGQSPPPQQRSDGEEEEVASFSGQILAGELDNCVSSIPDFPMHLACPEEEDKATAAEMAVPAAGDE
SISSELVLRAMHPYCLPNLTHLASLEDELQEQPDDLTLPPEGCVVLEIVGQAATAGDDLEIPVVVRQVSPGPRPV
LLDDSLTSSALQLLMPTLESETEAAVPKVTLCSEKEGLSLNSEEKLD SACLKPREVVPEVPKPEQNPPANAA
PGSQARKGRKKKSKEQPAACVEGYARRLRSSSRGQSTVGTEVTSQVDNLQKQPOEELQKESGPLQGKGPRAWA
RAWAALENSSPKNLSAGQSSPAKEGPLDLYPKLADTIQTNP IPTHLSLVDSAQASPMMPVDSVEADPTAVGPV
LAGPVVDPGLVDLASTSSELVEPLPAEPVLINPVLADSAAVDPAVVPISDNLPVDAVPSGPAPVDLALVDPVP
NDLTPVDPLVKSRPTDPRRGAVSSALGGSAPQLLVESESIDPPKTI IPEVKEVVD SLKIESGTSATTHEARPRP
LSLSEYRRRRQQRQAETEERSQPPTGKWPSLPETPTGLADIPCLVIPPAPAKKTALQRSPETPLEICLVPVGPS
PASPSPEFPVSKPVASSPTEQVPSQEMPLLARSPPVQSVSPA VPTPPSMSAALPFPAGGLGMPPSLPPPPLQPP
SLPLSMGPVLPDPFTHYAPLPSWPCYPHVSPSGYPCLPPPPFTVPLVSGTPGAYAVPPTCSVPWAPPPAPVSPYSS
TCTYGPLGWGPGPQHAPFWSTVPPPLPPASIGRAVPQPKMESRGTPAGPPENVLPLSMAPPLSLGLPHGAPQT
EPTKVEVKPVPA S P H P K H K V S A L V Q S P Q M K A L A C V S A E G V T V E E P A S E R L K P E T Q E T R P R E K P P L P A T K A V P T P R
QSTVPKLP AVHPARLRKLSFLPTPRTQGS EDVVQAF I S E I G I E A S D L S S L L E Q F E K S E A K K E C P P P A P A D S L A V G
NSGGVDIPQEKRPLDRLQAPELANVAGLTTPATPPHQLWKPLAAVSL LAKAKSPKSTAQEGTLKPEGVTEAKHPA
AVRLQEGVHGPPSRVHVGS GDHDYCVRSRTPPKMPALVIPEVGSRWNVKRHQDITIKPVL SLGPAAPPPPCIAAS
REPLDHRTSSEQADPSAPCLAPSSLLSPEASPCRNDMNTRTPPEPSAKQRSMRCYRKACRSASPSSQGWQGRRGR
NSRSVSSGSNRTSEASSSSSSSSSSSSRSRSRSLSPPHKRWRSSC SSSGRSRRCS SSSSSSSSSSSSSSSSSSSSSSR
SRSRSPSPRRRSDRRRRYSYRSHDHYQRQRLQKERAIEERRVVF IGKIPGRMTRSELKQRFVSFGEIECTIH
FRVQGDNYGFVTYRYAEEAFAAIESGHKLQADEQPFDLCFGGRRQFCKRSYSDLDSNREDFDPAPVKSKFDSL
FDTLKQAQKNLRR

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FIGURE 342

CCGGAAGTGA CTGCGGACGAATCGGCGTTTGCCGAGGCTGGCATAGATTGGGCTGTCTCCGCTCATAGCTGCTTT
TGGCGCGAAAGATGCCGGGTCTGGTTGACTCAAACCCTGCCCCGCCTGAGTCTCAGGAGAAGAAGCCGCTGAAGC
CCTGCTGCGCTTGCCCGGAGACCAAGAAGGCGCGGATGCGTGTATCATCGAGAAAGGAGAAGAACACTGTGGAC
ATCTAATTGAGGCCCACAAGGAATGCATGAGAGCCCTAGGATTTAAAATATGAAATGGTGGTCTGCTGTGTGAAT
AAATAATTCCTGAAGAATGAAGAAGATTAATTTTGGGAGTTCTTTGACGAACTTTGATATGTGGAAAAAGTATTT
ATAATTTATTGTAAGAAGAAAGTAAAATATTACTAGTGGAAGATCTTC

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FIGURE 343

MPGLVDSNPAPPESQEKKPLKPCCACPETKKARDACII EKGEEHCGHLIEAHKECMRALGFKI

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FIGURE 344

ATCCAATACAGGAGTGACTTGGAAGTCCATTCTATCACTATGAAGAAAAGTGGTGTTCCTTTCTCTTGGGCATC
ATCTTGCTGGTTCTGATTGGAGTGCAAGGAACCCAGTAGTGAGAAAGGGTCGCTGTTCTGTCATCAGCACCAAC
CAAGGGACTATCCACCTACAATCCTTGAAAGACCTTAAACAATTTGCCCAAGCCCTTCCTGCGAGAAAATTGAA
ATCATTGCTACACTGAAGAATGGAGTTCAAACATGTCTAAACCCAGATTTCAGCAGATGTGAAGGAAGTATTGAAA
AAGTGGGAGAAAACAGGTCAGCCAAAAGAAAAAGCAAAAGAATGGGAAAAAACATCAAAAAAGAAAGTTCTGAAA
GTTGAAAATCTCAACGTTCTCGTCAAAGAAGACTACATAAGAGACCACTTCACCAATAAGTATTCTGTGTTAA
AAATGTTCTATTTTAATTATACCGCTATCATTCCAAAGGAGGATGGCATATAATACAAAGGCTTATTAATTTGAC
TAGAAAAATTTAAACATTACTCTGAAATTGTAAGTAAAGTTAGAAAAGTTGATTTTAAGAATCCAAACGTTAAGAA
TTGTTAAAGGCTATGATTGTCCTTTGTTCTTCTACCAACCCACCAGTTGAATTTCAICATGCTTAAGGCCATGATTT
TAGCAATACCCATGTCTACACAGATGTTCAACCAACCATCCCACTCACAACAGCTGCCTGGAAGAGCAGCCCT
AGGCTTCCACGTAAGTGCAGCCTCCAGAGAGTATCTGAGGCACATGTGAGCAAGTCCTAAGCCTGTTAGCATGCTG
GTGAGCCAAGCAGTTTGAAATTGAGCTGGACCTCACCAAGCTGCTGTGGCCATCAACCTCTGTATTTGAATCAGC
CTACAGGCCCTCACACACAATGTGTCTGAGAGATTGCTGATTGTTATTGGGTATCACCAGTGGAGATCACCAG
TGTGTGGCTTTTCAAGCCTCCTTTCTGGCTTTGGAAGCCATGTGATTCCATCTTGCCCGCTCAGGCTGACCACTT
TATTTCTTTTGTTCCTTTGCTTCATTCAAGTCAGCTCTTCTCCATCCTACCACAATGCAGTGCCTTTCTTCT
CTCCAGTGCACCTGTCATATGCTCTGATTTATCTGAGTCAACTCCTTTCTCATCTTGTCCCCAACACCCACAGA
AGTGTCTTCTTCTCCCAATTCATCCTCACTCAGTCCAGCTTAGTTCAAGTCCTGCCTCTTAAATAAACCTTTTTG
GACACACAAATTATCTTAAACTCCTGTTTCACTTGGTTCAGTACCACATGGGTGAACACTCAATGGTTAACTAA
TTCTTGGGTGTTTATCCTATCTCTCAACCAGATTGTCAGCTCCTTGAGGGCAAGAGCCACAGTATATTTCCCTG
TTTCTTCCACAGTGCCTAATAATACTGTGGAAGTGGTTTTAATAATTTTTTAATTGATGTTGTTATGGGCAGGA
TGGCAACCAGACCATTGTCTCAGAGCAGGTGCTGGCTCTTTCCTGGCTACTCCATGTTGGCTAGCCTCTGGTAAC
CTCTTACTTATTATCTTCAAGGACACTCACTACAGGGACCAGGGATGATGCAACATCCTTGTCTTTTTATGACAGG
ATGTTTGCTCAGCTTCTCCAACAATAAGAAGCACGTGGTAAACACTTGCGGATATTCTGGACTGTTTTTAAAAA
ATATACAGTTTACCGAAAATCATATAATCTTACAATGAAAAGGACTTTATAGATCAGCCAGTGACCAACCTTTTC
CCAACCATACAAAAATTCCTTTTCCCGAAGGAAAAGGGCTTTCTCAATAAGCCTCAGCTTTCTAAGATCTAACAA
GATAGCCACCGAGATCCTTATCGAAACTCATTTTAGGCAAATATGAGTTTTATTGTCCGTTTACTTGTTCAGAG
TTTGTATTGTGATTATCAATTACCACACCATCTCCCATGAAGAAAGGGAACGGTGAAGTACTAAGCGCTAGAGGA
AGCAGCCAAGTCGGTTAGTGGAAGCATGATTGGTGGCCAGTTAGCCTCTGCAGGATGTGGAAACCTCCTTCCAGG
GGAGGTTCAAGTGAATTGTGTAGGAGAGGTTGTCTGTGGCCAGAATTTAAACCTATACTCACTTTCCCAAATTGAA
TCACTGCTCACACTGCTGATGATTTAGAGTGCTGTCCGGTGGAGATCCCACCCGAACGTCCTTATCTAATCATGAA
ACTCCCTAGTTCCTTATGTAACCTCCCTGAAAAATCTAAGTGTTCATAAATTTGAGAGTCTGTGACCCACTTA
CCTTGCACTCTCACAGGTAGACAGTATATACTAACAACCAAGACTACATATTGTCAGTACACACACGTTATAA
TCATTTATCATATATATACATACATGATACACTCTCAAAGCAAATAATTTTTCACTTCAAACAGTATTGACTT
GTATACCTTGTAATTTGAAATATTTTCTTTGTTAAATAGAAATGGTATCAATAAATAGACCATTAAATCAG

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FIGURE 345

MKKSGVLFLLGIILLVLIGVQGTPVVRKGRCSCTNQGTHLQSLKDLKQFAPSPSCEKIEIIATLKNGVQTCL
NPDSADVKELIKKEKQVSQKKKQKNGKKHQKKVLKVRKSQRSRQKKT

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FIGURE 346

GAGCGCGGCTGGAGTTTGTCTGCTGCCGCTGTGCAGTTTGTTCAGGGGCTTGTGGTGGTGAGTCCGAGAGGCTGCCG
TGTGAGAGACGTGAGAAGGATCCTGCACTGAGGAGGTGGAAAGAAGAGGATTGCTCGAGGAGGCTGGGGTCTGT
GAGGCAGCGGAGCTGGGTGAAGGCTGCGGGTTCCGGCGAGGCCCTGAGCTGTGCTGTCTGCTCATGCTCAAACCCGA
TCCCAGGCACAGGCTACAATCAGTTTTCCAAAAAGGAAGCTGTCTCGGGCATTGAACAAAGCTAAAAACTCCAGT
GATGCCAACTAGAACCAACAAATGTCCAAACCGTAACCTGTTCTCCTCGTGTAAAAGCCCTGCCTCTCAGCCCC
AGGAAACGTCTGGGCGATGACAACCTATGCAACACTCCCCATTTACCTCCTTGTCTCCACCAAAGCAAGGCAAG
AAAGAGAATGGTCCCCCTCACTCACATACACTTAAGGGACGAAGATTGGTATTTGACAATCAGCTGACAATTAAG
TCTCCTAGCAAAAGAGAAGTAGCCAAAGTTCACCAAAAACAAAATACTTTCTTCAGTTAGAAAAAGTCAAGAGATC
ACAACAAATTTCTGAGCAGAGATGTCCACTGAAGAAAGAATCTGCATGTGTGAGACTATTCAAGCAAGAAGGCACT
TGCTACCAGCAAGCAAAGCTGGTCTGTAACACAGCTGTCCAGATCGGCTGCCTGCCAGGGAAAGGGAGATGGAT
GTCATCAGGAATTTCTTGAGGGAACACATCTGTGGGAAAAAAGCTGGAAGCCTTTACCTTTCTGGTGCTCCTGGA
ACTGGAAAACTGCCTGCTTAAGCCGGATTCTGCAAGACCTCAAGAAGGAAGTGAAGGCTTTAAACTATCATG
CTGAATTGCATGTCCTTGAGGACTGCCAGGCTGTATTCCAGCTATTGCTCAGGAGATTTGTGAGGAAGAGGTA
TCCAGGCCAGCTGGGAAGGACATGATGAGGAAATTGGAAAAACATATGACTGCAGAGAAGGGCCCCATGATTGTG
TTGGTATTGGACGAGATGGATCAACTGGACAGCAAAGGCCAGGATGTATTGTACACGCTATTTGAATGGCCATGG
CTAAGCAATTTCTCACTTGGTGCTGATTGGTATTGCTAATACCCTGGATCTCACAGATAGAATTCTACCTAGGCTT
CAAGCTAGAGAAAAATGTAAGCCACAGCTGTTGAACCTCCACCTTATACCAGAAATCAGATAGTCACTATTTTG
CAAGATCGACTTAATCAGGTATCTAGAGATCAGGTTCTGGACAATGCTGCAGTTCAATTCTGTGCCCGCAAAGTC
TCTGCTGTTTCAGGAGATGTTGCAAAGCACTGGATGTTTGCAGGAGAGCTATTGAAATTGTAGAGTCAGATGTC
AAAAGCCAGACTATTCTCAAACCACTGTCTGAATGTAAATCACCTTCTGAGCCTCTGATTCCCAAGAGGGTTGGT
CTTATTACATATCCCAAGTCATCTCAGAAGTTGATGGTAACAGGATGACCTTGAGCCAAGAAGGAGCACAAGAT
TCCTTCCCTCTTCAGCAGAAGATCTTGGTTTGCTCTTTGATGCTCTTGATCAGGCAGTTGAAAATCAAAGAGGTC
ACTCTGGGGAAGTTATATGAAGCCTACAGTAAAGTCTGTGCAAACAGCAGGTGGCGGCTGTGGACCAGTCAGAG
TGTTTGTCACTTTCAGGGCTCTTGGGAAGCCAGGGGCATTTTAGGATTAAAGAGAAACAAGGAAACCCGTTTGACA
AAGGTGTTTTTCAAGATTGAAGAGAAAGAAATAGAACATGCTCTGAAAGATAAAGCTTTAATTGGAAATATCTTA
GCTACTGGATTGCCTTAAATTCTTCTTACACCCCAACCCGAAAGTATTTCAGCTGGCATTTAGAGAGCTACAGTC
TTCATTTTAGTGCTTTACACATTCGGGCCTGAAAACAAATATGACCTTTTTTACTTGAAGCCAATGAATTTTAAT
CTATAGATTCTTTAATATTAGCACAGAATAATATCTTTGGGTCTTACTATTTTTTACCCATAAAAGTGACCAGGTA
GACCCTTTTTAATTACATTCACACTTCTACCCTTGTGTATCTCTAGCCAATGTGCTTGCAAGTGTACAGATCT
GTGTAGAGGAATGTGTGTATATTTACCTCTTCGTTTGCTCAAACATGAGTGGGTATTTTTTGTGTTTTTTTTT
GTTGTTGTTGTTTTTGAGGCGCGTCTCACCCCTGTGCCCAGGCTGGAGTGCAATGGCGCGTCTCTGCTCACTAC
AGCACCCGCTTCCAGGTTGAAGTGATTCTCTTGCCCTCAGCCTCCCGAGTAGCTGGGATTACAGGTGCCACCAC
CGCGCCCAGCTAATTTTTTAATTTTTTAGTAGAGACAGGGTTTTACCATGTTGGCCAGGCTGGTCTTGAATCCTG
ACCCTCAAGTGATCTGCCACCTTGGCCTCCCTAAGTGCTGGGATTATAGGCGTGAGCCACCATGCTCAGCCATT
AAGGTATTTGTGAAGAACTTTAAGTTTAGGGTAAGAAGAATGAAAATGATCCAGAAAAATGCAAGCAAGTCCAC
ATGGAGATTTGGAGGACACTGGTTAAAG

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FIGURE 348

GAGCGCGGCTGGAGTTTGTGCTGCCGCTGTGCAGTTTGTTCAGGGGCTTGTGGTGGTGAGTCCGAGAGGCTGCG
TGTGAGAGACGTGAGAAGGATCCTGCACTGAGGAGGTGGAAAGAAGAGGATTGCTCGAGGAGGCCTGGGGTCTGT
GAGGCAGCGGAGCTGGGTGAAGGCTGCGGGTTCCGGCGAGGCCTGAGCTGTGCTGTCGTCATGCCTCAAACCCGA
TCCCAGGCACAGGCTACAATCAGTTTCCAAAAAGGAAGCTGTCTCGGGCATTGAACAAAGCTAAAACTCCAGT
GATGCCAACTAGAACCAACAAATGTCCAAACCGTAACCTGTTCTCCTCGTGTAAGCCCTGCCTCTCAGCCCC
AGGAAACGTCTGGGCGATGACAACCTATGCAACACTCCCCATTTACCTCCTTGTCTCCACCAAAGCAAGGCAAG
AAAGAGAATGGTCCCCCTCACTCACATACACTTAAGGGACGAAGATTGGTATTTGACAATCAGCTGACAATTAAG
TCTCCTAGCAAAAGAGAACTAGCCAAAAGTTACCCAAAACAAAATACTTTCTTCAGTTAGAAAAAGTCAAGAGATC
ACAACAAATTCTGAGCAGAGATGTCCACTGAAGAAAGAATCTGCATGTGTGAGACTATTCAAGCAAGAAGGCACT
TGCTACCAGCAAGCAAAGCTGGTCCGTAACACAGCTGTCCAGATCGGCTGCCTGCCAGGGGAAAGGGAGATGGAT
GTCATCAGGAATTTCTTGAGGGAAACACATCTGTGGGAAAAAGCTGGAAGCCTTTACCTTTCTGGTGCTCCTGGA
ACTGGA AAAACTGCCTGCTTAAGCCGGATTCTGCAAGACCTCAAGAAGGAACTGAAAGGCTTTAAACTATCATG
CTGAATTGCATGTCTTGAGGACTGCCAGGCTGTATTCCAGCTATTGCTCAGGAGATTGTGAGGAAGAGGTA
TCCAGGCCAGCTGGGAAGGACATGATGAGGAAATTGGAAAAACATATGACTGCAGAGAAGGGCCCCATGATTGTG
TTGGTATTGGACGAGATGGATCAACTGGACAGCAAAGGCCAGGATGTATTGTACACGCTATTTGAATGGCCATGG
CTAAGCAATTCTCACTTGGTGCTGATTGGTATTGCTAATACCCTGGATCTCACAGATAGAATTCTACCTAGGCTT
CAAGCTAGAGAAAAATGTAAGCCACAGCTGTTGAACTTCCACCTTATACCAGAAATCAGATAGTCACTATTTTG
CAAGATCGACTTAATCAGGTATCTAGAGATCAGGTTCTGGACAATGCTGCAGTTCAATTCTGTGCCCGCAAAGTC
TCTGCTGTTTCAGGAGATGTTGCAAAAGCACTGGATGTTTGCAGGAGAGCTATTGAAATTGTAGAGTCAGATGTC
AAAAGCCAGACTATTCTCAAACCACTGTCTGAATGTAAATCACCTTCTGAGCCTCTGATTCCCAAGAGGGTTGGT
CTTATTCACATATCCCAAGTCATCTCAGAAGTTGATGGTAACAGGATGACCTTGAGCCAAGAAGGAGCACAAGAT
TCCTTCCCTCTTCAGCAGAAGATCTTGGTTTGCTCTTTGATGCTCTTGATCAGGCAGTTGAAAATCAAAGAGGTC
ACTCTGGGGAAGTTATATGAAGCCTACAGTAAAGTCTGTGCAAAACAGCAGGTGGCGGCTGTGGACCAGTCAGAG
TGTTTGTCACTTTCAGGGCTCTTGGAAGCCAGGGGCATTTTAGGATTAAAGAGAAACAAGGAAACCCGTTTGACA
AAGGTGTTTTTCAAGATTGAAGAGAAAGAAATAGAACATGCTCTGAAAGATAAAGCTTTAATTGGAATATCTTA
GCTACTGGATTGCCTTAAATTCTTCTCTTACACCCCAACCCGAAAGTATTGAGCTGGCATTTAGAGAGCTACAGTC
TTCATTTTAGTGCTTTACACATTCGGGCCTGAAAACAAATATGACCTTTTTTACTTGAAGCCAATGAATTTTAAT
CTATAGATTCTTTAATATTAGCACAGAATAATATCTTTGGGTCTTACTATTTTTTACCCATAAAAGTGACCAGGTA
GACCCTTTTTAATTACATTCACTACTTCTACCACTTGTGTATCTCTAGCCAATGTGCTTGCAAGTGTACAGATCT
GTGTAGAGGAATGTGTGTATATTTACCTCTTCTGTTTGTCTCAAACATGAGTGGGTATTTTTTTGTTTGTTTTTTT
GTTGTTGTTGTTTTTGAGGCGCGTCTCACCTGTTGCCAGGCTGGAGTGCAATGGCGCGTTCTCTGCTCACTAC
AGCACCCGCTTCCCAGGTTGAAGTGATTCTCTTGCTCAGCCTCCCGAGTAGCTGGGATTACAGGTGCCACCAC
CGCGCCAGCTAATTTTTTAATTTTTTAGTAGAGACAGGGTTTTACCATGTTGGCCAGGCTGGTCTTGAACCTCTG
ACCCTCAAGTGATCTGCCACCTTGGCCTCCCTAAGTGCTGGGATTATAGGCGTGAGCCACCATGCTCAGCCATT
AAGGTATTTGTGAAGAACTTTAAGTTTAGGGTAAGAAGAATGAAATGATCCAGAAAAATGCAAGCAAGTCCAC
ATGGAGATTGGAGGACACTGGTTAAAG

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FIGURE 349

MPQTRSQAQATISFPKRKLSRALNKAKNSSDAKLEPTNVQTVTCSPRVKALPLSPRKRLGDDNLCNTPHLPPCSP
PKQGKKENGPPHSHTLKGRRLVFDNQLTIKSPSKRELAKVHQNKILSSVRKSQEITTNSEQRCPLKKESACVRLF
KQEGTCYQQAKLVLNTAVPDRLPAREREMDVIRNFLREHICGKKAGSLYLSGAPGTGKTACLSRILQDLKKELKG
FKTIMLNCMSLRTAQAVFPAAIAQEICQEEVSRPAGKDMMRKLEKHMTAEKGPMIVLVLEMDQLDSKGQDVLYTL
FEWPWLSNSHLVLIGIANTLDLTDRLPRLQAREKCKPQLLNFFPYTRNQIVTILQDRLNQVSRDQVLDNAAVQF
CARKVSAVSGDVRKALDVCRRRAIEIVESDVKSQTIKPLSECKSPSEPLIPKRVGLIHISQVISEVDGNRMTLSQ
EGAQDSFPLQQKILVCSLMLLIRQLKIKEVTLGKLYEAYSKVCRKQQVAAVDQSECLSLSGLLEARGILGLKRNK
ETRLTKVFFKIEEKEIEHALKDKALIGNILATGLP

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FIGURE 350

GGAGTGC GGGGCGCCCGGCCAGGGGAGCCGCCACAGCCATGGATTGCAAAGATAGACCAGCTTTTCCAGTTAA
GAAGTTAATACAAGCCCGTCTGCCGTTTAAGCGCCTGAATCTTGTCCCAAAGGGGAAAGCCGATGACATGTCAGA
CGATCAGGGTACTTCTGTGCAAAGTAAAAGCCCCGATTTAGAGGCCTCTTTGGACACCTTGGAAAACAACGTCA
TGTGGGTTCTGACATAGACTTTAGACCGAAACTTGTCAACGGGAAGGGTCCCTTAGATAACTTTTAAAGAAATAG
AATCGAAACCAGTATTGGCCAGAGCACAGTCATCATTGATTGACAGAGGACTCGAATGAGCAGCCAGACAGTCT
TGTGGACCACAATAAACTAAATTCTGAAGCCTCTCCCTCCAGGGAGGCAATAAATGGCCAGCGAGAAGACACTGG
GGATCAGCAGGGGTTGTTGAAGGCCATTGAGAACGACAAGTTGGCATTTCCTGGAGAGACCTTTTCAGACATTCC
TTGCAAAACAGAGGAGGAGGGTGTGGCTGTGGAGGTGCAGGGAGGAGAGGGCAGTCCCAGGAATGTTCCGCCACG
GAGCTGCCCGGAGCTGACGAGTGGCCCCGAGAATGTGCCCCAGAAAGGAGCAGGACAGTTGGAGTGAAGCTGGGGG
CATCCTGTTCAAAGGGAAGGTGCCTATGGTGGTCTTGCAGGACATCTTGGCTGTGAGACCACCGCAAAATCAAGTC
CCTTCCAGCCACACCCCAAGGCAAGAACATGACCCCTGAGAGTGAGGTGCTGGAATCTTTCCCCGAAGAAGACTC
TGTA CT CAGCCATTTCGTCCCTGAGCTCTCCCTCTTCCACCAGCTCGCCCGAGGGGCCGCTGCTCCCCAAAGCA
GCACAGCAGTACCAGTCCCTTCCCCACCTCCACGCCCCCTCCGCAGAATAACTAAGAAATTCGTCAAAGGCTCTAC
AGAGAAGAACAAGCTCAGACTGCAAAGAGATCAGGAGCGTCTGGGCAAGCAGCTCAAGTTACGTGCAGAAAGGGA
AGAAAAGGAGAAGCTGAAAGAGGAGGCCAAGCGGGCCAAGGAGGAGGCCAAGAAGAAGAAGGAGGAAGAGAAGGA
GCTTAAGGAAAAGGAGAGGCGGGAGAAGCGGGAGAAGGATGAGAAGGAGAAGGCGGAGAAGCAGCGGCTCAAGGA
GGAGCGGCGCAAGGAGAGACAGGAAGCCCTGGAGGCTAAACTTGAGGAAAAAAGGAAAAAGGAAGAAGAGAAACG
GTTAAGAGAAGAAGAGAAGCGCATTAAAGCAGAGAAGGCCGAAATCACGAGGTTCTTCCAGAAACCAAAGACTCC
ACAGGCCCCCAAGACCTGCGCGGCTCCTGTGGGAAGTTTGCCCCCTTTGAAATTAAGAGCACATGGTCTCTGGC
CCCTCGGCGTCGGACCGCTTTCATCCAGACCTCTGCAGTCAGCTGGACCAGCTCCTCCAGCAGCAGAGCGGCGA
GTTCTCCTTCTTGAAAGACCTCAAAGGCCGGCAGCCCCTGAGGTCCGGACCCACGCACGTTTCCACCCGGAATGC
AGATATTTTTTAACAGTGATGTCGTCATCGTGGAGCGTGGGAAGGGCGACGGTGTTCGAGAGGAGGAAGTTTGG
CAGGATGAAGCTCCTGCAGTTCTGTGAGAACCACCGGCTGCCTACTGGGGTACCTGGAATAAGAAGACGGCACT
CATCCGCGCGGAGACCCCTGGGCCAGGACACGAAGCTCCTGGACTATGAGGTGGACAGTGATGAGGAGTGGGA
AGAAGAGGAGCCTGGGGAGTCCCTGTCCACAGTGAGGGGGATGATGATGACGACATGGGAGAGGATGAAGATGA
GGACGATGGTTTCTTTGTGCCCCATGGGTACCTGTCTGAGGACGAAGGTGTGACAGAGGAGTGTGCCGACCCTGA
GAACCATAAGGTCCGCCAGAACTGAAGGCCAAGGAGTGGGACGAGTTCTTGGCTAAGGGGAAGCGCTTTCGCGT
CCTGCAACCTGTGAAGATCGGCTGCGTGTGGGCGGCTGACAGAGACTGCGCAGGCGATGACCTGAAGGTACTGCA
GCAGTTTCGACAGCCTGCTTCTGGAGACCCTGCCGGCCCAGGAGGAGCAGACGCCCAAGGCCTCCAAGCGGGAGAG
GAGAGACGAGCAGATCCTGGCCCAGCTGCTGCCGCTCCTGCACGGCAATGTGAACGGGAGCAAGGTATCATCCG
GGAGTTCCAGGAGCACTGCCGCCGGGGACTGCTCAGCAACCACACCGGCAGCCCGCGGACGCCCTCCACCACCTA
CCTGCACACCCCCACCCCCAGCGAGGATGCCGCCATCCCCCTCTAAGTCCCGGCTCAAGCGGCTCATTTCGAGAA
CTCAGTGTATGAGAAGCGGCCTGACTTCAGGATGTGCTGGTACGTGCACCCGCAGGTGCTACAGAGCTTCCAGCA
GGAGCACCTGCCCCGTGCCGTGCCAGTGGAGCTATGTGACATCGGTGCCCTCGGCCCCCAAGAGGACAGTGGCAG
CGTCCCCCTCCACGGGGCCAGCCAGGGCACTCCCATCTCGCTGAAGAGGAAGTCAGCGGGCAGCATGTGCATCAC
CCAATTCATGAAGAAGCGCAGGCACGACGGCCAGATTGGTGTCTGAAGACATGGACGGCTTCCAGGCAGACACGGA
GGAGGAGGAAGAGGAGGAGGGCGACTGTATGATCGTGGATGTCCCGGATGCTGTGGAGGTCCAAGCCCCGTGTGG
AGCCGCTTCCGGAGCTGGGGGTGGTGTGGGGGTGGACACCGGCAAGGCCACCCTGACCGCGAGCCCACTGGGTGC
ATCCTGAGAGCAGGGGTGACGTATGTAGAACGCTTAGGGTGTCTCCCCACAGAGCAGATACTTGAACCGACTCA
ATTCTGTGTAAAGAGCACTTTGTCTGCTTACGGACCTCCCCAAAGTGTGCAGAGTTCTATATAGGATGCTGG
ATTAGTTCCTTTGATATTTGTA AAAATTCCCCCAAGAGCCGCATATGAATCTGCCCTTTAATAAAGCATTATTGA
GATTGCTGGCCTATTGGGGAAGCTGCGGGCACAGGA

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FIGURE 351

MDCKDRPAFPVKKLIQARLPFKRLNLVPGKGADDMSDDQGTSVQSKSPDLEASLDTLENNCHVGSDIDFRPKLVN
GKGPLDNFLRNRIETSIGQSTVIIDLTEDSNEQPDSDLVDHNKLNSEASPSREAINQREDTGDQQGLLKAIQNDK
LAFPGETLSDIPCKTEEEGVGCGGAGRRGDSQECSPRSCPELTSGPRMCPRKEQDSWSEAGGILFKGKVPVVVLQ
DILAVRPPQIKSLPATPQGKNMTPSEVLESFPEEDSVLSHSSLSSPSSTSSPEGPPAPPKQHSSTSPFPTSTPL
RRITKKFVKGSTEKNKLRQLQDQERLKGQLKLRAEREEKEKLKEEAKRAKEEAKKKKEEKEKELKEKERREKREKD
EKEKAQQLKEERRKERQEALEAKLEEKRKKEEKLREEEKRIKAEKAEITRFFQKPKTPQAPKTLAGSCGKF
APFEIKEHMLAPRRRTAFHPDLCSQLDQLLQQQSSEFSFLKDLKGRQPLRSGPTHVSTRNADIFNSDVVIVERG
KGDGVPERRKFGRMKLLQFCENHRPAYWGTWNKKTALIRARDPWAQDTKLDDYEVDSDDEWEEEEPGESELSHSEG
DDDDMGEDDEDDGFFVPHGYLSEDEGVTEECADPENHKVRQKLKAKEWDEFLAKGKRFRVLQPVKIGCVWAAD
RDCAGDDLKVLQQFAACFLETLPAQEEQTPKASKRERRDEQILAQLLPLHGNVNGSKVIREFQEHCRRLSN
HTGSPRTPSTTYLHTPTPSEDAAIPSKSRLKRLISENSVYEKRPDFRMCWYVHPQVLQSFQQEHLFPVPCQWSYVT
SVPSAPKEDSGSVPTGSPSQGTPISLKRKSAGSMCITQFMKKRRHDGQIGAEDMDGFQADTEEEEEEEGDCMIVD
VPDAVEVQAPCGAASGAGGGVGVDTGKATLTASPLGAS

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FIGURE 352

GCAGTTCAGACCCCCACACCCATCAAAGAGCCGCTCCTCCCCCGCAGGCGCCTTCGCCGCTCCCTCCCTT
CCTTTCCTTTCCGCTCCTCTTCCGACCTGTCCACCCGGGAGGAAGGGAGCTGGAAGGGGGCGGAAACCTCTCCC
CTCCAAAAAGCACAAACAACTGTTCACTGCGGAGGAGCCGGGTTCGCCCTGCCGGACAGCGGGGGCTTTGTT
CCCCGAGTTGTTTCTGCCCATTGACCTGTCTAGCTGCTGGGGAAACGCTGCTGTTGACCTTTGGTTGAACTGC
TAAGGCGATTTTGCTGATTTTTCTTTCTTTTCCGCGAGGGCTGTCTTTTGCTCCTCCAAATGAGCCAGTCCCC
CTCCCTTCTCCCCAAAGCGCTCCAAGAGAAAGTGCCAGGAAGGGGCTTGTCGCCGAAGGCCCTGGCGGCTGAGCGG
GGCCAGGTCTTGTTAGGCCACCAGGGTGGGCGTCCGCGCCATTGTTTGAGCTTGTCGGCGCTGGTGGGAGAGAT
GAGGGCAATTCCTCTGGGACGCAAGTCCCCTCGAATGGCCGGGGCTGGCCGGGATGTTCCCCGCACGGCGCTGCC
CTCGAGTCCCCCGATGGAGAGCGCGGGCGCGCCTTCTTCGCTGGCGTCCAAACCCGGGACCAGCTAGAACACA
GCAGGGCTGGGACTGGGTTCCAGCCCCACGTGGAGTCTGGATTGTTTTGTTGTGTTTTGCTTTCTTCTTGGAA
GAAATCCCGAGGGGACCGCCCTAGAGCGGCAGCTCCAGGACCTCGGCCCTTGGGCTTCCGGGGGTGCAGCCACTT
AGGCCCCGCTCCCGGGGAGAGAGGGATTATTTTTTAAGATTTATCCCCAGGGCGCGCGGCATTTCCTGTCCCTC
GTGAATCCCGTTGAGAGTCTCCTCCCCAACCTCCTCCATTCCCCAGCCAGACCGATTTCGAGAGCCCTGGAGA
TTCTGGGCGAGGCTAGTGACTGGGTAGTACAGGCCTCTAGCCCCACCATTGCTCTCTGTCTTTCAGTTCCCCAG
GAGGGCAATGGCATCAAACAGCACAGCTCTGGGGGATGTCAATATTGCATACCTTTTCTACCTAAAGGGAAAATG
ACTCGCTTTTCTGCTTGCAAATATGGTAGTTTCTGCTTACAAATGTAATACAATGCCCATGACAGCCAAGGACTG
GAAGCATAAGTTGCTAGGTCTTACAGGTGATTTTTTACAATGAAGCAAACCTCACTATGTTAGACACCATTACAT
TGGATGTCTCCAACTAACAAAAGTAACATAAGACAGATGTAGGTGTAAATTGAGAGTGAAATTTGACCCTTTGA
CCGTCACAACTTCTTGGGCTTATCCTGGGTGCTTATAGGAGAGGTGGGCTCCACCACAAAAATGGACTGCTCA
GAAAAATGAGGGAGAGAGAAAGGGTGGCCACTTTCCCGAGCCAAGAAATTCCTTGAAAAAAATCAGAACATCTG
AAACCAGAGAGCCGATTTCTTACCAGGGAGGCAGTTCCTGGCTAACGAAGAGGAAGCACGATGGAAGAAAAGTT
CACTCCAACGGAAGCCAGTTTGCTGAACATAGCAGATCGCCCAGGAGGACTGGGAGAGACTGCAAACAGTTTGA
GCCCCCAGCATGGCGTTAGGTGTCTAGCCAGCTGGCAGGAAGGTCCAGGTGTCTGTGTTTCAAGTCTCAAGGCGGC
TATGAGAGGTTTTCTCCGAGTACCCAGAATTCTGTCTAAAACCAAGGCCCTGGCAGCCATCCCACCCCGGTT
CCCCCAGTGCCACAGAGCCCTTGACCTGGGCTGCAGCTCCTGTGGGACCCCACTACACGACCAGGGGGGTCTCT
GTGGAGATCCTTCCCTTCTCTACCTCGGCAGTGCTACCATGCTGCCCGGAGAGACATGCTGGACGCCCTGGGC
ATCACGGCTCTGTTGAATGTCTCTCGGACTGCCCAAACCACTTTGAAGGACACTATCAGTACAAGTGCATCCCA
GTGGAAGATAACCACAAGGCCGACATCAGCTCCTGGTTCATGGAAGCCATAGAGTACATCGATGCCGTGAAGGAC
TGCCGTGGGCGCGTGTCTGGTGCAGTGCAGGCGGGCATCTCGCGGTGGGCCACCATCTGCCTGGCCTACCTGATG
ATGAAGAAACGGGTGAGGCTGGAGGAGGCCTTCGAGTTCGTTAAGCAGCGCCGAGCATCATCTCGCCCAACTTC
AGCTTCATGGGGCAGCTGCTGCAGTTCGAGTCCCAGGTGCTGGCCACGTCCTGTGCTGCGGAGGCTGCTAGCCCC
TCGGGACCCCTGCGGGAGCGGGGCAAGACCCCCGCCACCCCACTCGCAGTTCGTCTTCAGCTTTCCGGTCTCC
GTGGGCGTGCAGTCCGCCCCCAGCAGCCTGCCCTACCTGCACAGCCCCATCACCACCTCTCCCAGCTGTTAGAGC
CGCCCTGGGGGCCCCAGAACCAGAGCTGGCTCCCAGCAAGGGTAGGACGGGCGCATGCGGGCAGAAAGTTGGGA
CTGAGCAGCTGGGAGCAGGCGACCGAGCTCCTTCCCCATCATTTCTCCTTGGCCAACGACGAGGCCAGCCAGAAT
GGCAATAAGGACTCCGAATACATAATAAAAGCAAACAGAACACTCCAACCTTAGAGCAATAACGGCTGCCGCAGCA
GCCAGGGAAGACCTTGTTTTGGTTTTATGTGTCTAGTTTCACTTTTCCGATAGAAATTTCTTACCTCATTTTTTAA
GCAGTAAGGCTTGAAAGTGATGAACCCACAGATCCTAGCAAATGTGCCCAACCAGCTTTACTAAAGGGGGAGGAA
GGGAGGGCAAAGGGATGAGAAGACAAGTTTCCAGAAAGTGCCTGGTCTGTGTACTTGTCCCTTGTGTGCTTG
TTGTAGTTAAAGGAATTTCATTTTTTAAAGAAATCTTCGAAGGTGTGGTTTTCTTTCTCAGTCACCAACAGAT
GAATAATTATGCTTAATAATAAAGTATTTATTAAGACTTTCTTCAGAGTATGAAAGTACAAAAGTCTAGTTACA
GTGGATTAGAAATATATTTATGTTGATGTCAAACAGCTGAGCACCGTAGCATGCAGATGTCAAGGCAGTTAGGAA
GTAATGGTGTCTTGTAGATATGTGCAAGGTAGCATGATGAGCAACTTGAGTTTGTGGCACTGAGAAGCAGGCG
GGTTGGGTGGGAGGAGGAAGAAAGGGAAGAATTAGGTTGAATTGCTTTTTTAAAAAAAAGAAAAGAAAAGAC
AGCATCTCACTATGTTGCCAAGGCTCATCTTGAGAAGCAGGCGGGTGGGTGGGAGGAGGAAGAAAGGGAAGAAT
TAGGTTTGAATTGCTTTTTTAAAAAAA

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FIGURE 353

MGRKVHSNGSQFAEHSRSPRRRTGRDCKPVRAPSMALGVSQLAGRSRCLCSESQGGYERFSSEYPEFCSKTKALAA
IPPPVPPSATEPLDLGCSSCGTPLHDQGGPVEILPFLYLGSAYHAARRDMLDALGITALLNVSSDCPNHFEGHYQ
YKCIPVEDNHKADISSWFMEAIEYIDAVKDCRGRVLVHCQAGISRSATICLAYLMMKKRVRLEEAFEFVKQRRSI
ISPNF SFGQLLQFESQVLATSCAAEAASPSGPLRERGKTPATPTSQFVFSFPVSVGVSAPSSLPYLHSPITTS
PSC

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FIGURE 354

CTGCCATTTAGGACAAGCTGGATGATGATGGTTTGTATAGCTCCAGGGGTTTCGTGTATAGGAGATGATGAATCTGC
TTCATCCAGAATCACAATCTTAAAAGGCGGGAACTGAGGCGACTGTGGGGACATCAGTGATCGTAAGTCTCCTGG
GCCCCGTTATTCTCAGATTAGGTGACGGAGCTAAGACTTCGAGACCATCTCGTCCTTTTTGTATCGCGGAAACCTG
AGGAACGAGCCGGCGGGTGGTACCTGCACGAGAAGCCAGGCTAACTGGGTGAAGTACCATGCAAGCATTTCCTAA
AGGTACATCCATCAGTACTAAACCCCGCTGACCAAGGATCGAGGAGTAGCTGCCAGTGCGGGAAGTAGCGGAGA
GAACAAGAAAGCCAAACCCGTTCCCTGGGTGGAAAAATATCGCCCAAATGTGTGGATGAAGTTGCTTTCAGGA
AGAAGTGGTTGCAGTGCTGAAAAATCTTTAGAAGGAGCAGATCTTCCTAATCTCTTGTTTTACGGACCACCTGG
AACTGGAAAAACATCCACTATTTTGGCAGCAGCTAGAGAACTCTTTGGGCCTGAACTTTTCCGATTAAGAGTTCT
TGAGTTAAATGCATCTGATGAACGTGGAATACAAGTAGTTCGAGAGAAAGTGAAAAATTTTGCTCAATTAAGTGT
GTCAGGAAGTCGCTCAGATGGGAAGCCGTGTCCGCCTTTTAAGATTGTGATTCTGGATGAAGCAGATTCTATGAC
CTCAGCTGCTCAGGCAGCTTTAAGACGTACCATGGAGAAGGAGTCGAAAACCAACCCGATTCTGTCTTATCTGTAA
CTATGTCACTCGAATAATTGAACCCCTGACCTCTAGATGTTCAAAATTCGCTTCAAGCCTCTGTCAGATAAAAT
TCAACAGCAGCGATTACTAGACATTGCCAAGAAGGAAAATGTCAAAATTAGTGATGAGGGAATAGCTTATCTTGT
TAAAGTGTCAAGAGGAGACTTAAGAAAAGCCATTACATTTCTTCAAAGCGCTACTCGATTAAACAGGTGGAAAGGA
GATCACAGAGAAAAGTGATTACAGACATTGCTGGGGTAATACCAGCTGAGAAAATTGATGGAGTATTTGCTGCCTG
TCAGAGTGGCTCTTTTGACAACTAGAAGCTGTGGTCAAGGATTTAATAGATGAGGGTCATGCAGCAACTCAGCT
CGTCAATCAACTCCATGATGTGGTTGTAGAAAATAACTTATCTGATAAACAGAAGTCTATTATCACAGAAAACT
TGCCGAAGTTGACAAATGCCTAGCAGATGGTGCTGATGAACATTTGCAACTCATCAGCCTTTGTGCAACTGTGAT
GCAGCAGTTATCTCAGAATTGTTAACGTGATATATCTGGATGGGGGGTTTTGTAAATAATGAAGTTGTAATAAAA
ATAAAATGACCAAAGCACCG

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FIGURE 355

MQAFLKGT SISTKPPLTKDRGVAASAGSSGENKKAKPVPWVEKYRPKCVDEVAFQEEVVAVLKKSLEGADLPNLL
FYGPPGTGKTSTILAAARELFGPELFRRLRVLELNASDERGIQVVREKVKNFQQLTVSGSRSDGKPCPPFKIVILD
EADSMTSAAQAALRRIMEKESKTTRFCLICNYVSRIIEPLTSRCSKFRFKPLSDKIQQQRLLDIKKENVKISDE
GIAYLVKVSEGDRLKAITFLQSATRLTGGKEITEKVITDIAGVIPAEKIDGVFAACQSGSFDKLEAVVKDLIDEG
HAATQLVNQLHDVVVENNLSDKQKSIITEKLAEVDKCLADGADEHLQLISLCATVMQQLSQNC

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FIGURE 356

GGCACGAGCTCGGCTCCTGGAAAGATGGAGGCAGCGGAGACAGAGGCGGAAGCTGCAGCCCTAGAGGTCCTGGCT
GAGGTGGCAGGCATCTTGGAACCTGTAGGCCTGCAGGAGGAGGCAGAACTGCCAGCCAAGATCCTGGTTGAGTTT
GTGGTGGACTCTCAGAAGAAAGACAAGCTGCTCTGCAGCCAGCTTCAGGTAGCGGATTTCTGCAGAACATCCTG
GCTCAGGAGGACACTGCTAAGGGTCTCGACCCCTTGGCTTCTGAAGACACGAGCCGACAGAAGGCAATTGCAGCT
AAGGAACAATGGAAAGAGCTGAAGGCCACCTACAGGGAGCACGTAGAGGCCATCAAAATTGGCCTCACCAAGGCC
CTGACTCAGATGGAGGAAGCCCAGAGGAAACGGACACAACCTCCGGGAAGCCTTTGAGCAGCTCCAGGCCAAGAAA
CAAATGGCCATGGAGAAACGCAGAGCAGTCCAGAACCAGTGGCAGCTACAACAGGAGAAGCATCTGCAGCATCTG
GCGGAGGTTTCTGCAGAGGTGAGGGAGCGTAAGACAGGGACTCAGCAGGAGCTTGACAGGGTGTTCAGAACTT
GGAAACCTGAAGCAGCAGGCAGAACAGGAGCGGGACAAGCTGCAGAGGTATCAGACCTTCCTCCAGCTTCTGTAT
ACCCTGCAGGGTAAGCTGTTGTTCCCTGAGGCTGAGGCTGAGGCAGAGAATCTTCCAGATGATAAACCCAGCAG
CCGACTCGACCCCAGGAGCAGAGTACAGGAGACACCATGGGGAGAGACCCCTGGTGTGTCTTCAAGGCTGTTGGT
CTACAACCTGCTGGAGATGTAAATTTGCCATGACTTTCCTGGAGGACAGCAGCATGGAGAAAGATCCTAGAAAAGG
CCTCTGACTTCCCTCACCTCCCAACCATCATTACAGGAAAGACTGTGAACTCCTGAGTTCAGCTTGATTTCTGAC
TACATCCCAGCAAGCTCTGGCATCTGTGGATTAAATCCCTGGATCTCTCTCAGTTGTGTATTTGTTCACTTCA
TATGCTGGCAGGAACAACCTATTAATACAGATACTCAGAAGCCAATAACATGACAGGAGCTGGGACTGGTTTGAAC
ACAGGGTGTGCAGATGGGGAGGGGGTACTGGCCTTGGGCCTCCTATGATGCAGACATGGTGAATTTAATTCAAGG
AGGAGGAGAATGTTTTAGGCAGGTGGTTATATGTGGGAAGATAATTTTATTCATGGATCCAAATGTTTGTTGAGT
CCTTTCTTTGTGCTAAGGTTCTTGCGGTGAACCAGAATTATAACAGTGAGCTCATCTGACTGTTTTAGGATGTAC
AGCCTAGTGTTAACATTCTTGATATCTTTTTGTGCCTTATCTAAACATTTCTCGATCACTGGTTTCAGATGTTT
ATTTATTATATCTTTTCAAAGATTACAGAGATTGGCTTTTGTGATCCACTATTGTATGTTTTGTTTCATTGACCT
CTAGTGATACCTTGATCTTTCCCACTTTCTGTTTTCGGATTGGAGAAGATGTACCTTTTTTGTCAACTCTTACTT
TTATCAGATGATCAACTCACGTATTTGGATCTTTATTTGTTTTCTCAAATAAATATTTAAGGTTAAAAAAAAAA
AAAAAAA

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FIGURE 357

MEAAETEAEAAALEVLAEVAGILEPVGLQEEAELPAKILVEFVVDSQKKDKLLCSQLQVADFLQNILAQEDTAKG
LDPLASEDTSRQKAIAAKEQWKELKATYREHVEAIKIGLTKALTQMEEAQRKRTQLREAFEQLQAKKQMAMEKRR
AVQNQWOLQQEKHLQHLAEVSAEVRERKTGTQQELDRVFQKLGNLKQQAEOERDKLQRYQTFLQLLYTLQGKLLF
PEAEAEAENLPDDKPQQPTRPQEQSTGDTMGRDPGVSFKAVGLQPAGDVNLP

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FIGURE 358

CCTTCAGCATAAAAAGCTGATCCACAAACAAGAGGAGCACCAGACCTCCTCTTGGCTTCGAGATGGCTTCGCCACA
CCAAGAGCCCAAACCTGGAGACCTGATTGAGATTTTCCGCCTTGGCTATGAGCACTGGGCCCTGTATATAGGAGA
TGGCTACGTGATCCATCTGGCTCCTCCAAGTGAGTACCCCGGGGCTGGCTCCTCCAGTGCTTCTCAGTCCTGAG
CAACAGTGCAGAGGTGAAACGGGGGCGCCTGGAAGATGTGGTGGGAGGCTGTTGCTATCGGGTCAACAACAGCTT
GGACCATGAGTACCAACCACGGCCCGTGGAGGTGATCATCAGTTCTGCGAAGGAGATGGTTGGTCAGAAGATGAA
GTACAGTATTGTGAGCAGGAACGTGAGCACTTTGTCGCCCAGCTGAGATATGGCAAGTCCCGCTGTAAACAGGT
GGAAAAGGCCAAGGTTGAAGTCGGTGTGGCCACGGCGCTTGGAATCCTGGTTGTTGCTGGATGCTCTTTTGCGAT
TAGGAGATACCAAAAAAAGCAACAGCCTGAAGCAGCCACAAAATCCTGTGTTAGAAGCAGCTGTGGGGGTCCCA
GTGGAGATGAGCCTCCCCATGCCTCCAGCAGCCTGACCCTCGTGCCCTGTCTCAGGCGTTCTCTAGATCCTTTC
CTCTGTTTCCCTCTCTCGCTGGCAAAGTATGATCTAATTGAAACAAGACTGAAGGATCAATAAACAGCCATCTG
CCCCTTCAAAAAAAAAA

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FIGURE 359

MASPHQEPKPGDLIEIFRLGYEHWALYIGDGYVIHLAPPSEYPGAGSSSVFSVLSNSAEVKRGRLEDVVGGCCYR
VNNSLDHEYQPRPVEVI ISSAKEMVGQMKYSIVSRNCEHFVAQLRYGKSRCKQVEKAKVEVGVATALGILVVAG
CSFAIRRYQKKATA

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FIGURE 360A

AGGGGGCGGCGCTCCCGGCCCATCCCTTAGCCCCGCGGCGGCGCTGTGGGCCGGAGGCTGCCTGCACCGCGTCAG
GGAGGCCGGCCTAGAAACCTCCCTCCCAGAAGAAAGCCGATCCCAGTTCAGGTGGGGTCTTCTCGGTTGCGTA
CCTGGCTGGAGCCGAGCTGGTGGGCGGCCGGCAGCCGGCGTTTCTGGTGATGACAGCCCCGAAATGAAAGCAGCG
CGGCCGCCGCTCCGAGGGCTGCAGGGAGATCAGCGTCCAGCAAATAAGAAGCAAGTCTGGACCCGGAGGAGGA
GGAGCGGCCGAGCATCTCTCTCTGCTCCGCCGTGTCCTTTAGATGAGCACTCCCGGCCGGAGCCGGAGGTGGATC
CGCAGAGCTGCCTCTGGGCGCCTGACCCCGCGCTGACATCACAACTGTGACAGGCGCATCAGCCCCGTACCTG
CTCCCGGCCGCTGCCCGTCTCTCCAGCCTCTTTGTATGCCGAGACATGGCCAGCCAGCAGGATTCTGGGCTTCTT
TGAGATCAGTATCAAATATTTACTGAAATCCTGGAGTAATACTTCTCCCGTTGGCAACGGTTACATCAAGCCTCC
GGTTCCACCTGCTTCTGGCACGCACAGGGAGAAAGGGCCGCCAACCATGCTACCCATCAATGTGGACCCAGACAG
TAAACCAGGAGAATATGTCCTCAAAAGTTTATTTGTCAACTTCACCACCTCAGGCTGAACGCAAGATTCTGTATCAT
TATGGCAGAGCCCCGGAAGCCATTGACGAAATCTCTGCAACGTGGAGAAGACCCCCAATTTGATCAGGTCAT
CAGCTCAATGAGCTCCCTTTCTGAGTACTGCCTGCCTTCCATTCTACGTACATTATTTGACTGGTATAAAAGGCA
AAATGGCATTGAGGATGAATCACATGAATACAGACCAAGAACAAGCAATAAATCAAAAAGCGATGAACAACAGCG
AGATTATTTAATGGAAGACGGGACCTCGCCATTGATTTTATTTTTCTTTAGTATTAATAGAAGTTTGAACA
GATTCACCTTCATCCTGTAATAGACAGTTTAATACATGATGTTATTAAGTGGCTTTCAAGCACTTTAAATACAA
AGAAGGGTACCTTGGTCCCAACACTGGCAATATGCATATTGTGGCAGACCTGTATGCAGAAGTCATTGGAGTGTT
GGCACAAGCCAAATTCCCTGCTGTAAAGAAGAAATTTATGGCGGAGCTAAAAGAATTACGGCACAAAGAGCAGAA
CCCATATGTGGTTCAAAGCATTATCAGCTTAATAATGGGCATGAAATCTTTTGAATTAAGATGTATCCAGTGGA
GGATTTTGAGGCCTCTCTTCAGTTTATGCAGGAATGTGCACATTACTTCTCGAGGTCAAAGACAAAGATATCAA
GCATGCCCTTGGCTGGGCTTTTTGTTGAAATACTTGTTCAGTTGCTGCTGCTGTTAAAAATGAAGTAAATGTTCC
CTGCCCTAGAAATTTTGTGGAAGCCTGTATGACACCACGCTGGAACCTTCTTCTCGAAAGAAGCATTCTTGGC
CTTGTAACCCCTGGTGACCTGTTTGTCTGTGTGTCAGTCAGAAGCAGCTGTTCTTGAACAGGTGGCACATTTTCT
CAACAACCTGCTTGTCCAACCTTAAAAACAAAGATCCCAAGATGGCTCGAGTTGCACTGGAATCTCTCTACAGATT
ACTTTGGGTTTACATGATTCTGAATTAATGTGAAAGCAACACAGCTACTCAGAGCCGACTTATAACCATCATCAC
AACACTTTTCCCCAAAGGGTCCCGCGGTGTGGTACCAAGGGACATGCCTCTGAACATCTTTGTGAAAATCATCCA
GTTCAATTGCCCAGGAACGTTTAGATTTTGCAATGAAAGAAATCATTTTTCGATTTTCTTTGTGTGGGAAAACCAGC
AAAAGCATTCACTCTCAACCCAGAGAGAATGAACATTGGTTTACGGGCATTCTTGGTCATAGCTGATAGCTTGCA
GCAGAAAGATGGGGAACCTCCCATGCCGTTACAGGAGCCGTTCTTCTCAGGAAACACGTTAAGAGTAAAGAA
AACATATTTGAGTAAACACTAACTGAAGAGGAAGCCAAAATGATAGGCATGTCCTTATATTACTCTCAAGTACG
AAAAGCTGTAGACAACATTTTAAGGCACCTTGATAAAGAAGTAGGAAGGTGTATGATGCTGACTAATGTACAGAT
GTTAAACAAAGAACCAGGAAAGACATGATCAGGGGTGAGAGAAAGCCAAAAATAGATCTTTTCAGGACCTGTGTTGC
TGCTATTCTCGACTGCTTCTCTGATGGGATGTCAAACCTTGAACCTTATTGACTTACTGGCTAGGCTCTCTATTCA
TATGGATGATGAATTGCGACATATTGCACAAAATCTCTTCAGGGTTTACTTGTGACTTCTCAGATTGGAGGGA
AGATGTACTATTTGGCTTTACCAACTTCTGCTCCGGGAAGTAAATGATATGCATCACACACTCCTTGATTCTGTC
CCTGAAGTTGCTGCTGCAGCTGCTCACCCAGTGGAACTAGTCATCCAGACACAAGGAAAAGTCTATGAACAAGC
CAACAAAATCAGAAATTCAGAGCTCATCGCAAATGGCTCCAGTCACAGAATTTCAGTCGGAACGAGGTCCCCACTG
CAGTGTAATCCACGCTGTAGAAGGTTTTGCTCTGGTTTTACTCTGCAGTTTCCAGGTGGCCACACGCAAACCTGTC
CGTTTTTAATACTCAAGGAAATTCGAGCGTTGTTTTATTGCCCTGGGGCAGCCTGAGGATGACGACAGGCCGATGAT
TGATGTATGATGATCAGCTAAGTTCTTCCATTCTAGAAAGTTTTATTTCATGTAGCAGTTTTCGGATTTCAGCAACATT
ACCACTCACCCACAATGTGGATCTGCAGTGGTTGGTGGAAATGGAACGCAGTCTGGTCAATAGCCATTATGATGT
GAAAAGCCCTTCCCATGTCTGGATATTTGCACAGTCTGTCAAAGACCCCTGGGTCTCTGCTCTTTCAGCTTCTCT
CCGGCAGGAGAACTTACCCAAGCACTGCCCCACAGCCCTCAGCTATGCCTGGCCTTATGCCTTCACTCGGCTCCA
GTCCGTGATGCCTCTGGTGGACCCAAATAGCCCAATTAATGCCAAGAAAACCAGCACTGCCGGCAGCGGAGACAA
CTATGTTACTTTGTGGAGAAATTACCTAATCTTTGTTTTGGAGTTGCAAAACCCAGTATTATGAGCCAGGACA
CTTAAGAGCTTCCACTCCAGAAATAATGGCGACCACACCTGATGGTACAGTGAGCTACGATAACAAGGCCATAGG
CACCCCATCGGTGGGAGTTCTGTTAAAGCAGTTGGTGCCTTTGATGAGACTAGAGAGCATTGAGATCACAGAGTC
CTTAGTTTTAGGATTTGGAAGAACAATTCCTTGTTTTCAGAGAATTGGTAGAAGAATTCATCCATTAATGAA
AGAAGCTCTGGAAGAAGACCAGAGAACAAGAAACGCCGAGAACGGCGAGACTTGTTAAGGCTACAACACTCTCG

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FIGURE 360B

AATTTTGAACTTTGGCTGATGCTGGTGTAAATAAGTGACAGCACAAATGGAGCCCTAGAGCGGGATACTTTAGC
CCTGGGAGCTTTGTTCTTAGAATATGTGGACTTGACCCGCATGCTCCTAGAAAGCTGAAAATGACAAAGAAGTTGA
AATTCTTAAAGATATCCGGGCACATTTTAGTGCAATGGTGGCCAACTTGATTCAGTGTGTTCCAGTTCACCACCG
AAGATTTCTCTCCCCCAGCAAAGTCTGAGGCACCACCTTTTCATCTTATTCAGCCAGTGGGCAGGACCCTTCAG
CATTATGTTCACTCCTCTGGATCGTTACAGTGACAGAAATCATCAGATTACAAGATATCAGTATTGTGCATTAAA
AGCAATGTCAGCAGTACTGTGCTGTGGCCCTGTCTTTGACAATGTGGGCCTTTCCCCAGATGGCTACCTATATAA
ATGGCTTGACAACATTCTGGCTGTCAAGATTTACGAGTTCATCAACTTGGCTGCGAAGTTGTTGTCTTGCTACT
GGAACCTTAATCCTGACCAAATAAATCTTTTTAACTGGGCAATTGACCGATGCTACACAGGTTTCTACCAACTTGC
ATCTGGCTGCTTCAAAGCCATAGCAACTGTGTGTGGAAGCAGGAACTATCCCTTCGACATAGTGACATTGTTAAA
CCTTGTTCTATTCAAGGCCTCTGACACCAACAGAGAGATTTATGAAATCTCCATGCAGCTCATGCAGATCCTTGA
AGCAAAGCTTTTTGTATACTCAAAGAAAGTCGCTGAGCAAAGACCGGGAAGTATTCTCTATGGAACACACGGCCC
GCTGCCACCCCTCTACAGCGTGTCACTCGCCCTCTTGTCATGTGAGCTGGCCAGGATGTACCCTGAGCTCACACT
CCCCCTCTCTCAGGTAAGCCAGCGATTCCCCACAACACACCCCCAACGGGCGCCAGATCATGCTTACCTACCTGC
TGCCCTGGCTGCACAACATCGAGCTGGTGGACAGCAGGCTCCTCCTCCCGGGTCGAGCCCCAGCAGCCCAGAGGA
CGAAGTCAAGGACCGGGAAGGTGACGTGACTGCTTCTACGGGCTGAGAGGAAATGGCTGGGGCTCTCCAGAAGC
CACGTCACTGGTCTGAACAACCTCATGTACATGACGGCCAAGTATGGAGATGAAGTTCCTGGGCCAGAAATGGA
AAATGCTTGGAATGCTTTAGCCAACAATGAGAAATGGAGCAACAACCTGAGGATCACCTTGAGTTCTTGATTAG
CCTCTGTGGGGTCAGCAGCGACACAGTTCTCCTACCCTATATTAAGGAGTGGCAATATACTTGTGCCGTAACAA
CACCATTCAAACCATGGAAGAGCTTCTCTTTGAGCTGCAGCAGACAGAACCCGTGAACCCCATCGTCCAGCATTG
TGACAACCCGCCCTTCTACCGCTTCACGGCCAGTAGCAAGGCTTCCGCAGCAGCCTCAGGAACCACCTCTAGCAG
CAATACAGTGGTTGCTGGCCAGGAAAATTTCCAGATGCTGAGGAGAACAAAGATATTGAAAGAATCTGATGAAAG
GTTTAGTAATGTCATCAGAGCCACACTCGCCTCGAGTCAAGATACAGCAATAGCTCTGGAGGATCCTACGATGA
AGATAAAAATGATCCAATTTCTCCCTACACGGGCTGGTTGCTGACTATTACAGAGACCAAGCAGCCGAGCCCTT
ACCGATGCCTTGTAAGGATGCTGGGCCCCCTGGTTGACTATCTCCCGGAGACCATCACTCCCCGGGGGCC
ACTCCACAGGTGCAATATTGCTGTAATTTTATGACTGAAATGGTGGTGGATCACAGTGTACGAGAAGACTGGGC
GTTTCATCTACCATTATTACTTTCATGCTGTCTTCTTAGGTTTAGACCCTACCGGCCTGAAGTCTTTGAACACAG
CAAAAACCTGCTTCTTACCTCTTGATTGCCCTCTCTTGCAACAGCAATTTCCATTCCATTGCTTCCGTGCTCCT
GCAGACCCGAGAGATGGGTGAAGCTAAGACTCTAACCGTGACGCCAGCCTACCAACCTGAATATCTCTATACAGG
TGGCTTTGACTTCTGAGAGAGGACCAGTCATCCCCGTGCTGACTCAGGGCTTAGTTCAAGCTCCACCTCTC
TAGCATCAGTCTGGGAGGCAGCAGTGGAAACCTCCCACAGATGACCCAGGAGGTAGAAGATGTGGACACAGCTGC
TGAAACAGATGAGAAGGCAAACAAGCTCATTGAGTTTCTCACGACCAGGGCATTGTTGGTCCACTTTGGTGCCATGA
AGACATCACACCTAAAAATCAAAATTCAAAGAGTGTGAACAGCTCACTAATTTTCTACGTCACGTTGTATCTGT
ATTTAAAGATTCCAAATCAGGCTTCCATCTGGAGCACCAGTTGAGTGAAGTTGCATTGCAGACAGCCCTCGCAAG
CTCTTCAAGGCATATGCTGGTGGTCCCTTCCAGATATCCGGGCCCTCAAGCAACCTCTGTCAGCACATGCCTT
ATCTGACCTTCTCTCAAGATTGGTGGAGGTGATAGGAGAACATGGAGATGAGATTGAGGTTATGTAATGGAAGC
GCTCCTAACCTTGAGGGCGGCTGTGGATAACTTGTCTGACTGCTTGAAGAACAGTGACCTCCTAACTGTATTGTC
CCGCTCTTCTCACCAGATTTAAGCTCCAGCAGTAACTAACAGCAAGCAGAAAGAGCACAGGACAACATAACAT
GAACCCGGGAACCAACAGCGGCAACACCGCAACTGCCGAACGGAGCCGGCATCAACGAAGCTTCTCTGTGCCCAA
GAAGTTTGGTGTCTCGACCGATCCTCTGACCCACCTCGAAGTGCCACACTGGACAGAATTCAGGCTTGTAACCA
ACAAGGCCTCTCCTCAAAAACAGAAAGCTCATCTCCTTGAAGGACAGTCTCACGGACCCATCCCACATAAACCA
TCCCACCAACCTGCTGGCCACCATATTCTGGGTACAGTGGCCTTGATGGAGTCTGATTTTGAAGTTTGAATACTT
AATGGCCTTAAGGCTGTTGAGCAGACTACTGGCACATATGCCACTCGATAAGGCTGAGAACCGAGAAAAGCTTGA
GAAACTCCAGGCACAGCTGAAGTGGGCCGACTTCTCCGGGCTGCAGCAGCTGCTGCTGAAAGGATTACATCCCT
CACCACCACAGACCTGACCCTGCAGCTCTTCACTGCTGCTGACACCAGTGTCCAAAATATCCATGGTGGATGCATC
CCACGCTATTGGGTTTCCACTGAATGTCTTGTGTCTCCTGCCTCAGCTGATTTCAGCATTTTGAAGTCCCAATCA
GTTCTGTAAGGATATAGCCGAAAGGATTGCTCAGGTTTGTGTTAGAAGAGAAGAACCCCAAACTTTCAAATCTTGC
ACATGTCTGACTCTTTATAAAACGCACAGCTACACGAGGGACTGTGCCACGTGGGTCAATGTGGTCTGTGATA
CCTTCATGAAGCATATGCTGACATTACCTTGAATATGGTTACCTACCTGGCAGAGCTGCTGGAGAAGGGCCTCCC

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FIGURE 360C

TAGTGTGCAGCAGCCCCCTGCTCCAGGTGATCTACAGTCTTCTCAGCTACATGGACCTTTCTGTCGTTCCCTGTCAA
ACAGTTCAATGTGGAAGTTCTGAAGACAATTGAAAAATATGTGCAAAGTGTTCACTGGAGAGAAGCTCTGAATAT
CTTGAAGCTGGTAGTTTCTCGGTGAGCCAGCCTTGTTTTACCTTCATACCAGCACAGTGACCTCTCAAAAATAGA
AATACATCGAGTGTGGACTAGTGCTTCCAAGGAATTACCTGGGAAAACCCTGGACTTCCACTTCGATATTTCCGA
GACTCCAATCATCGGGAGGCGGTATGATGAGCTGCAGAATTCTTCTGGGCGTGATGGGAAGCCCAGGGCCATGGC
CGTACCCCGGAGCACATCTTCCACTTCCTCAGGCTCCAACCTCCAACGTCCTTGTTCCAGTGAGCTGGAAAAGGCC
CCAGTATTCTCAGAAGAGAAACAAAAGAGAAGTTGGTACATGTCTTTTCTCTGTGTGGCCAAGAAGTAGGATTGAG
CAAAAATCCATCAGTGATTTTTTCATCGTGTGGGGATCTGGATCTGCTTGAGCACCAGACAAGCTTGGTATCTTC
TGAGGACGGTGCCCGAGAGCAGGAGAACATGGATGACACAAACAGCGAGCAGCAGTTTAGAGTCTTCAGAGACTT
CGACTTCCTAGATGTGGAGCTGGAGGATGGAGAGGGTGAGAGTATGGACAATTTCAACTGGGGAGTGCGCAGACG
TTCTCTGGACAGCCTGGATAAGTGTGATATGCAGATTCTGGAGGAGCGCCAACCTGTCAGGAAGCACTCCTAGCCT
GAATAAAATGCACCATGAGGACTCCGATGAATCATCCGAGGAGGAGGACCTCACAGCCAGCCAGATCCTGGAGCA
CTCAGACCTAATCATGACTCTCTCCCCCTCTGAAGAGACGAATCCCATGGAGCTGCTCACCACAGCCTGTGACTC
GACCCCTGCAGAACCTCATTCCTTTAACACCAGAATGTCCAGCTTTGATGCTTCCTTGCCTGATATGAATAATCT
GCAGATTTCTGAGGGTTCAAAGGCTGAAGCTGTTCTGTGAGGAGGAGGACACCACCGTGCATGAGGATGATCTTTC
TAGTTCCATCAATGAACTCCCAGCAGCTTTTGAATGCAGCGACAGCTTTAGCCTGGACATGACTGAGGGGGAAGA
AAAAGGCAATCGGGCACTGGACCAGTTTACCCTGGCGAGCTTTGGAGAAGGTGACAGGGGAGTCTCTCCCCCTCC
CTCGCCCTTCTTCTCAGCCATCCTTGCCGCCTTTAGCCCGCAGCCTGTGACGATGCCGAGGAGGCTGGCGCAG
CCACATCAACCAGCTTATGTGTGACTCAGATGGCTCCTGTGCTGTGTATACATTTTCATGTGTTCTCCTCCTTGTT
TAAGAATATTCAGAAAAGGTTCTGCTTCCTAACCTGTGATGCAGCCAGTTACCTTGGAGATAACCTCCGGGGAAT
CGGATCCAAATTTGTCAGCTCTTCCCAGATGCTCACCTCCTGCTCTGAATGTCTACACTTTTTTGTTGATGCCGA
GACTCTCCTTTTCATGTGGACTTCTGGACAAGCTCAAGTTCAAGTGTGTAGAACTGCAAGAATATTTGGATACCTA
CAACAACAGGAAAAGAGGCCACACTCTCTTGCTTGCAAATTGTAAGGCAACATTTGCAGGGGGATCAAGAGATGG
AGTAATTACCTGTCAACCAGGGGACTCCGAAGAAAAGCAATTGGAAGTGTGTCAGAGATTATATAAGCTACACTT
CCAGCTGCTATTGCTTTTTTTCAGTCTACTGTAAGCTCATCGGCCAGGTGCACGAAGTTAGCTCCATGCCAGAGCT
GCTGAATATGTCCAGGGAAGTGAAGTACCTAAAGAAACACCTGAAGGAAGCCAGTGACGTCATTGCAGCTGACCC
TCTCTATTTCAGACGGCGCGTGGTCCGAGCCACCTTCACGTCCACTGAAGCAGCCATCCAGTCCATGCTGGAGTG
CCTGAAGAACAACGAAGCTCGGCAAAGCTTTGCGGCAGATCAGGGAGTGACAGAAGTCTGTGGCCCAATGACATCTT
TGGAAGCAGTTCTGATGATGAGGTCCAGACACTACTGAATATTTATTTCCGTACCAAACCTCTGGGACAGACGGG
TACTTATGCCCTGGTGGGGTCTAACAGAGCCTGACCGAGATCTGCACCAAGCTGATGGAGCTGAACATGGAGAT
CCGGGACATGATCCGACAGGGCCAGAGTTACCGAGTCTCCTACTACTTTTCTTCCAGACTCCAGTGTCTTGGCAC
TAGTCTCTGACAGGAGCCTCCTGTCCCCTGAGGTTCCAACTGCAGTGTGCCATGCTGGGGCAACGTCATTCA
GTGCTTCTCGGCCTTCAAAGGCTTGGACAGACTGTTCTCCCTCTTGTACCTGTAGGGCTTTTTCTAAAGAGG
ATGGCAGAACTTCCAACGTGTAGCAATACTATAAGAACCAAGGTAGCTTAGAACGTCCTGGACAGACTCCACTCA
TCATGCTGTGTGGCACAATGTGTTACATTTGACCGAGCATATGCAACTCGCTACTGAAGAAGTGACTTCCGTTG
CATACCAAAGCCGACTACACTGAACAGTACCTTCTTTCTAGAAACAATTTTAGATTGGCAAAGTGCAATGTTT
TCTTCACTCAAAAAATTTTATATTCTCAAACATGTATATTCTTCCCTGTCTTGTTCCATTTTCTTTTCTTTTT
CTTTTTCTTTTTCTTTCTTTCTGTTGGGCTGAGAAAGGGGCGAGGCAAAATGAAGCTGGCCACTGAAAAGTGAAG
ATGGTCAAAAGCTGACAGCCTGTGTATGTGAAAAGGGAATTGTAAATGGACTGCAATGTAATGTACACTGTAATT
TGAATACAATTACTGTATCTAAAAGGAGCTGCTATGAAGTACCTTTCTTATGTTGCTAGGCTACTGTTTCTGAAA
GCCCTGGATCTCTTTGCACCAAAAATGGTCCAGATAGACTCTTTTAAAGGATCTTGGCTGCTTTTTACTAGAAGG
TTGCTTTTATGAGCATATTTATACTGCTGAAGGATGAGTGTTAATTTAATTAACCTTTGCCGTTTTGTAGAGAAA
ACTATTCACAAGATAAATTCCAAGTCTTTTACCTGTCAGGCATGCATATTTTAAATATCTGTTTGGATAGTCAGA
AGTAGAATCATAAAGGTAAAATATGAGTTGTTACTTTGTTTCTTCGATGTCATATTTTATGTGTAATATATATGT
AAAGGGCCATTCTTAAGTTCTCTCCTTAAACTTAATGCTGTCAAGTGTTAGATGTGTGCATGTGAACCTGTTGCA
CTGCAGAAACATATTCAGAGTTTATCTATGTAACCTTATCACTCTGTAAATACATTTAAAGTTTTTGTGATGTAA
GCTTAATTGATATTCTGTTTCAAGAACTTTCTTTAGACTAAAAAAAAAAAAAAAAAGACAAA

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FIGURE 361

MASQQDSGFFEISIKYLLKSWSENTSPVNGYIKPPVPPASGTHREKGPPTMLPINVDPDSKPGEYVLKSLFVNFT
TQAEKIRIIMAEPLEKPLTKSLQGEDPQFDQVISSMSSLSEYCLPSILRTLFDWYKRQNGIEDESHEYRPRTS
NKSKSDEQQRDYLMERRDLAIDFIFSLVLIEVLKQIPLHPVIDSLIHDVINLAFKHFKYKEGYLGPNTGNMHIVA
DLYAEVIGVLAQAKFPAVKKKFMALKELRHKEQNPYVVQSIISLIMGMKFFRIKMPVEDFEASLQFMQECAHY
FLEVKDKDIKHALAGLFVEILVPVAAAVKNEVNVPCLRNFVESLYDTTLELSSRKKHSLALYPLVTCLLCVSQKQ
LFLNRWHIFLNNCLSNLKNKDPKMARVALESYRLLWVYMIRIKCESNTATQSRITITITTLFPKGSRGVVPDM
PLNIFVKIIQFIAQERLDFAMKEIIFDFLCVGKPAKAFSLNPERMNIGLRAFLVIADSLQQKDGEPPMPVTGAVL
PSGNTLRVKKTYLSKTLTEEEAKMIGMSLYYSQVRKAVDNILRHLDKEVGRCMMLTNVQMLNKEPEDMITGERKP
KIDLFRTCVAAIPRLPDGMSKLELIDLLARLSIHMDDEL RHIAQNSLQGLLVDFSDWREDVLFGFTNFLLREVN
DMHHTLLDSSSKLLLQLLTQWKLVITQQKVYEQANKIRNSELIANGSSHRIQSERGPHCSVLHAVEGFALVLLC
SFQVATRKL SVLILKEIRALFIALGQPEDDDRPMIDVMDQLSSSILESFIHVAVSDSATLPLTHNVLDLQWLVEWN
AVLVNSHYDVKSPSHVWIFAQSVKDPWVLCLSFLRQENLPKHCP TALSYAWPYAFTRLQSVMLVPDNPSPINAK
KTSTAGSGDNYVTLWRNYLILCFGVAKPSIMSPGHLRASTPEIMATTPDGTVSYDNKAIGTPSVGVLLKQLVPLM
RLESIEITESLVLGFRNTSLVRELVEELHPLMKEALERRPENKKRRERRDLLRLQLLRIFELLADAGVISDST
NGALERDTLALGALFLEYVDLTRMLLEAENDKEVEILKDIRAHFSAMVANLIQCVPVHHRRFLFPQQSLRHHLF I
LFSQWAGPFSIMFTPLDRYSDRNHQITRYQYCALKAMSAVLCCGPVFDNVGLSPDGYLYKWLDNILACQDLRVHQ
LGCEVVVLLLELNPQINLFNWAIDRCYTGSYQLASGCFKAIATVCGSRNYPFDIVTLLNLVLFKASDTNREIYE
ISMQLMQILEAKLFVYSKKVAEQRPGSILYGTGHPPLPLYSVSLALLSCELARMYPELTLP LFSGKPAIPHNTPO
RAPDHAYLPAALAAQHRAGGQQAPPPGSSPSSPEDEVK DREGDVTASHGLRGNGWGSPEATSLVLNNLMYMTAKY
GDEVPGPEMENAWNALANNEKWSNNLRITLQFLISLCGVSSDTVLLPYIKKVAIYLCRNNTIQTMEELLFELQQT
EPVNP I VQHCDNPPFYRFTASSKASAAASGTTSSSNTVVAGQENFPDAEENKILKESDERFSNVIRAHTRLESRY
SNSSGGSYDEDKNDPISPYTGWLLTITETKQPQPLPMPCTGGCWAPLVDYLPETITPRGPLHRCNIAVIFMTEMV
VDHSVREDWALHPLLLLHAVFLGLDHYRPEVFEHSHKLLLHLLIALSCNSNFHSIASVLQTREMGEAKTLTVQP
AYQPEYLYTGGFDFLREDQSSPVPD SGLSSSSSTSSSISLGGSSGNLPQMTQEVEDVDTAAETDEKANKLIEFLT
RAFGPLWCHEDITPKNQNSKSAEQLTNFLRHVVSVFKDSKSGFHLEHQLSEVALQTALASSSRHYAGRSFQIFRA
LKQPLSAHALSDLLSRLVEVIGEHGDEIQGYVMEALLTLEAAVDNLS DCLKNSDLLTVLSRSSSPDLSSSSKLTA
SRKSTGQLNMNPGTTSGNTATAERSRHQRSFSVPKKFGVIDRSSDPPRSA

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FIGURE 362

TTCCCCCCCCCCCCCCCCCCCCCGCCCGAGCACAGGACACAGCTGGGTTCTGAAGCTTCTGAGTTCTGCAGCCT
CACCTCTGAGAAAACCTCTTTTCCACCAATACCAATGAAGCTCTGCGTGACTGTCCTGTCTCTCCTCATGCTAGTA
GCTGCCTTCTGCTCTCCAGCGCTCTCAGCACCAATGGGCTCAGACCCTCCACCGCCTGCTGCTTTTCTTACACC
GCGAGGAAGCTTCCTCGCAACTTTGTGGTAGATTACTATGAGACCAGCAGCCTCTGCTCCCAGCCAGCTGTGGTA
TTCCAAACCAAAAGAAGCAAGCAAGTCTGTGCTGATCCCAAGTGAATCCTGGGTCCAGGAGTACGTGTATGACCTG
GAACTGAACCTGAGCTGCTCAGAGACAGGAAGTCTTCAGGGAAGGTCACCTGAGCCCGGATGCTTCTCCATGAGAC
ACATCTCCTCCATACTCAGGACTCCTCTCCGCAGTTCCCTGTCCCTTCTCTTAATTTAATCTTTTTTATGTGCCGT
GTTATTGTATTAGGTGTCATTTCCATTATTTATATTAGTTTAGCCAAAGGATAAGTGTCTATGGGGATGGTCCA
CTGTCACGTGTTTCTCTGCTGTTGCAAATACATGGATAACACATTTGATTCTGTGTGTTTTCCATAATAAACTTT
AAAATAAAATGCAGACAGTTA

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FIGURE 363

MKLCVTVLSLLMLVAAFCSPALSAPMGSDPPTACCFSTARKLPRNFVVDYYETSSLCSQPAVVFQTKRSKQVCA
DPSESWVQEYVYDLELN

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FIGURE 364

GGCACGAGGCCTCGTGCCGCCGGGCTCTTGGTACCTCAGCGGAGCGCCAGGCGTCCGGCCGCCGTGGCTATGTT
CGTGTCGATTTCGCGAAAGAGTTCTACGAGGTGGTCCAGAGCCAGAGGGTCCTTCTCTTCGTGGCCTCGGACGT
GGATGCTCTGTGTGCGTGCAAGATCCTTCAGGCCTTGTTCCAGTGTGACCACGTGCAATATACGCTGGTTCCAGT
TTCTGGGTGGCAAGAAGCTTGAACTGCATTTCTTGAGCATAAAGAACAGTTTCATTATTTTATTCTCATAAACTG
TGGAGCTAATGTAGACCTATTGGATATTCTTCAACCTGATGAAGACACTATATTCTTTGTGTGTGACACCCATAG
GCCAGTCAATGTGTCGTCATGTATACAACGATACCCAGATCAAATTACTCATTAAACAAGATGATGACCTTGAAGT
TCCCGCCTATGAAGACATCTTCAGGGATGAAGAGGAGGATGAAGAGCATTTCAGGAAATGACAGTGTGGGTCAGA
GCCTTCTGAGAAGCGCACACGGTTAGAAGAGGAGATAGTGGAGCAAACCATGCGGAGGAGGCAGCGCGAGAGTG
GGAGGCCCCGAGAAGAGACATCCTCTTTGACTACGAGCAGTATGAATATCATGGGACATCGTCAGCCATGGTGTAT
GTTTGAGCTGGCTTGGATGCTGTCCAAGGACCTGAATGACATGCTGTGGTGGGCCATCGTTGGACTAACAGACCA
GTGGGTGCAAGACAAGATCACTCAAATGAAATACGTGACTGATGTTGGTGTCTCGCAGCGCCACGTTTCCCGCCA
CAACCACCGGAACGAGGATGAGGAGAACACACTCTCCGTGGACTGCACACGGATCTCCTTTGAGTATGACCTCCG
CCTGGTGTCTTACCAGCACTGGTCCCTCCATGACAGCCTGTGCAACACCAGCTATACCGCAGCCAGGTTCAAGCT
GTGGTCTGTGCATGGACAGAAGCGGCTCCAGGAGTTTCCTTGACAGATGGGTCTTCCCCTGAAGCAGGTGAAGCA
GAAGTTCCAGGCCATGGACATCTCCTTGAAGGAGAATTTGCGGGAAATGATTGAAGAGTCTGCAAATAAATTTGG
GATGAAGGACATGCGCGTGCAGACTTTCAGCATTCATTTTGGGTTCAAGCACAAGTTTCTGGCCAGCGACGTGGT
CTTTGCCACCATGTCTTTGATGGAGAGCCCCGAGAAGGATGGCTCAGGGACAGATCACTTCATCCAGGCTCTGGA
CAGCCTCTCCAGGAGTAACCTGGACAAGCTGTACCATGGCTGGAACTCGCAAGAAGCAGCTGCGAGCCACCCA
GCAGACCATTGCCAGCTGCCTTTGCACCAACCTCGTCATCTCCAGGGGCCTTTCTGTACTGCTCTCTCATGGA
GGGCACTCCAGATGTGCTGCTGTTCTCTAGGCCGGCATCCCTAAGCCTGCTCAGCAAACACCTGCTCAAGTCCTT
TGTGTGTTGACAAAGAACC GGCGCTGCAAACCTGCTGCCCCCTGGTGTGCTGCCCCCTGAGCATGGAGCATGG
CACAGTGACCGTGGTGGGCATCCCCCAGAGACCGACAGCTCGGACAGGAAGAAGTTTTTTGGGAGGGCGTTTGA
GAAGGCAGCGGAAAGCACCAGCTCCCGGATGCTGCACAACCATTTTGACCTCTCAGTAATTGAGCTGAAAGCTGA
GGATCGGAGCAAGTTTCTGGACGCACTTATTTCCCTCCTGTCTAGGAATTTGATTCTTCCAGAATGACCTTCTT
ATTTATGTAACCTGGCTTTTCAATTTAGATTGTAAGTTATGGACATGATTTGAGATGTAGAAGCCATTTTTTATTAAA
TAAAATGCTTATTTTAGGCTCCGTCCCCAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 365

MFVSDFRKEFYEVVQSQRVLLFVASDVDALCACKILQALFQCDHVQYTLVPVSGWQELETAFLEHKEQFHYFILI
NCGANVDLLDILQPDEDTIFFVCDTHRPVNVVNVYNDTQIKLLIKQDDDLVPAYEDIFRDEEEDEEHSGNDSG
SEPSEKTRLEEEIVEQTMRRRQRREWEARRRDILFDYEQYEHGTSSAMVMFELAWMLSKDLNDMLWWAIVGLT
DQWVQDKITQMKYVTDVGVLRHVSRHNRNEDEENTLSVDCTRISFEYDLRLVLYQHWSLHDSL CNTSYTAARF
KLWSVHGQKRLQEF LADMGLPLKQVKQKFQAMD ISLKENLREMIEESANKFGMKDMRVQTF SIHFGFKHKFLASD
VVFATMSLMESPEKDGSGTDHFIQALDSLRSNLDKLYHGLELAKKQLRATQQT IASCLCTNLVISQGPFLYCSL
MEGTPDVMLFSRPASLSLLSKHLLKSFVCSTKNRRCKLLPLVMAAPLSMEHGT VTVVGIPPETDSSDRKNFFGRA
FEKAAESTSSRMLHNHFDLSVIELKAEDRSKFLDALISLLS

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FIGURE 366

GCGGGATTTTCAAGCGTAGGCCCGGGAACTCGAGCTGCCATGAGCCTCTGGGTGGACAAGTATCGGCCCTGCT
CCTTGGGACGGCTGGACTATCACAAGGAGCAGGCGGCCAGCTGCGGAACCTGGTGCAGTGTGGTGACTTTCCTC
ATCTGTTAGTGTACGGACCATCAGGTGCTGGAAAAAAGACAAGAATTATGTGTATTCTACGTGAACTTTATGGTG
TTGGAGTGGAAAAATTGAGAATTGAACATCAGACCATCACAACCTCCATCTAAAAAAAATTGAAATTAGCACCA
TTGCAAGTAACTACCACCTTGAAGTTAATCCTAGTGATGCTGGAAATAGTGACCGAGTAGTCATTGAGGAGATGT
TGAAAACAGTGGCACAATCACAACAACCTTGAAACAACTCTCAAAGGGATTTTAAAGTGGTATTATTGACAGAAG
TTGACAACTCACCAAGATGCTCAGCATGCCCTTGCGAAGAACCATGGAAAAATATATGTCTACCTGCAGATTGA
TCTTGTGCTGCAATTCTACATCTAAAGTGATCCCACCTATTCTGTAGTAGGTGCTTGGCGGTTTCGTGTGCCTGCTC
CCAGCATTGAAGATATTTGCCACGTGTTATCTACTGTGTGAAGAAGGAAGGTCTGAATCTTCCCTTCACAACCTGG
CTCATAGACTTGACAGAGAAGTCTTGTAGAAAATCTCAGAAAAGCCCTGCTTATGTGTGAAGCCTGCAGAGTGCAAC
AATATCCTTTTACTGCAGATCAAGAAATCCCTGAGACAGATTGGGAGGTGTATCTGAGGGAGACTGCAAAATGCTA
TTGTCTAGTCAGCAAACCTCCACAAAGGCTCCTTGAAGTTCGTGGAAGGCTGTATGAGCTTCTAACTCATTGTATTCT
CTCCTGAGATAATAATGAAGGGCCTTCTCTCAGAACTGTTACATAATTGTGATGGACAACCTGAAAGGGGAGGTGG
CACAAATGGCAGCTTACTATGAGCATCGTCTACAGCTGGGTAGCAAAGCCATTTATCACTTGAAGCGTTTGTGG
CCAATTTCATGGCAGCTTTATAAGAAGTTCATGGAGGATGGATTGGAAGGCATGATGTTCTGACTTCTGTGCTAGTTA
TTCCTGCAAAGATTTCTCAGTATCAGTATTTACATACAGCTTATATTAAGAGCTGTGGGTAAATTAAGTGAAC
TTAATCATGTGCTATTTGCGTTTTTTTGGTAATAACTTCTCTGTGAATAATTAATCATCCTCTGAGTTAAATAAT
TGCTCCTATACTATTGAAGTATGTAGTTTTGTACATAACTTAGAGACTTTAGAGTCTAAGAAAATGATCTTAATT
TACTTTAAGCATTGGTTATTCAAGTATTCATTGTTGATCCTCCTATTCTCTTCCGTCTAATCTCTCACCTGCTAA
AGGAGATTTACACATTAGAAAGCAAAGATTATTTTCATTTATCCAGATGACCATTTTCTGCCACAGGTAACATGA
TTGTTTGACACACCATTATATTTAATTCTAGTTTCTCTCAATGAATAATTGTATTTTTGTAGGAAATGTAAGATT
TCATTCTGAAACATAATTATTGGTATGGACAAAATTGCAGATACCATTTCTGTTGAGGCTGCAGATTCCAACCTT
TTATTTTCAGTGGTTCAGATTAGTATTAGGTGCGTACTAAGAAATAAGCATGTTTTCTACTAATTTAAGTACTTGAG
ACTCTTGAAGAAAATTGAGAATGAAGTTCCTGGAGAAAGGTATGTTACTGTAGTAATTACTCTTTGAACAGGTTTT
GTGTTTTGTGCTATTAGCTCTGCCCTTTTAAATTAAATATTTTGGTTTCATGGACCAAAGGGTTTACTTGACAAATTT
GTGTGACAGACTCCGAACAATTCCTTTACTACGAAGTATAATTTATAAAATAAAATATAACCATTTTAAAGGTAC
AGTTTGATTTTTGACCAGTGAACTATGATCCCAATCAAGGTATAGATGCCGTCACCCCAAAAAGTTCCCTCCAT
ATCCCTTTGCAGTCAGTTCATCCCTACCCTGGCCCAGATGATCACTGATCTTGTGCTATTATAGATGAGTTTTGCCA
GTTCAAGAATTTAATGGAATCAGATATTGTAAGCATTCTTGTGTAATACTTCATTCTCTCATTATTGAGATTCT
ATCCATATTGTTGAATGTTTCACTAGTTAATGTTTATTGTTCAATATTTTTGTATATACTTTTAAAGCCTATTCA
CTTGCTGATGGATCTTTGGTTTGTTCAGGTTTGGTTATTATGAATAAAGTTGCTGTGAATAAAAAAAAAAAAAA
AAAAAA

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FIGURE 367

MSLWVDKYRPCSLGRLDYHKEQAAQLRNLVQCGDFPHLLVYGPSGAGKKTRIMCILRELYGVGVEKLRIEHQTIT
TPSKKKIEISTIASNYHLEVNPSDAGNSDRVVIQEMLKTVAQSQQLETNSQRDFKVVLLTEVDKLTQDAQHALRR
TMEKYMSTCRLILCCNSTSKVIPPIRSRCLAVRVPAPSIEDICHVLSTVCKKEGLNLPSQLAHLAEKSCRNLRK
ALLMCEACRVQQYPFTADQEIPETDWEVYLRETANAIVSQQTPQRLLEVGRGRLYELLTHCIPPEIIMKGLLSELL
HNCDGQLKGEVAQMAAYYEHRLQLGSKAIYHLEAFVAKFMALYKKFMEDGLEGMMF

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FIGURE 368

CGAGCTGCCATGAGCCTCTGGGTGGACAAGTATCGGCCCTGCTCCTTGGGACGGCTGGACTATCACAAAGGAGCAG
GCGGCCCAGCTGCGGAACCTGGTGCAGTGTGGTGACTTTCTCATCTGTAGTGTACGGACCATCAGGTGCTGGA
AAAAAGACAAGAATTATGTGTATTTTACGTGAACTTTATGGTGTTGGAGTGGAAAAATTGAGAATTGAACATCAG
ACCATCACAACTCCATCTAAAAAATAATTGAAATTAGCACCATTGCAAGTAACTACCACCTTGAAGTTAATCCT
AGTGATGCTGGAAATAGTGACCGAGTAGTCATTGAGGAGATGTTGAAAACAGTGGCACAATCACAACTTGA
ACAACTCTCAAAGGGATTTTAAAGTGGTATTATTGACAGAAGTTGACAACTCACCAAAGATGCTCAGCATGCC
TTGCGAAGAACCATGGAAAAATATATGTCTACCTGCAGATTGATCTTGTGCTGCAATTCTACATCTAAAGTGATC
CCACCTATTCTAGTAGGTGCTTGGCGGTTCTGTGCTGCTCCAGCATTGAAGATATTTGCCACGTGTTATCT
ACTGTGTGTAAGAAGGAAGGTCTGAATCTTCTTCACTGGCTCATAGACTTGCAGAGAAGTCTTGTAGAAAT
CTCAGAAAAGCCCTGCTTATGTGTGAAGCCTGCAGAGTGCAACAATATCCTTTTACTGCAGATCAAGAAATCCCT
GAGACAGATTGGGAGGTGTATCTGAGGGAGACTGCAATGCTATTGTGAGTGCAGCAAACTCCACAAAGGCTCCTT
GAAGTTCGTGGAAGGCTGTATGAGCTTCTAACTCATTGTATTCTCCTGAGATAATAATGAAGGGCCTTCTCTCA
GAACTGTTACATAATTGTGATGGACAAGTGAAGGGGAGGTGGCACAATGGCAGCTTACTATGAGCATCGTCTA
CAGCTGGGTAGCAAAGCCATTTATCACTTGGAAGCGTTTGTGGCCAAATTCATGGCACCTTTATAAGAAGTTCATG
GAGGATGGATTGGAAGGCATGATGTTCTGACTTCTGTGAGTTATTCTTGCAAAGATTTCTCAGTATCAGTATTTA
CATAAGCTTATATTAAAGAGCTGTGGGTAAATTAAGTGAATTAATCATGTCGTATTTGGGTTTTTTTGGTAA
TAACTTCTCTGTGAAGTATTAATCATCCTCTGAGTTAAATAATTGCTCCTATACTATTGAAGTATGTAGTTTTGT
ACATAACTTAGAGACTTTAGAGTCTAAGAAAATGATCTTAATTTACTTTAAGCATTGGTTATTCAAGTATTCATT
GTTGATCCTCCTATTCTCTTCCGTCTAATCTCTCACCTGCTAAAGGAGATTTACACATTAGAAAGCAAAGATTAT
TTTCATTTATCCAGATGACCATTTTCTGCCACAGGTAACATGATTGTTTGACGG

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FIGURE 369

MSLWVDKYRPCSLGRLDYHKEQAAQLRNLVQCGDFPHLLVYGPSGAGKKTRIMCILRELYGVGVEKLRIEHQITIT
TPSKKKIEISTIASNYHLEVNP SDAGNSDRVVIQEMLKTVAQSQQLETNSQRDFKVVLLTEVDKLTKDAQHALRR
TMEKYMSTCRLILCCNSTSKVIPPIRSRCLAVRVPAPSIEDICHVLSTVCKKEGLNLPSQLAHLAEKSCRNLRK
ALLMCEACRVQQYPFTADQEIPETDWEVYLRETANAIVSQQTPQRLLEVGRGRLYELLTHCIPPEIIMKGLLSELL
HNCDGQLKGEVAQMAAYYEHRLQLGSKAIYHLEAFVAKFMALYKKFMEDGLEGMMF

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FIGURE 370

AGTCTCCGGCGAGTTGTTGCCTGGGCTGGACGTGGTTTTGTCTGCTGCGCCGCTCTTCGCGCTCTCGTTTCATT
TTCTGCAGCGCGCCACGAGGATGGGCCACAAGCAGATCTACTACTCGGACAAGTACTTCGACGAACACTACGAGT
ACCGGCATGTTATGTTACCCAGAGAACTTTCCAAACAAGTACCTAAAACATCTGATGTCTGAAGAGGAGTGGA
GGAGACTTGGTGTCCAACAGAGTCTAGGCTGGGTTCATTACATGATTCATGAGCCAGAACCACATATTCTTCTCT
TTAGACGACCTCTTCCAAAAGATCAACAAAAATGAAGTTTATCTGGGGATCGTCAAATCTTTTTCAAATTTAATG
TATATGTGTATATAAGGTAGTATTCAGTGAATACTTGAGAAATGTACAAATCTTTCATCCATACCTGTGCATGAG
CTGTATTCTTCACAGCAACAGAGCTCAGTTAAATGCAACTGCAAGTAGGTTACTGTAAGATGTTTAAAGATAAAG
TTCTTCCAGTCAGTTTTTCTCTTAAGTGCTGTTTGAGTTTACTGAAACAGTTTACTTTTGTTCAATAAAGTTTG
TATGTTGCATTTAAAAA

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FIGURE 371

MAHKQIYYSDKYFDEHYEYRHVMLPRELSKQVPKTHLMSEEEWRRLGVQQSLGWVHYMIHEPEPHILLFRRPLPK
DQQK

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FIGURE 372

GAATTCCCAAACGTGCACAGGGGAGTGAGGGCAGGGCGCTCGCAGGGGGCACGCAGGGAGGGCCCAGGGCGCCAG
GGAGGCCGCGCCGGGCTAATCCGAAGGGGCTGCGAGGTCAGGCTGTAACCGGGTCAATGTGTGGAATATTGGGGG
GCTCGGCTGCAGACTTGGCCAAATGGACGGGACTATTAAGGAGGCTCTGTGGTGGTGAGCGACGACCAGTCCCT
CTTTGACTCAGCGTACGGAGCGGCAGCCCATCTCCCAAGGCCGACATGACTGCCTCGGGGAGTCTTGACTACGG
GCAGCCCCACAAGATCAACCCCCCTCCACCACAGCAGGAGTGGATCAATCAGCCAGTGAGGGTCAACGTCAAGCG
GGAGTATGACCACATGAATGGATCCAGGGAGTCTCCGGTGGACTGCAGCGTTAGCAAATGCAGCAAGCTGGTGGG
CGGAGGCGAGTCCAACCCCATGAATAACAAGCTATATGGACGAGAAGAATGGCCCCCTCTCCCAACATGAC
CACCAACGAGAGGAGAGTCAATCGTCCCGCAGACCCACACTGTGGACACAGGAGCATGTGAGGCAATGGCTGGA
GTGGGCCATAAAGGAGTACAGCTTGATGGAGATCGACACATCCTTTTTCCAGAACATGGATGGCAAGGAAGTGTG
TAAAATGAACAAGGAGGACTTCTCTCGCGCCACCACCCTCTACAACACGGAAGTGTGTTGTACACCTCAGTTA
CCTCAGGGAAAGTTCAGTCTGCTGGCCTATAATACAACCTCCACACCGACCAATCCTCAGATTGAGTGTCAAAGA
AGACCCTTCTTATGACTCAGTCAGAAGAGGAGCTTGGGGCAATAACATGAATTCTGGCCTCAACAAAAGTCTCTCC
CCTTGGAGGGGCACAAACGATCAGTAAGAATACAGAGCAACGGCCCCAGCCAGATCCGTATCAGATCCTGGGCCC
GACCAGCAGTCGCTAGCCAACCCTGGAAGCGGGCAGATCCAGCTGTGGCAATTCTCTGGAGCTGCTCTCCGA
CAGCGCCAAACGCCAGCTGTATCACCTGGGAGGGGACCAACGGGGAGTTCAAAATGACGGACCCCGATGAGGTGGC
CAGGCGCTGGGGCGAGCGGAAAAGCAAGCCCAACATGAATTACGACAAGCTGAGCCGGGGCCCTCCGTTATTACTA
TGATAAAAACATTATGACCAAAGTGCACGGCAAAAGATATGCTTACAAATTTGACTTCCACGGCATTGCCCAGGC
TCTGCAGCCACATCCGACCGAGTCGTCCATGTACAAGTACCCTTCTGACATCTCCTACATGCCTTCTTACCATGC
CCACCAGCAGAAGGTGAACCTTGTCCCTCCCCATCCATCCTCCATGCCTGTCACTTCTTCCAGCTTCTTTGGAGC
CGCATCACAACTACTGGACCTCCCCACGGGGGGAATCTACCCCAACCCCAACGTCCCCGCCATCCTAACACCCA
CGTGCTTTCACACTTAGGCAGCTACTACTAGAGCTTCTTCTAGCTGAAGCCCATCCTGCACACTTACTGGATGC
TTTGGACTCAACAGGACATATGTGGCCTTGAAGGGAAGACAAAAGTGGATGTTCTTTCTTGTGGATAGAACCCTT
TGTATTTGTTCTTTAAAAACATTTTTTTTTAATGTTGGTAAGTCTTCTGCTTCTTCTACCTGAACAAAGAGATGAATA
ATTCCATGGGCCAGTATGCCAGTTTGAATTCTCAGTCTCCTAGCATCTTGTGAGTTGCATATTAAGATTACTGGA
ATGGTTAAGTCATGGTTCTGAGAAAGAAGCTGTACGTTTTCTTTATGTTTTATGACCAAAGCAGTTTCTTGTCA
ATACACGGGGTTCAGTATGACACAGAATCATGGACTTAACCCGTCATGTTCTGGTTTGAGATTTAGTGACAAATA
GAGGTGGGAAGCTTATAATCTAATTTTAGGAGGACCAAATTCAGCGGATGGCAACTGGAACATTGATTGTAAGGC
CAGTGAAGTTTTACCCAACTGGAATTTGATGGAAAGAAGGTTTGTGTGTTAAGACGCCAAGGGCATTGCAGAA
TCCCTCTCAGTGGACAGTATGCACTCAGCTGACCACTCTCTCTAGAAATAGTCAAGATATGAACTAAGAAATTTT
AATGCAAATACATACATTCTGAAAGACGGGGAATTAATTTACTAATTTTTTTTTTTTAAATGATGACAGTGGTC
CCAGAACTTGGAAGTTGTAGGGATTTCTAAACTCAAGCAGATTTCGCAAGTGTGTGCGCTTGTGACACCATCA
GACCAGGGCCAACCAATCAGAAGGCAACTTACTGTATAAATTATGCAGAGTTATTTTCTATATCTCACAGTATT
AAAAATAAATAATTAAAAATTAAGAATAAATAAACGAGTTGACCTCGGTCACAAAAGCAGTTTTACTATCGAAT
CAATCGCTGTTATTTTTTTTTAATGTAATTTGTACATCTTTTTTCAATCTGTACATTTGGGCTGTCTTGTATGTT
TTTATGCTCCTTTTTTAAAAAGCATAATATGCCTATAGCTGAAAAGGAAACAGGGCTGTTAAGTCACTGACTTAT
GAGAAAGCAAAGCACTGGTACAGTTATTTAACAGGCATACACAAGCAGGGAAAAGATAATCCATTTAGATCTTTA
ATGCTTTGGAAATGCGTGTAAACAGTACTGCAATAATCACAGCTCTGGGAAAACAAACGAACTTTCCCTTGTGGA
GAGGAGGGATTTTCTGCTCTATATAAGCAACATATTTTAGACATTAAATATATATAATTTTGAGGTAAATTG
TTGACTTTTTTAACTATATTAAGTGTAAAGCTGCAAACTGTCAAAGAAGACCATGTTGTAAATAATTTGACTAA
ATAAATGGTTCCTTCTCTCAAAAAAAAAAAAAA

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FIGURE 373

MDGTIKEALS VVSDDQSLFDSAYGAAHL PKADMTASGSPDYGQPHKINPLPPQQEWINQPVRVNVKREYDHMNG
SRESPVDCSVSKCSKLVGGGESNPMNYSYMDEKNGPPPPNMTTNERRVIVPADPTLWTQEHVRQWLEWAIKEYS
LMEIDTSFFQNMDGKELCKMNKEDFLRATTLYNTEVLLSHLSYLRESSLLAYNTTSHTDQSSRLSVKEDPSYDSV
RRGAWGNMNSGLNKSPPLGGAQTISKNTEQRPQPDYQILGPTSSRLANFGSGQIQLWQFLELLSDSANASCI
TWEGTINGEFKMTDPDEVARRWGERKSKPNMNYDKLSRALRYYYDKNIMTKVHGKRYAYKFDFHGIAQALQPHPT
SSMYKYPSDISYMPSYHAHQKVN FVPPHPSSMPVTSSSFFGAASQYWTSP TGGIYPNPVPRHPNTHVPSHLGS
YY

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FIGURE 374A

CGGCGCGGGTGTGAGAGCGGTGTGGTAGGTGTTGTAGCCGCTATGGTGAAGTTCGCTTTGTAGCGGCCCCGGCT
AGAGAGTTGGCCTGTTCCCTGCCTTTGTGACCCGGAGGAGCTTTTGGGGGTGCGTCAAGCCCCTGGCCTGAGGCA
GCGAACTGGTTTGTGGCCTGTTTGATTCTGTGAGAGGTTTGCTGACCCAAGACAGTATCGAAAATGCATATTAA
GTCAATTATTCTAGAGGGATTCAAGTCCTATGCTCAGAGGACCGAAGTCAATGGTTTTGACCCCTCTTCAATGC
TATCACTGGCTTAAATGGTAGTGGGAAATCCAACATATTGGACTCCATCTGCTTTTTACTGGGCATCTCCAACCT
GTCTCAGGTTTCGGGCTTCTAATTTACAAGATTTAGTTTACAAAAATGGGCAGGCTGGTATTACCAAAGCCTCTGT
GTCAATCACTTTTGATAATTCTGACAAAAGCAAAGTCCTTTAGGATTTGAGGTTTCATGATGAAATCACAGTAAC
AAGGCAGGTGGTTATTGGTGGTAGAAATAAATATTTAATCAATGGAGTCAATGCCAACACACCAGAGTACAGGA
TCTCTTCTGTTCTGTTGGCCTTAATGTTAACAACCTCACTTTCTCATCATGCAGGGCCGAATTACAAAAGTATT
GAATATGAAACCACCAGAGATTTTATCCATGATAGAAGAAGCAGCTGGAACCAGGATGTATGAATACAAAAAAT
AGCTGCACAGAAAACCTATAGAAAAAAGGAGGCTAAGCTGAAAGAAATTAAGACGATACTTGAAGAAGAGATTAC
TCCAACCATTTCAAAAATTAAGAGAGGAAAGATCGTCCTACTTGGAGTACCAAAAAGTAATGAGAGAAATAGAACA
TTTGAGTCGTTTATATATTGCTTATCAGTTTTTGTCTGGCTGAAGATACCAAAAGTACGCTCAGCTGAGGAATTA
AGAAATGCAAGATAAAGTTATAAAGCTTCAGGAAGAATTGTCTGAGAATGATAAAAAAATAAAGCACTTAATCA
TGAAATAGAAGAATTGGAAAAAAGAAAGATAAGGAAACTGGAGTTATACTTCGATCTTTAGAAGATGCTCTTGC
AGAGGCTCAGCGAGTTAATACTAAATCTCAAAGCGCATTGTATCTCAAGAAGAAAAATCTGGCATGTGAGGAAAG
CAAACGCAAAGAGCTGGAAAAAATATGGTTGAGGACTCAAAAACCTTTAGCAGCAAAGGAAAAAGAGGTTAAAAA
GATAACAGATGGACTGCATGCCCTTCAAGAAGCAAGTAATAAAGATGCTGAAGCTCTGGCAGCTGCACAGCAGCA
CTTCAATGCTGTTTCCGCTGGCCTGTCCAGTAATGAAGATGGAGCAGAAGCAACTCTTGCTGGTCAAATGATGGC
CTGTAATAATGATATAAGTAAAGCTCAGACAGAAGCCAAACAGGCTCAGATGAAGTTGAAGCATGCTCAACAGGA
ATTAAGAATAAAACAAGCTGAAGTTAAGAAGATGGATAGTGGCTACAGGAAGGATCAAGAAGCTCTAGAAGCTGT
AAAAAGACTTAAAGAAAAAAGCTTGAAGCTGAAATGAAAAAGCTAAATTATGAAGAAAAATAAGAGGAAAGCCTTTT
GGAAAAAGCGCAGGCAGCTGTCTCGTGATATTGGTAGATTGAAAGAAACATATGAAGCTCTATTAGCCAGATTTCC
CAATCTTCGATTTGCATACAAGGATCCAGAGAAGAACTGGAATAGAAATTTGTGTGAAGGACTTGTGGCTTCTCT
GATTAGTGTGAAAGACACTTCTGCAACCACAGCTTTAGAATTAGTGGCTGGAGAACGACTCTACAATGTTGTAGT
AGACACAGAAGTTACTGGTAAAAAGCTACTAGAAAGGGGGAACTGAAACGTCGATACACTATAATTCCACTCAA
TAAATTTTCAGCCAGATGTATTGCACCAGAACTCTGAGAGTTGCTCAGAATCTTGTGGCCCTGACAACGTTCA
TGTGGCTCTTTCTTGGTTGAATATAAACCAGAACTTCAGAAAGCAATGGAGTTTGTCTTTGGAACAACATTTGT
TTGTGACAATATGGATAATGCCAAAAAAGTGGCCTTTGATAAGAGGATAATGACTAGAACTGTAACCTCTCGGAGG
TGATGTGTTTGATCTCATGGGACATTGAGTGGAGGTGCTCGATCCCAGGCAGCTTCCATTTTAAACCAAGTTTCA
AGAACTCAAAGATGTTTCAAGGATGAAGTGAAGATCAAAGAGAATGAGCTGCGGGCTCTAGAAGAGGAATTAGCAGG
TCTTAAAAACACTGCTGAAAAGTATCGCCAACCTAAAAACAGCAGTGGGAGATGAAAACTGAAGAGGCAGATTTATT
ACAAACCAAGCTCCAGCAAAGCTCATATCACAAGCAACAAGAAGATTAGATGCCCTTAAAAAACCATTGAGGA
AAGTGAGGAGACTTTGAAAAACACTAAAGAAATCCAAAGAAAAGCAGAAAGAAAAATATGAAGTATTGGAAAATAA
AATGAAAAATGCAGAAGCTGAAAGAGAGCGAGAAGTGAAGATGCTCAGAAAAAAGCTGGATTGTGCCAAAACAAA
GGCAGATGCATCTAGCAAGAAGATGAAAGAAAAACAACAGGAAGTTGAAGCTATCACTCTGGAAGTGAAGAGCT
CAAGAGAGAGCATACATCTTACAAACAACAGCTTGAAGCTGTAAATGAAGCTATCAAATCCTATGAAAGTCAGAT
TGAAGTAATGGCAGCTGAGGTGGCTAAAAATAAGGAGTCAGTAAATAAAGCTCAAGAAGAGGTGACCAAGCAAAA
AGAGGTGATAACAGCCCCAAGACACTGTAATTAAGCTAAATATGCAGAAGTGGCAAAACACAAGGAGCAAAACAAT
GATTCTCAGCCTTAAAAATTAAGGAATTAGACCACCACATCAGCAAACATAAACGGGAGGCTGAAGATGGTGTCTGC
AAAGGTATCCAAAAATGTTGAAAGATTATGACTGGATTAAATGCAGAGAGACACCTCTTTGGCCAACCAATAGTGC
CTATGATTTTCAAACTAACAACCCTAAAGAAGCTGGTCAGAGACTTCAGAAGTTGCAAGAAATGAAGGAGAACT
AGGAAGAAATGTCAATATGAGAGCTATGAATGTATTGACAGAAGCTGAAGAGCGATGCAATGACTTGATGAAGAA
GAAGAGAATTGTAGAAAATGACAAATCCAAATTTCTTACAACCTATAGAAGACCTTGACCAGAAGAAAAACCAAGC
CCTAAATATTGCATGGCAAAAGGTGAACAAGGACTTTGGGTCTATTTTTTCTACTCTTTTGCCTGGTGCTAATGC
TATGCTTGCACCACCAGAGGGTCAAACCTGTTTTGGATGGTCTGGAGTTCAAGGTTGCCCTTAGGAAATACCTGGAA
AGAAAACCTAACTGAACTTAGTGGTGGTCAGAGGTCTTTAGTGGCCTTGTCATTAATACTGTCCATGCTTCTCTT
CAAACCTGCTCCAATTTATATCCTTGATGAGGTAGATGCAGCCTTGATCTTTCTCATACCCAAAACATTGGACA

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FIGURE 374B

GATGCTGCGTACTCATTTCACACATTCTCAGTTCATTGTGGTGTCACTAAAAGAAGGTATGTTCAACAATGCAAA
CGTTCCTTTTCAAACCAAGTTTGTGGATGGTGTCTTCTACAGTAGCCAGATTTACTCAATGTCAAAATGGAAAGAT
TTCAAAGGAAGCAAAATCCAAGGCAAAACCACCCAAAGGAGCACATGTGGAAGTTTAAACTACAAAGTTATTTCT
TCATCTTGACCTGTTTTTTTAAATGTAAACTTTTAAGGACTTGAGATAACTAATTTGTTTATATACAAAAATTAA
TGTTACTGTGTTACTTAACCCATGTTTTCTCTTTATATAATCACTTATCGCTTACAAATGAGCATATATTCCTCA
TCTCTTAAGTAGTCTAATTATGGTCCAATTATTGTGGTTGTGATTTTATGCATATCCATCAAAATGTTTTTTTC
TTATGCGGGTCTTTTATATATTAGGGATCCTGAGATACCCGATTCTATATGTAAAAGCTAATATACAAAAAAGCA
GATTAAATTACATGATAAATGTAGCTGAAAAAAAAAAAAA

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FIGURE 375

MHIKSIILEGFKSYAQRTEVNGFDPLFNAITGLNGSGKSNILDSICFLLGISNLSQVRASNLDLVYKNGQAGIT
KASVSITFDNSDKKQSPLGFVHDEITVTRQVVIGGRNKYLINGVNANNTRVQDLFCVGLNVNPNHFLIMQGRI
TKVLNMKPPEILSMIEEAAGTRMYEYKKIAAQKTIEKKEAKLKEIKTILEEEITPTTIQKLKEERSSSYLEYQKVMR
EIEHLSRLYIAYQFLLAEDTKVRSAEELKEMQDKVIKLQEELSENDKKIKALNHEIEELEKRKDKETGVILRSLE
DALAEAQRVNTKSQSAPDLKKKNLACEESKRKELEKNMVEDSKTLAAKEKEVKKITDGLHALQEASNKDAEALAA
AQQHFNAVSAGLSSNEDGAEATLAGOMMACKNDISKAQTEAKQAQMMLKHAQQELKNKQAEVKKMDSGYRKDQEA
LEAVKRLKEKLEAEMKKLNYEENKEESLLEKRRQLSRDIGRLKETYEALLARFPNLRFAVKDPEKNWNRNCVKGL
VASLISVKDTSATTALVAGERLYNVVVDTEVTGKKLLERGELKRRYTIIPLNKISARCIAPETLRVAQNLVGP
DNVHVALSLVEYKPELQKAMEFVFGTTFVCDNMDNAKKVAFDKRIMTRTVTLGGDVFDPHGTLSSGARSQAASIL
TKFQELKDVQDELRIKENELRALEEELAGLKNTAEKYRQLKQQWEMKTEEADLLQTKLQQSSYHKQQEELDALKK
TIEESEETLKNTKEIQRKAEKEYEVLENKMKNAEAEERERELKDAQKKLDCAKTKADASSKKMKEKQQEVEAITLE
LEELKREHTSYKQQLEAVNEAIKSYESQIEVMAAEVAKNKESVNKAQEEVTKQKEVITAQDTVIKLNMQKWQNT
SKTMILSLKIKELDHHISKHKREAEDGAAKVSMLKDYDWINAERHLFGQPNSAYDFKTNNPKEAGQRLQKLQEM
KEKLGRNVNMRAMNVLTEAEERCNDLMKKKRIVENDKSKILTIEDLDQKKNQALNIAWQKVNKDFGSIFSTLLP
GANAMLAPPEGQTVLDGLEFKVALGNTWKENLTLSGGQRSIVALSLILSMLLFKPAPIYILDEVDAALDLSHTQ
NIGQMLRTHFTHSQFIVVSLKEGMFNANVLFKTKFVDGVSTVARFTQCQNGKISKEAKSKAKPPKGAHVEV

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FIGURE 376

ACTAAGACCGCAAGGCATTTCATTTCTCTCTACGGTGGATGCGGACGCCGGGAGGAGAGAGCCCCAGAGAGAGGA
GCTGGGAGCGGAGGCGCAGGCAATGCTCAGCCCTGGATGTAGCTGAGAGGCTGGGAGAAGAGACGACCGCTGGAG
ACCGAGCGGCGTGGGGAAGACCTAGGGGGGTGGGTGGGGGAAGCAGACAGGAGAACAACCTCGAAATCAAGCGCTTT
ACAGATTATTTTATTTTGTATAGAGAACACGTAGCGACTCCGAAGATCAGCCCCAATGAACATGTCAGTGTTGAC
TTTACAAGAATATGAATTCGAAAAGCAGTTCAACGAGAATGAAGCCATCCAATGGATGCAGGAAAACCTGGAAGAA
ATCTTTCTGTTTTCTGCTCTGTATGCTGCCTTTATATTTCGGTGGTGGGCACCTAATGAATAAACGAGCAAAGTT
TGAACCTGAGGAAGCCATTAGTGCTCTGGTCTCTGACCCTTGAGTCTTCAGTATATTTCGGTGTCTTCGAACTGG
TGCTTATATGGTGTACATTTTGTATGACCAAAGGCCTGAAGCAGTCAGTTTGTGACCAGGGTTTTTACAATGGACC
TGTCAGCAAATTCTGGGCTTATGCATTTGTGCTAAGCAAAGCACCCGAACCTAGGAGATACAATATTTCATTATTCT
GAGGAAGCAGAAGCTGATCTTCCTGCACTGGTATCACCACATCACTGTGCTCCTGTACTCTTGGTACTCCTACAA
AGACATGGTTGCCGGGGGAGGTTGGTTTCATGACTATGAACATATGGCGTGCACGCCGTGATGTACTCTTACTATGC
CTTGCGGGCGGCAGGTTTCCGAGTCTCCCGGAAGTTGCCATGTTTCATCACCTTGTCAGATCACTCAGATGCT
GATGGGCTGTGTGGTTAACTACCTGGTCTTCTGCTGGATGCAGCATGACCAGTGTCACTCTCACTTTTCAGAACAT
CTTCTGGTCTCACTCATGTACCTCAGCTACCTTGTGCTCTTCTGCCATTTCTTCTTTGAGGCCTACATCGGCAA
AATGAGGAAAACAACGAAAGCTGAATAGTGTGGAACTGAGGAGGAAGCCATAGCTCAGGGTCATCAAGAAAAAT
AATAGACAAAAGAAAATGGCACAAGGAATCACACGTGGTGCAGCTAAAACAAAACAAAACATGAGCAAACACAAA
ACCCAAGGCAGCTTAGGGATAATTAGGTTGATTTAACCAGTAAGTTTATGATCCTTTTAGGGTGAGGACTCACT
GAGTGCACCTCCATCTCCAAGCACTGCTGCTGGAAGACCCCATTCCTCTTTATCTATCAACTCTAGGACAAGGG
AGAACAAAAGCAAGCCAGAAGCAGAGGAGACTAATCAAAGGCAAACAAAGGCTATTAACACATAGGAAAATATGT
ATTTACTAAGTGTACATTTCTCTAAGATGAAAGATTTTTACTCTAGAACTGTGCGAGCACACACACAATC
CTTTCTAATTTTATGGACACTAACTGGAGCCAATAGAAAAGACAAAAATGAAAGAGACACAGGGTGTATATCTA
GAACGATAATGCTTTTGCAGAACTAAAGCCTTTTTAAGAAATGCCAGCTGCTGTAGACCCCATGAGAAAAGATG
TCTTAATCATCCTTATGAAAACAGATGTAAACAATAATTTCAACTAATTCATCTTCACTGCATAGCCTCAGG
CTAGTGAGTTTGGCAAAACCAAAGGGGGTGAATACTTCCCAAGATTCTTCTGGGAGGATGGAACAGTGCAGC
CCAGGTCCCATGGGGGCAGCTCCATCCCAGAGCAATTTCTGATAGTTGAACTGTAATTTCTACTCTTAAGTGAGAT
ATGAAGTATTATCCTTTTGTTCAGTTGCCCGGGCTTTTGAACAGAAGAGTAAATACAGAATTGAAAAAGATAAA
CACTCAACCAAACAATGTGAAAACGGGTTCTGTAGTATTTGTAAAAAGGCCCGGCCAGGACCACTGTGAGCTGG
AAAAGGGAGAAAAGGCAGTGGGAAAAGAGGTGAGCCGAAGATCAATTCGACAGACAGACGGTGTGTATGCCCTCC
CTGTTTGACTTCACACACACTCATAACTTTCCAAATGAAACCCACAGTATAGCGCATATTTTCGATATTTTGT
GAATTCACAAAAGGAAATCACAGGGCTGTTTCGAAATATTGGGGGAACACTGTGTTTCTGCATCATCTGCATTTGCT
CCCCAAGCAATGTAGAGGTGTTTAAAGGGCCCTCTGCTGGCTGAGTGGCAATACTACAACAACTTCAAGGCAAG
TTTGGCTGAAAACAGTTGACAACAAAGGGCCCCCATACTTATCCCTCAAATTTTAAAGTGATATGAAATACTTG
TCATGTCTTTGGCCAAATCAGAAGATATTATCCTGCTTCAAGTCAGCTTCAGAAATGTTTTAAAGGGACTTTA
GCTCTGGAACCTCAAAATCAATTTATTAAGAGCCATATTCTTTAAAAAAGGCTGGATAATATTATCTGTAATA
TTTCAGTCCTTTACAAGCCAAATACATGTGTCAATGTTTCTAGTATTTCAAAGAAGCAATTATGTAAAGTTGTTT
AATGTGACATAATAGTATTATAATTGGTTAAGTAGCTTAATGATTAGGCAAACTAGATGAAAAGATTAGGGGCTT
CCACACTGCATAGATCACACGCACATAGCCACGCATACACACACAGACACACAGATGTGGGGTACACTGAATTTT
AAAGCCCCAATGAATAGAAACACATTTTCTGGCTAGCAGAAAAAACAACAACTGTTGTTTCTCTTTCTTG
CTTTGAGAGTGACAGTAAAAGGGATTTTTTCGAATTATTTTATATTATTTTAGCTTTAATTGTGCTGTCGTTT
ATGAAACAGAGCTGCTCTGCTTTTCTGTGAGAGATGGCAAGGGCTTTTTTCAGCATCTCGTTTATGTGTGGAATTT
AAAAAGAATAAAGTTTATTCCATTCTGAAAAAAAAAAAAAAAAA

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FIGURE 377

MNMSVLTLOEYEFKQFNENEAIQWMQENWKKSF LFSALYAAFIFGGRHLMNKRAKFELRKPLVLWSLTLAVFSI
FGALRTGAYMVYILMTKGLKQSVCDQGFYNGPVSKEWAYAFVL SKAPELGDTIFIILRKQKLIFLHWYHHITVLL
YSWYSYKDMVAGGGWFMTMNYGVHAVMYSYYALRAAGFRVSRKFAMFITLSQITQMLMGCVVNYLVFCWMQHDQC
HSHFQNIWFSSLMYLSYLVLFCHFFFEAYIGKMRKTTKAE

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FIGURE 378

CGGGCACTCACCGTGTGTAGTTGGCATCTCCGCGCGTCCGGACACCCGATCCCAGCATCCCTGCCTGCAGGACTG
TTCGTGTTTCAGCTCGCGTCCTGCAGCTGTCCGAGGTGCTCCAGTTGGAGGGCTGAGGTTCCCGGGCTCTGTGCTG
AGTGGGCGGGCGGCACCGCGGAGATGCCTGGGAAGAAGGCGCGCAAGAACGCTCAACCGAGCCCCGCGCGGGCTC
CAGCAGAGCTGGAAGTCGAGTGTGCTACTCAACTCAGGAGATTTGGAGACAACTGAAC TTCGGGCAGAACTTC
TGAATCTGATATCCAACTCTTCTGCTCAGGAACCTGACTGCATCAAAAAC TTGCATGAGGGGACTCCTTCAAAA
GAGTTTTCTCAGGAGGTGCACGTTTCATCAATTTGAAGAAAGACTGCATTGTAATTGAGAGGAATGTGAAGGTGC
ATTCATGGGTGCCCTTGGAACGGAAGATGGAATACATCAAAGTGAATTTCTGTTCAAGTTTTCCAGATTATCA
TTCTTTGGGATGAGAGAACATTATAAAACCACTTTGTTTATTTTAAAGCAAGAATGGAAGACCCTTGAAAATAAA
GAAGTAATTATTGACACATTTCTTTTTTACTTAGAGAATCGTTCTAGTGTTTTTGCCGAAGATTACCGCTGGCCT
ACTGTGAAGGTAGATGACCTGTGATTAGACTGGGCGGCTGGGGAGAAACAGTTCAGTGCATTGTTGTTGTTGCTG
TTTTTGGTGTTTTGCTTTTCAGTGCCAACTCAGCACATTGTATATGATTTCGGTTTATACATATTACCTTGTTATA
ATGAAAAAACTCATTCTGAGAACACTGAAATGTTATACTCAGTGTTGATTTCTTCGGTCACTACACAACGTAAAA
TCATTTGTTTCTTTTGACTCAAATTGTATTGCTTCTGTTTCAGATGATCTTTCATTCAATGTGTTCTGTTGGGCG
TTACTAGAAACTATGGAACACTGGAATAAATTTGAAAAAATTGGATAAAGTATAGGAGGGTTACTTGGGGCCA
GTAAATCAGTAGACTGAACATTCAATATAATAAAGAACATGGGGATTTTGTATAACCAGGGATAATAAAAAGAA
AAAGAAGTTAATTTTTTAATTGATGTTTTTGAACCTTAGTAGAACAAATATTCAGAAGTAAC TTGATAAGATATGA
ATGTTTCTAAAGAGTTTCTAAAGGTTTCGAAATGCTCCTTGTCACATTAGTGTGCATCCTACAAAAGTGATCTCT
TAATGTAAATTAAGAATATTTTCATAATTGGAATATACTTTTCTTAAAAAAAGGAACAGTTAGTTCTCATCTAG
AATGAAAGTTCCATATATGCATTGGTGAATATATATGTATACACATACTTACATACTTATATGGGTATCTGTATA
GATAATTTGTATTAGAGTATTATATAGCTTCTTAGTAGGGTCTCAAGTAAGTTCATTTTTTTTTATCTGGGCTATA
TACAGTCCTCAAATAAATAATGTCTTGATTTTATTTTCAGCAGGAATAATTTTATTTATTTTGCCTATTTATAATT
AAAGTATTTTTCTTTAGTTTGAAATGTGTATTAAAGTTACATTTTGTAGTTACAAGAGTCTTATAACTACTTGAA
TTTTTAGTTAAATGTCTTAATGTAGGTTGTAGTCACTTTAGATGGAAAATTACCTCACATCTGTTTTCTTCAGT
ATTACTTAAGATTGTTTATTTAGTGGTAGAGAGATTTTTTTTTTCAGCCTAGAGGCAGCTATTTTACCATCTGGT
ATTTATGGTCTAATTTGTATTTAAACATATGCACACATATAAAAGTTGATACTGTGGCAGTAACTATTAAAAGT
TTTCACTGTT

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FIGURE 379

MPGKKARKNAQPSPARAPAELEVECATQLRRFGDKLNFRQKLLNLISKLFCSGT

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FIGURE 380

CGGGCACTCACCGTGTGTAGTTGGCATCTCCGCGCGTCCGGACACCCGATCCCAGCATCCCTGCCTGCAGGACTG
TTCGTGTTTCAGCTCGCGTCCTGCAGCTGTCCGAGGTGCTCCAGTTGGAGGCTGAGGTTCCCGGGCTCTGTCTGCTG
AGTGGGCGGGCGGCACCGCGGAGATGCCTGGGAAGAAGGCGCGCAAGAACGCTCAACCGAGCCCCGCGCGGGCTC
CAGCAGAGCTGGAAGTCGAGTGTGCTACTCAACTCAGGAGATTTGGAGACAACTGAACTTCCGGCAGAACTTC
TGAATCTGATATCCAACTCTTCTGCTCAGGAACCTGACTGCATCAAAAACCTTGCATGAGGGGACTCCTTCAAAA
GAGTTTTCTCAGGAGGTGCACGTTTCATCAATTTGAAGAAAGACTGCATTGTAATTGAGAGGAATGTGAAGGTGC
ATTCATGGGTGCCCTTGGAAACGGAAGATGGAATACATCAAAGTGAATTTCTGTTCAAGTTTTCCAGATTATCA
TTCTTTGGGATGAGAGAACATTATAAAACCACTTTGTTTATTTTAAAGCAAGAATGGAAGACCCTTGAAAATAAA
GAAGTAATTATTGACACATTTCTTTTTTACTTAGAGAATCGTTCTAGTGTTTTGGCGAAGATTACCGCTGGCCT
ACTGTGAAGGTAGATGACCTGTGATTAGACTGGGCGGCTGGGGAGAAACAGTTCAGTGCATTGTTGTTGTTGCTG
TTTTTGGTGTTTTGCTTTTCAGTGCCAACTCAGCACATTGTATATGATTCCGTTTATACATATTACCTTGTTATA
ATGAAAAAACTCATTCTGAGAACACTGAAATGTTATACTCAGTGTGATTCTTCGGTCACTACACAACGTAAAA
TCATTTGTTTCTTTTGACTCAAATTGTATTGCTTCTGTTTCAGATGATCTTTCATTCAATGTGTTCTGTTGGGCG
TTACTAGAACTATGGAAAACTGGAAAATACTTTGAAAAAATTGGATAAAGTATAGGAGGGTTACTTGGGGCCA
GTAAATCAGTAGACTGAACATTCAATATAATAAAGAACATGGGGATTTTGTATAACCAGGGATAATAAAAAGAA
AAAGAAGTTAATTTTAAATTGATGTTTTTGAACCTTAGTAGAACAAATATTCAGAAGTAACTTGATAAGATATGA
ATGTTTCTAAAGAGTTTCTAAAGGTTCGAAATGCTCCTTGTACATTAGTGTGCATCCTACAAAAGTGATCTCT
TAATGTAAATTAAGAATATTTTCATAATTGGAATATACTTTTCTTAAAAAAAAGGAACAGTTAGTTCTCATCTAG
AATGAAAGTTCCATATATGCATTGGTGAATATATATGTATACACATACTTACATACTTATATGGGTATCTGTATA
GATAATTTGTATTAGAGTATTATATAGCTTCTTAGTAGGGTCTCAAGTAAAGTTCATTTTTTTTTATCTGGGCTATA
TACAGTCTCATAATAATAATGTCTTGATTTTATTTTCAGCAGGAATAATTTTATTTATTTTGCCTATTTATAATT
AAAGTATTTTTCTTTAGTTTGAAATGTGTATTAAAGTTACATTTTTTGAGTTACAAGAGTCTTATAACTACTTGAA
TTTTTAGTTAAATGTCTTAATGTAGGTTGTAGTCACCTTAGATGGAAAATTACCTCACATCTGTTTTCTTCAGT
ATTACTTAAGATTGTTTATTTAGTGGTAGAGAGATTTTTTTTTTTCAGCCTAGAGGCAGCTATTTTACCATCTGGT
ATTTATGGTCTAATTTGTATTTAAACATATGCACACATATAAAAGTTGATACTGTGGCAGTAAACTATTAAAGT
TTTCACTGTT

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FIGURE 381

MPGKKARKNAQPSPARAPAELEVECATQLRRFGDKLNFRQKLLNLISKLFCSGT

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FIGURE 382

AGCCTGCCCTTGGGGCTGCCCACGCCCCCTTCAGATCCTTTGCTCCGGAGAGAGACCTGTCCGAGCAGAGGCCTG
GACTACATCTCCCGCGTGCCTGGCAGTGTGGTGGCCTCTGTGCGCCGTCTGCACTCGTTGCAGGCGACGATGCA
GAGGGCTGTAAGTGTGGTGGCCCCGTCTGGGCTTTTCGCCTGCAGGCATTCCCCCGGCCCTTGTGTCTCCACTTAG
TTGCGCACAGGAGGTGCTCCGCAGGACACCGCTCTATGACTTCCACCTGGCCCCACGGCGGGAAAAATGGTGGCGTT
TGGCGGTTGGAGTCTGCCAGTGCAGTACCGGGACAGTCACACTGACTCGCACCTGCACACACGCCAGCACTGCTC
GCTCTTTGACGTGTCTCATATGCTGCAGACCAAGATACTTGGTAGTGACAGGTGTAAGCTGATGGAGAGTCTAGT
GGTTGGAGACATTGCAGAGCTAAGACCAAAACCAGGGGACACTGTCGCTGTTTACCAACGAGGCTGGAGGCATCTT
AGATGACTTGATTGTAACCAATACTTCTGAGGGCCACCTGTATGTGGTGTCCAACGCTGGCTGCTGGGAGAAAGA
TTTGGCCCTCATGCAGGACAAGGTGAGGGAGCTTCAGAACCAGGGCAGAGATGTGGGCTGGAGGTGTTGGATAA
TGCCCTGCTAGCTCTGCAAGGCCCCACTGCAGCCCAGGTAACAGGCCGGCGTGGCAGATGACCTGAGGAACT
GCCCTTCATGACCAGTGCTGTGATGGAGGTGTTTGGCGTGTCTGGCTGCCGCGTGACCCGCTGTGGCTACACAGG
AGAGGATGGTGTGGAGATCTCGGTGCCGGTAGCGGGGACAGTTACCTGGCAACAGCTATTCTGAAAAACCCAGA
GGTGAAGCTGGCAGGGCTGGCAGCCAGGGACAGCCTGCGCCTGGAGGCAGGCCTCTGCCTGTATGGGAATGACAT
TGATGAACACACTACACCTGTGGAGGGCAGCCTCAGTTGGACACTGGGGAAGCGCCGCCGAGCTGCTATGGACTT
CCCTGGAGCCAAGGTCATTGTTCCCCAGCTGAAGGGCAGGGTGCAGCGGAGGCGTGTGGGGTTGATGTGTGAGGG
GGCCCCCATGCGGGCACACAGTCCCATCCTGAACATGGAGGGTACCAAGATTGGTACTGTGACTAGTGGCTGCCC
CTCCCCCTCTCTGAAGAAGAAATGTGGCGATGGGTTATGTGCCCTGCGAGTACAGTCGTCCAGGGACAATGCTGCT
GGTAGAGGTGCGGCGGAAGCAGCAGATGGCTGTAGTCAGCAAGATGCCCTTTGTGCCACAACTACTATACCCT
CAAGTGAAGCTGGCTCAGGGTGGGGCTGTCCCTTCCAGGAGTTTTGCCCTACAAGGGGTTAGTCAAGAAGCTGA
GGCAGAACTCACTGGGGGTGGGCAGTTAAGGTGGAGGCTGATTCTAATTGTCTGGTTGAGGGGCCACACCACCTA
TTCCCCCACCTAACTCATGCCATTCCAGCTTCCTTCAGGACCCTGCTTCTGAGTGACGGACCAGCTCACACAAT
GTCTTGTTTTCAGTCCATGATCCCACTGACCTACTCTTGCCCTGCTGGAGGGTAATGAGAAGCTTTGGTTCTGCCAT
CTCTCCCACTCTGCCAGGTGCTGGCTGTGGAGCAAAGGCTCACCTTTGTGGAGAGGATAAAACCTKCCCAACCTA
CCTCACCATGGTTTTTTCACATTGCAAAGGGTAATAACATGGGCAGTGCGGACTTAGGCTACCCCTCCAGTTTGC
TTTCCGTAAATGCAAATTGTCCTTACTGCAAGTCAGGAATGATTGCTGACTCACAGTAGGGCTGCTATGCCTGTG
TGTAACCTTGGGGATGGCTGAGGGAACATAGACTCACTCTCCACATTCCAAGTTGGTCTAGTGTGCTGCCCAG
TAGCAAACCATGGCAGACTCACCACCTATTCTGAGTTCCAGGGCTGCTGTAGGGCAGGGTGGGCTTCCTCCAGA
CTTGCTTACCCTGGGCTGATCTTTGCCCTGGTATGCATTAATGGACTCCACTGAATCCTGAAAAAAAAAATTAA
ACTTCCTTCTTACTTGCCA

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FIGURE 383

MQRAVSVVARLGFR LQAFPPALCRPLSCAQEVLRRTP LYDFHLAHGGKMVAFAGWSLPVQYRDSHTDSHLHTRQH
CSLFDVSHMLQTKILGSDRCKLMESLVVGDIAELRPNQGTLSLFTNEAGGILDDLIVTNTSEGHLYVVS NAGCWE
KDLALMQDKVRELQNQGRDVGLEVL DNALLALQGPTAAQVLQAGVADDLRKLPFM T SAVMEVFGVSGCRVTRCGY
TGEDGVEISVPVAGAVHLATAILKNPEVKLAGLAARDSLRLEAGLCLYGNDIDEHTTPVEGSLSWTLGKRRRAAM
DFPGAKVIVPQLKGRVQRRRVGLMCEGAPMRAHSPILNMEGTKIGTVTSGCPSPSLKKNVAMGYVPCEYSRPGTM
LLVEVRRKQQMAVVSKMPFVPTNYITLK

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FIGURE 384

AGCGCAGCACTCCCCGCTCGTTGGCCCGGGTATCCCAGCGCGGACCCACGCGATACGCTGACGCCCCGACGCCGA
TCCGGCCGAGCCAAGTAAGGGGGACGGCCCCGAGACGGAGAAGGGAGAGAGTGGGAGTTTCCCAGCCCCGAGAACT
TTCGAAGTTGAGAAGAGAACCCCTGGAACGTGCGCTCAGCACTGGGATTTTCTGGACTCAACGATGACTCTGAAT
AATGTCACCATGCGCCAGGGCACTGTGGGCATGCAGCCACAGCAGCAGCGCTGGAGCATCCCAGCTGATGGCAGG
CATCTGATGGTCCAGAAAGAGCCCCACCACTACAGCCACCGCAACCGCCATTCTGCTACCCCTGAGGACCACTGC
CGCCGAAGCTGGTCCCTCTGACTCCACAGACTCAGTCATCTCCTCTGAGTCAGGGAACACCTACTACCGAGTGGTG
CTCATAGGGGAGCAGGGGGTGGGCAAGTCCACTCTGGCCAACATCTTTGCAGGTGTGCATGACAGCATGGACAGC
GACTGCGAGGTGCTGGGAGAAGATACATATGAACGAACCCCTGATGGTTGATGGGGAAAGTGCAACGATTATACTC
CTGGATATGTGGGAAAATAAGGGGGAAAATGAATGGCTCCATGACCACTGCATGCAGGTCGGGGACGCATACCTG
ATTGTCTACTCAATCACAGACCGAGCGAGCTTCGAGAAGGCATCTGAGCTGCGAATCCAGCTCCGCAGGGCCCCGG
CAGACAGAGGACATTCCCATAATTTTGGTTGGCAACAAAAGTGACTTAGTGCGGTGCCGAGAAGTGTCTGTATCA
GAGGAGAGCCTGTGCAGTGGTGTGTTGACTGCAAGTTCATCGAGACCTCTGCAGCTGTCCAGCACAACGTGAAG
GAGCTGTTTGAGGGCATTGTGCGACAGGTGCGCCTTCGGCGGGACAGCAAGGAGAAGAATGAACGGCGGCTGGCC
TACCAGAAAAGGAAGGAGAGCATGCCCAGGAAAGCCAGGCGCTTCTGGGGCAAGATCGTGGCCAAAAACAACAG
AATATGGCCTTCAAGCTCAAGTCCAAATCCTGCCATGACCTCTCTGTACTCTAGGAACCCAGGGTCACCCAGATG
TCCCTTTGATGGCCCTTGTTGAAGGCCATTGGGACCAATAATCTATATTAGATTGAATACTTAAGTTAGATGTGG
TTTCCCCCATTGTAGCAGGGAGCTAGCGTATTAGCCTTGTTGGGCAACATGATGCATGGGAAATGAAAGATTTTTG
TAAAAGTCAGTATTTATTTCCAGGAAAAGCCTGACCTTGCTATTTGAACACCCAAGACTCTTTAGAGGATGTGT
TTGGTGTTCACATGTGTTTCTTCTATTTTGGATAGTAGGGAAAGTAAAGCTTACAAAGAATGCCTAGAACAAGAAC
TTTTCATCATTAATAATTTTCCCAGTGTTCTGATATGTGACTTTGAGGCCAATGAGTCATAAACAAATATAAGA
AAGCTGTCAATGAGTTTCTTCAAAGGAGGGAAAACTTTCTACGAATCTAAGATCCATGGAGCTAGAATTGTAGAA
CTAGGCTCATCAGAATCGTGAATATTATTGCTCCATCAAACCTGTGAAAAGAAATGATGTGGACCTTGCTGGAAAC
AAAGGCTTAGCAAACAATTTTTGTTCAATGCCACCGAGACATATAGAATTGGGAACCTGATACATGTGTCCCTTA
TAGGCTCAAAAATTATATCTTACAATTTCTTATTTAGGGGGAAATTATTTGAATCAGATTCTATTTAGTCAAACC
ACCTTTTATGTTTTATTATTTTTGAATTCATGGAGCCATCATAAAATATTTTTTAAATCAGAATTATTGATACC
CTGTAGTGCAAAATGTCAATTTTTAATGTATAATCAGAAGTCTGAATTTTCATAAACATATAGCATAAAAACCT
CCAGTACTTTGGTTGACCCTTGATGTACAGCTCTGCTCTATTTATTATTTTGCAAAATAACCATTTTAAC
ATTTGATAAAGCATATTTATGAACATATTTCTTAATAAGAAAAATATCCATTTTATTACCATTTTCTATCTTTT
CAAAATATGCAAGTTTTTACCTATATGTCTTATAATAAAGAAATAAAATATTTGA

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FIGURE 385

MTLNNTMRQGTVMQPQQQRWSIPADGRHLMVQKEPHQYSHRNRHSATPEDHCRRSWSSDSTDVVISSESGNTY
YRVVLIGEQQGVGKSTLANIFAGVHDSMDSCEVLGEDTYERTLMVDGESATIILLDMWENKGENEWLHDHCMQVG
DAYLIVYSITDRASFEKASELRIQLRRARQTEDIPIILVGNKSDLVRCREVSSEGRACAVVFDCKFIETSAAVQ
HNVKELFEGIVRQVRLRRDSKEKNERRLAYQKRKESMPRKARRFWGKIVAKNNKNMAFKLKSCHDLSVL

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FIGURE 386A

ACGTTGCCCCGGGATGCGGACAGGTTCCGCCGCCTCCAGCGCCCCATCCTGAGCCGATTATCTGCAATTATGAAAT
GAAGTAACTCAAGATGAGCAAGTTAAAAGTGATACCAGAAAAAGCCTTACCAATAATTCTAGGATCGTAGGACT
CCTGGCTCAACTGGAGAAGATCAATGCTGAGCCTTCAGAATCAGACACTGCCCCGATATGTTACATCAAAAATTCT
TCATCTGGCTCAGAGTCAAGAAAAACAAGGAGAGAAATGACAGCCAAAGGTTCTACAGGAATGGAAATTCTGCT
GTCAACATTAGAGAACACAAAAGATCTTCAAACCTACACTTAATATCTTAAGCATTCTTGTGAGCTGGTGTCAGC
TGGTGGAGGTCGAAGAGTGAGTTTCTTAGTCACCAAAGGTGGTTACAAATATTGTTGCAGTTACTTATGAATGC
CAGCAAAGAATCTCCCCCACATGAGGACTTAATGGTACAGATTCACTTCTATTCTTGCAAAGATTGGACCAAAAGA
TAAAAAATTTGGAGTAAAGGCTAGAATTAATGGGGCTCTGAATATAACCTGAATTTGGTCAAGCAGAATTTGCA
GAATCATCGCTTGGTTCTACCTTGCTTCAGCTTTTACGAGTATATTCTGCCAACTCTGTGAATTCAGTATCCTT
AGGGAAAAATGGAGTTGTGGAACCTGATGTTTAAAATCATTGGACCATTTAGTAAGAAGAATTCAGTCTTATAAA
GGTTGCTTTAGACACTCTTGCTGCATTGCTAAAATCAAAAACAAATGCCAGGAGAGCTGTAGACAGAGGATATGT
CCAAGTGCTTTTAAACAATTTATGTAGATTGGCACC GCCATGATAACCGGCATAGAAACATGCTCATTCCGAAAGG
AATTTTACGGAGTTTAAAAAGTGTTACAAACATCAAGTTGGGAAGAAAAGCATTATTGATGCCAATGGGATGAA
AATTCTGTATAATACTTCGCAATTGCCTGTTATTCTGTGACTGGTCTGTGGCTCAGCTCTACAGCTTACCTCC
TGAAGTGATGACGTAGTAGATGAAAGTGATGACAACGATGATATTGATGTAGAAGCTGAAAACGAAACTGAGAA
TGAAGATGACCTAGATCAAAATTTTAAAGATGATGATATTGAAACAGATATTAACAACTAAAACCCAGCAAGA
ACCGGGACGAACAATAGAAGATCTAAAAATGTATGAACACCTTTTCCCTGAGCTTGTTGATGATTTTCAGGACTA
TGATTTAATCTCCAAAGAACCAAAGCCTTTTGTATTTGAGGGAAAAGTACGTGGTCTTATTGTTGTTCTACGGC
AGGCGAGGGAACATCTGGGAATTCTGGCAATTTAAGAAAAGTTGTAATGAAGGAGAACATATCTTCTAAAGGAGA
TGAAGGTGAAAAGAAGTCTACCTTTATGGATCTAGCAAAAGAAGATATTAAAGATAATGATAGAACATTACAACA
GCAGCCAGGTGATCAAAATAGAACTATTTTCATCAGTCCATGGTTTAAACAATGATATTGTAAAGGCCTTGGACCG
AATTACATTGCAGAATATTCCTTCTCAAACAGCCCCAGGTTTTACTGCAGAAATGAAGAAGGACTGCAGTCTTCC
TCTTACTGTCTTACCTGTGCTAAAGCATGTCCACACATGGCTACTTGTGGAATGTTCTGTTTGAGGGAAGAAC
AGTTCAGCTAGGGAAGCTTTGCTGCACTGGAGTTGGAACCTGAAGATGATGAAGATACTGAGTCAAATTCATCGGT
AGAACAAGCATCGGTTGAAGTACCTGATGGACCAACACTCCATGACCCAGACCTCTATATTGAGATTGTGAAAAA
TACGAAGTCTGTCCCAGAATATTTCAGAGGTGGCTTATCCCGATTATTTGGTCCATTCCGCCCTCATTCAAAGA
GCCTATTTTAGAAAGGCCTTATGGTGTACAAAGGACAAAAATTGCTCAAGATATTGAAAGGCTAATACATCAGAG
TGATATCATAGATCGTGTGGTATATGACTTGGATAACCCAAATTACACCATCCAGAAGAGGGAGATATTTTGAA
ATTTAACTCCAAATTTGAGTCTGGGAATCTGCGCAAAGTAATTCAAATTAGAAAAAATGAATATGATCTTATTCT
GAACTCAGACATAAACAGCAATCATTATCATCAGTGGTTTTACTTTGAAGTCAGTGGAATGCGACCAGGTGTTGC
TTACAGGTTTAAACATCATTAACTGTGAAAAGTCCAACAGTCAGTTTAAATTATGGTATGCAACCACTCATGTATTC
GGTTCAGGAAGCATTAAATGCCAGACCATGGTGGATTTCGTATGGGGACTGACATTTGTTACTATAAAAAATCATT
CTCAAGAAGTTCAGTTGCTGTCAGGTGGGCAAAAGGGAATCCTACTATACAATTACATTTACTGTCAATTTTCC
ACATAAGATGATGTTTGCTACTTTGCTTATCACTATCCATATACGTATTCACTTTACAGATGCATCTTCAAAA
ATTGGAATCAGCACACAATCCTCAGCAAATCTATTTTCGGAAAGATGTGTTATGTGAAACCCCTGTCTGGAAACAG
CTGCCCCCTGGTGACTATAACAGCAATGCCAGAGTCTAATTATTATGAACATATCTGCCATTTAGAAATCGCCC
TTACGTTTTCTTGTCTGCTCGGGTACATCCTGGAGAACTAATGCAAGTTGGGTTATGAAAGGAACGTTGGAATA
TCTCATGAGCAATAACCCCACTGCTCAGAGCTTACGAGAATCTTATATTTTAAAATTGTCCCTATGTTAAATCC
AGATGGTGTGTCATCAATGGAAATCATCGCTGTTCTTTAAGTGGAGAGGATTGGAATAGGCAGTGGCAAAGTCCAAG
TCCGGATTTACATCCTACAATTTACCATGCTAAGGGGCTGTTGCAATACTTGGCTGCAGTGAAGCGTTTACCCCT
GGTTTATTGTGATTATCATGGCCATTCCCGAAAGAAGAATGTATTTATGTATGGTTGCAGCATCAAAGAGACAGT
GTGGCATAACCAATGATAATGCAACTTCATGTGATGTTGTGGAGGATACGGGATACAGGACATTGCCTAAGATACT
GAGCCATATCGCCCCAGCATTGTCATGAGCAGCTGTAGCTTCGTAGTGGAAAAATCTAAAGAATCCACAGCACG
TGTTGTAGTTTGGAGGGAAATAGGAGTACAAAGAAGTTATACCATGGAGAGTACTTTATGTGGCTGTGATCAGGG
AAAATACAAGGGTTTACAGATTGGTACCCGAGAAGTGAAGAGATGGGAGCAAAATTTTGTGTTGGTCTTTTACG
TTGAAAAGACTGACCTCTCCATTGGAGTATAATCTGCCTCCAGCCTGCTTGACTTTGAAAATGATTTAATTGA
ATCAAGCTGCAAAGTAAGTAGCCCTACCACTTATGTCTTGGATGAAGATGAACCTCGATTCTTGAAGAAGTTGA
TTACAGTGCAGAAAGTAATGATGAGTTAGATATTGAGTTGGCTGAAAATGTAGGAGATTATGAACCTTCTGCTCA

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FIGURE 386B

AGAAGAAGTACTTTCTGACTCTGAATTATCAAGAACATACCTACCTTGAGCCCGCTGCCATCTCTTGTTAACTGC
AAAGAATAAATGAAATATCTTGGTTTTATTTCCTCCAGGAAGCTTGAGAGAAATGAGTTTATACAGAGCTGACTCA
AAAAGACAAAAAGTAACTTGGGCCAGTTTGGTTTCAAGATAATAAATGTGTTATTAATTAATGATAAAATTGGCG
CTTGTTTTATTTTCGATATTCAATGCACCTTTATGTAGCATTGAATGATCAAATATTGGATTTACCTTTAAAAAAA
AAAAACCTGAGTATCATTGCATGAATTTTTATCTCCCTATGGTTATATCCTGCATCAAGTGGATAATTTTGAAGT
GTGTTTCAGAAATATAAAATTGAAATTTTAGAGTTGTTGAAAATCCTGACTTGTTGAAAACTAATATATATGTACAT
GGATTTCTATAGATGTGTTTGTGTTAGAAAGTGGGTAGATATTGCAGATAAGACTGTTCTTCAGAAATCATGTAACT
ATTGGGTTGTGACTGAAGTAGTGCAGGGTTTGCCTTGAAACCATTACATTCTACATTTACCAAATTAAACAAATA
AAAACCTGTATTAAATGTTGC

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FIGURE 387

MSKLVKVIPEKSLTNNRIVGLLAQLEKINAEPSESDTARYVTSKILHLAQSQEKTRREMTAKGSTGMEILLSTLE
NTKDLQTTLNILSILVELVSAGGGRRVSFLVTKGGSQILLQLLMNASKESPPEHEDLMVQIHSILAKIGPKDKKFG
VKARINGALNITLNLVKQNLQNHRLVLPCLQLLRVYSANSVNSVSLGKNGVVELMFKIIIGPFSKKNSSLIKVALD
TLAALLKSKTNARRAVDRGYVQVLLTIYVDWHRHDNRHRNMLIRKGILRSLKSVTNIKLGRKAFIDANGMKILYN
TSQLPVIPVTGPVAQLYSLPPEVDDVDESDDNDDIDVEAENETENEDDLQNFKNDDIETDINKLKPQQEPGRT
IEDLKMYEHLFPELVDDFQDYDLISKEPKPFVFEGKVRGPVVPVPTAGEGTSGNSGNLRKVVMKENISSKGDEGEK
KSTFMDLAKEDIKDNDRTLQQQPGDQNRTISSVHGLNNDIVKALDRITLQNIPSQTAPGFTAEMKKDCSLPLTVL
TCAKACPHMATCGNVLFEGRTVQLGKLCCTGVGTEDDETESNSSVEQASVEVPDGP TLHDPDLYIEIVKNTKSV
PEYSEVAYPDYFGHIPPPFKEPILERPYGVQRTKIAQDIERLIHQSDIIDRVVYDLNPNYTIPEEGDILKFNSK
FESGNLRKVIQIRKNEYDLILNSDINSNHYHQWFYFEVSGMRPGVAYRFNIINCEKSNSQFNYGMPMLYSVQEA
LNARPWWIRMGTDICYKYNHFSRSSVAAGGQKGKSYTTITFTVNFPHKDDVCYFAYHYPTYSTLQMHQLQKLESA
HNPQQIYFRKDVLCETLSGNSCPLVTITAMPESNYEHIHFNRNPYVFLSARVHPGETNASWVMKGTLEYLMSN
NPTAQSLRESYIFKIVPMLNPDGVINGNHRCSLSGEDLNRQWQSPSPDLHPTIYHAKGLLQYLAAVKRLPLVYCD
YHGHSRKKNVFMYGCSIKETVWHTNDNATSCDVVEDTGYRTL PKILSHIAPAFCMSSCSFVVEKSKESTARVVVW
REIGVQRSYTMESTLCGCDQGYKGLQIGTRELEEMGAKFCVGLLRRLKRLTSPLEYNLPSSLLDFENDLIESSCK
VTSPTTYVLDEDEPRFLEEVDYSAESNDELDIELAENVGDYEPSAQEEVLSDSELSRTYLP

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FIGURE 388

GGCGGACGCTGGAAGCGCCGTTCTGACTCTAATGTACTTAGACACTTGAAGCCACAAAAGGATTTATCCCCGA
GGTTCCTCATCTGCTCGCGAGGATGCCTTTTCTCTTCTGCCTTGCGAAATAACAGCAGCCTAGCTGTTGCCCGTG
ACCAGTGAGAAAGGCAGCGTCGCGGGCTGATTAGGTTTACCCAAAGGGTGCCGGCGCCGAATTGGTTTTCTAACG
AGAACTTTTAAAATGATCCGTTCCAAAAAAGGGTAGGAGCCGCGAGACCCTCCAAGTGGCCAGAGAAAACAAGTC
TCGTCTGGCAAAGTTCTCGGCCCCACGCGGTCCGCGGCCAAGGGCCAACGGTCCCTCGCCCCACGTTGCCCGCAGCA
CTGCGCGTGCGCGAGCCGCTGTCAAACGCGCTGACGGAGGCCGAGAAGAAAAAAGGCGGGAGCCGTCATATCCCG
GGTTGAGCAAAATGGCGCGGGGAGAAGGAGATGCAGGAGTTACCCGTAGCTTCTTCCGAGGCCGCCCGGACCTCA
GCACGCTTACGCATTCCATCGTGCGGCGGAGGTACTTAGCTCACTCGGGCCGCAGCCACCTGGAGCCCGAGGAGA
AGCAGGCACTGAAGCGGTGGTGGAGGAGGAGCTGCTGAAGATGCAGGTGGATGAAGCCGCTTCCAGGGAAGACA
AACTGGACCTTACCAAGAAGGGCAAGAGGCCTCCCACCCCTTGTAGCGACCCGGAGAGAAAAAGGTTCCGCTTCA
ATTGAGAGTCGGAGTCCGGCTCTGAAGCCTCCAGCCCAGACTACTTTGGACCCCGAGCAAGAATGGGGTGGCAG
CAGAAGTCAGCCAGCCAAAGAGGAGAATCCAAGGCGAGCCTCAAAGGCAGTTGAGGAGAGCAGTGATGAGGAAC
GGCAGAGGGACCTGCCCCACAGAGGGGAGAGGAGAGCAGTGAGGAGGAGGAAAAGGGGTACAAGGGGAAGACTA
GGAAGAAACCTGTGGTAAAGAAGCAGGCACCAGGCAAGGCCTCAGTCAGTAGGAAGCAGGCCAGGGAAGAAAGTG
AGGAGAGCGAGGCAGAACCCGTTGAGAGGACAGCAAAGAAGGTGGAGGGAAATAAAGGAATAAAAGCCTGAAGG
AAAGTGAACAGGAGAGTGAAGAGGAGATCCTAGCCCAGAAGAAAGAGCAGAGAGAGGAGGAAGTGGAGGAGGAAG
AGAAAGAAGAGGATGAGGAAAAGGGGGATTGGAAACCCAGAACCAGGAGCAATGGCCGGAGAAAGTCAGCTAGGG
AGGAGAGGAGCTGTAAGCAGAAAAGCCAGGCAAAGAGGCTCTTGGGAGACTCAGACAGCGAGGAAGAGCAGAAAG
AGGCAGCCAGCAGTGGGGATGACAGTGGGAGAGATAGAGAACCCCCAGTGCAGAGGAAGAGTGAGGACAGGACCC
AGCTTAAGGGTGGGAAGAGGTTGAGTGGAAAGCAGCGAGGACGAGGAAGACAGTGGGAAGGGGGAACCCACAGCTA
AAGGCTCTAGAAAGATGGCCAGACTGGGCAGCACCAGTGGTGAGGAAAGTGAAGTGGAGAGGGAGGTAAGTGACA
GCGAGGCAGGGGGAGGCCCCAGGGGGAGAGGAAGAACCCTCTTCCAAGAAGAGCTCCAGGAAAGGCAGGACAC
GAAGCTCCTCTTCTCCTCAGATGGAAGTCCAGAGGCCAAAGGAGGGAAGGCTGGCTCAGGTCGCCGTGGAGAGG
ACCACCCGGCTGTGATGAGGCTGAAGCGCTACATTCGGGCCTGTGGTGCCCATCGAAACTACAAGAAGCTGTTGG
GCTCCTGTTGCTCACACAAGGAGCGCCTGAGTATCCTCCGGGCAGAACTGGAAGCGCTAGGCATGAAGGGTACCC
CTTCCCTAGGGAAGTGTGCGGCCCTGAAGGAGCAGAGGGAGGAGGCAGCTGAGGTGGCCTCCTTGGATGTTGCGA
ACATCATCAGTGGCTCGGGCCGGCCACGCAGACGTACAGCCTGGAACCCCTTAGGAGAAGCAGCACCCCCAGGGG
AGCTGTACCGACGGACCCTGGACTCAGATGAAGAGCGGCCCGTCCCGCACCCCCAGACTGGTCACATATGCGTG
GCATCATCAGCAGTGATGGCGAGAGTAAGTGAAGCTCTGCCACCCCCAGGAGGGACCCTTGATACATGTACAAAGC
ATACATAGCACCCCTTGCCCTGTGTCTGTGGAACAGAAGCAGCTTCCTTCAGAGAAGACTGCAGCTCCCAAGGAC
ACAAGCTGTTGGGATGCTACTTCTCAGCTTCACGCTGTCCCTTTAAGGTGTTTATTTTTTAAGACTCAATAAAGG
AGTGTTTTTAATCACCTCAAAAAAAA

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FIGURE 389

MAREKEMQEFTRSFFRGRPDLSLTHSIVRRRYLAHSGRSHLEPEEKQALKRLVEEELLKMQVDEAASREDKLDL
TKKGKRPPTPCSDPERKRFRFNSESESGSEASSPDYFGPPAKNGVAAEVSPAKEENPRRASKAVEESSDEERQORD
LPAQRGEESSEEEKGYKGKTRKKPVVKKQAPGKASVSRQAREESESEAEQVQRTAKKVEGNKGTKSLKESEQ
ESEEEILAQKKEQREEEVEEEKEEDEEKGDWKPRTSNGRRKSAREERSCKQKSQAKRLLGDSSEEEQKEAAS
SGDDSGRDREPPVQRKSEDRTQLKGGKRLSGSSEDEEDSGKGEP TAKGSRKMARLGSTSGEESDLEREVSDSEAG
GGPQGERKNRSSKKSSRKGRTRSSSSSSDGSPKAGGKAGSGRRGEDHPAVMRLKRYIRACGAHRNYKKLLGSCC
SHKERLSILRAELEALGMKGTPSLGKCRALKEQREAAAEVASLDVANIISGSGRPRRRRTAWNPLGEAAPPGELYR
RTLDSDEERPRPAPPDWSHMRGIISSDGESN

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FIGURE 390

CTCCCTTTGGGCAAGGACCTGAGACCCCTGTGCTAAGTCAAGAGGCTCAATGGGCTGCAGAAGAACTAGAGAAGG
ACCAAGCAAAGCCATGATATTTCCATGGAAATGTCAGAGCACCCAGAGGGACTTATGGAACATCTTCAAGTTGTG
GGGGTGGACAATGCTCTGTTGTGATTTCCTGGCACATCATGGAACCGACTGCTGGACTTACCATTATTCTGAAAA
ACCCATGAACTGGCAAAGGGCTAGAAGATTCTGCCGAGACAATTACACAGATTTAGTTGCCATACAAAACAAGGC
GGAAATTGAGTATCTGGAGAAGACTCTGCCCTTTCAGTCGTTCTTACTACTGGATAGGAATCCGGAAGATAGGAGG
AATATGGACGTGGGTGGGAACCAACAAATCTCTTACTGAAGAAGCAGAGAAGCTGGGGAGATGGTGAGCCCAACAA
CAAGAAGAACAAGGAGGACTGCGTGGAGATCTATATCAAGAGAAACAAAGATGCAGGCAAAATGGAACGATGACGC
CTGCCACAAACTAAAGGCAGCCCTCTGTTACACAGCTTCTTGCCAGCCCTGGTCATGCAGTGGCCATGGAGAATG
TGTAAGAAATCATCAATAATTACACCTGCAACTGTGATGTGGGGTACTATGGGCCCCAGTGTCAGTTTGTGATTCA
GTGTGAGCCTTTGGAGGCCCCAGAGCTGGGTACCATGGACTGTACTCACCCCTTTGGGAACTTCAGCTTCAGCTC
ACAGTGTGCCTTCAGCTGCTCTGAAGGAACAACTTAACTGGGATTGAAGAAACCACCTGTGGACCATTGGA
CTGGTCATCTCCAGAACCAACCTGTCAAGTGATTGAGTGTGAGCCTCTATCAGCACCAGATTTGGGGATCATGAA
CTGTAGCCATCCCCTGGCCAGCTTCAGCTTTACCTCTGCATGTACCTTCATCTGCTCAGAAGGAAGTGAATTAAT
TGGGAAGAAGAAAACCATTTGTGAATCATCTGGAATCTGGTCAAATCCTAGTCCAATATGTCAAAAATTGGACAA
AAGTTTCTCAATGATTAAGGAGGGTGATTATAACCCCTCTTCATTCCAGTGGCAGTCATGGTTACTGCATTCTC
TGGGTTGGCATTATCATTTGGCTGGCAAGGAGATTAAAAAAGGCAAGAAATCCAAGAGAAGTATGAATGACCC
ATATTAAATCGCCCTTGGTGAAAGAAAATTCTTGAATACTAAAAATCATGAGATCCTTTAAATCCTTCCATGAA
ACGTTTTGTGTGGTGGCACCTCCTACGTCAAACATGAAGTGTGTTTCTTCAGTGCATCTGGGAAGATTTCTACC
TGACCAACAGTTCCTTCAGCTTCCATTTGCCCCCTCATTTATCCCTCAACCCCCAGCCACAGGTGTTTATACAG
CTCAGCTTTTTGTCTTTTCTGAGGAGAAACAAATAAGACCATAAAGGGAAAGGATTCATGTGGAATATAAGATG
GCTGACTTTGCTCTTTCTTGACTCTTGTTTTAGTTTTCAATTCAGTGTGACTTGATGACAGACACTTCTAAAT
GAAGTGCAAATTTGATACATATGTGAATATGGACTCAGTTTTCTTGAGATCAAATTTACGTCGTCTTCTGTAT
ACTGTGGAGGTACACTCTTATAGAAAGTTCAAAAAGTCTACGCTCTCCTTTCTTTCTAACTCCAGTGAAGTAATG
GGGTCCTGCTCAAGTTGAAAGAGTCCTATTTGCACTGTAGCCTCGCCGCTGTGGAATTGGACCATCCTATTTAAC
TGGCTTCAGCTCCCCACCTTCTTCAGCCACCTCTCTTTTTTTCAGTTGGCTGACTTCCACACCTAGCATCTCATGA
GTGCCAAGCAAAAAGGAGAGAGAGAGAAATAGCCTGCGCTGTTTTTTAGTTTGGGGGTTTTGCTGTTTCTTTTA
TGAGACCCATTCTATTTCTTATAGTCAATGTTTTCTTTTATCACGATATTATTAGTAAGAAAACATCACTGAAAT
GCTAGCTGCAAGTGACATCTCTTTGATGTATATGGAAGAGTTAAAACAGGTGGAGAAATTCCTTGATTACAAT
GAAATGCTCTCCTTTCCCTGCCCCCAGACCTTTTATCCACTTACCTAGATTCTACATATTCTTTAAATTTTCATC
TCAGGCCTCCCTCAACCCACCACTTCTTTTATAACTAGTCCTTTACTAATCCAACCCATGATGAGCTCCTCTTC
CTGGCTTCTTACTGAAAGGTTACCCTGTAACATGCAATTTTGCAATTTGAATAAAGCCTGCTTTTTTAAGTGTTAA

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FIGURE 391

MIFPWKCQSTQRDNLWNIFKLWGWMLCCDFLAHHGTDCWTYHYSEKPMNWQRARFCRDNYTDLVAIQNKAEIEY
LEKTLPFSSRSYYWIGIRKIGGIWTWVGTKSLTEEAENWGDGEPNNKKNKEDCVEIYIKRNKDAGKWND DACHKL
KAALCYTASCQPWSCSGHGECVEIINNYTCNCDVGYYGPQCQFVIQCEPLEAPELGTMDCTHPLGNFSFSSQCAF
SCSEGTNLTGIEETTCGPFGNWSSPEPTCQVIQCEPLSAPDLGIMNC SHPLASF SFTSACTFICSEGTELIGKKK
TICESSGIWSNPSPICQKLDKSFSMIKEGDYNPLFIPVAVMVTAFSGLAFIIWLARRLKKGKSKRSMNDPY

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FIGURE 392A

AACTCATGCGGCCAGAGCGGGAAAGAGACTCGTCTTTGCGTCCGAGTTCTGGAGCCGCCGCACCCCGACTCCTGG
GGCCGCGGCAGCGGCTGCGAGGGGACGGGCGTCCGCTGTCTCCTGGGTTCCTCTCGTAGCGACCCGCGGGATCGG
AAAAAAAGGAGAAGATGAGGAGGAGGGTGGCAGCAGCGGCGGCCGCGGGGACCAGCGCGGACGGCGGCGACG
GAGGAGAGCAGCTCCTCACTGTCAAGCACGAGCTGCGGACTGCTAATTTGACAGGACATGCTGAGAAGGTGGGAA
TAGAAAAATTTGAGCTCCTGAAGGTCCTAGGAACCTGGAGCTTATGGAAAAGTATTTCTAGTTTCGTAAATAAGTG
GCCATGATACTGGAAAGCTGTATGCCATGAAAGTTTTGAAAAAGGCAACAATCGTTCAAAGGCCAAAACACAG
AGCATACAAGGACAGAACGACAAGTCCTGGAACACATTAGGCAGTCGCCATTTTGGTAACATTACATTATGCTT
TCCAGACAGAAACCAAACCTTCATCTCATTTTAGATTATATAAATGGTGGTGAACCTTTTACTCATCTTTCTCAA
GAGAGCGTTTCACAGAGCATGAGGTCAGATTTATGTTGGAGAGATTGTGCTTGCCCTCGAACATCTCCACAAGT
TGGGGATTATATATCGTGATATTAAGCTTGAGAATATTCTACTTGATTCTAATGGCCATGTGGTGCTGACAGATT
TTGGTCTGAGTAAGGAGTTTGTGGCTGATGAACTGAAAGAGCATATTCCTTTTGTGGAACATTGAATACATGG
CACCAGATATTGTCAGAGGGGGAGATTACAGGACATGACAAGGCAGTTGACTGGTGGAGTTTGGGTGTTCTAATGT
ATGAATTACTAAGTGGAGCATCTCCTTTCACTGTTGATGGAGAAAAAATCCCAAGCTGAGATATCTAGGAGAA
TATTAAGAGTGAGCCTCCATATCCCCAAGAAATGAGTGCTTTAGCGAAAGACCTAATTCAGCGTCTTTTGATGA
AAGATCCCAAGAAGAGATTGGGATGTGGTCCACGTGATGCAGATGAAATCAAAGAACATCTCTTTTTCAGAAAA
TAAATGGGATGATTTAGCCGCCAAAAAAGTGCTGCACCATTTAAGCCAGTCATTGAGATGAATTAGATGTGA
GTAACCTTGCAGAAGAGTTCACAGAAATGGATCCCACTTATTCTCCCGCAGCCCTGCCCCAGAGTTCTGAGAAGC
TGTTTCAGGGCTATTCTTTGTTGCTCCTTCCATCTATTCAAGCGTAATGCAGCTGTATAGACCCTCTTCAGT
TTCACATGGGAGTTGAACGTCTGGAGTGACAAATGTTGCCAGGAGTGCAATGATGAAGGACTCTCCATTCTATC
AACACTATGACCTAGATTGGAAGGACAAACCCCTGGGAGAAGGTAGTTTTTCAATTTGTCGAAAGTGTGTGCATA
AAAAAAGTAACCAAGCTTTGCAAGTCAAAATAATCAGCAAAAAGGATGGAAGCCAATACTCAAAGGAAATAACAG
CTCTGAAACTCTGTGAAGGACACCCCAATATTGTGAAGTTGCATGAAGTTTTTCATGATCAGCTTCACACGTTTC
TAGTGATGGAACCTCTGAATGGAGGAGAAGTGTGACGCATTAAGAAAAAGAAGCACTTCAGTGAGACGGAAG
CCAGCTACATCATGAGGAAGCTTGTTTCAGCTCTAAGCCACATGCATGATCTTGGAGTGGTGCACAGGGATCTGA
AACCTGAGAATTTATTGTTACCGATGAAAATGACAATTTGGAATTAATAATTGATTTTGGATTTGCACGGC
TAAAGCCACCGGATAATCAGCCCTGAAGACTCCATGCTTCACCCCTCATTTCATGCCGCCAGAGCTCTTGAATC
AGAACGGCTACGATGAGTCTGTGACCTGTGGAGCTTGGGCGTCAATTTGTACACAATGTTGTGAGGACAGGTTT
CCTTCCAATCTCATGACCGAAGTTTGACGTGTACCAGCGCGGTGGAATCATGAAGAAATTAAGGGGAGATT
TCTCCTTTGAAGGAGAAGCCTGGAAGAATGTATCCCAAGAGGCTAAAGATTTGATCCAAGGACTTCTCACAGTAG
ATCCAAAACAAAAGGCTTAAATGTCTGGCTTGAGGTACAATGAATGGCTACAAGATGGAAGTCAGCTGTCTCCA
ATCCTCTGATGACTCCGGATATTCTAGGATCTTCCGGAGCTGCCGTGCATACCTGTGTGAAAGCAACCTTCCACG
CCTTTAACAATAACAAGAGAGAGGGGTTTTGCCTTCAGAAATGTTGATAAGGCCCTTTGGCTAAGAGAAGAAAA
TGAAAAAGACTAGCACCGTACCGAGACGCGCAGAGGGTCCAGTGAGAGTTCCCATCTCTTCTCTCATTCTC
ACGGTAAACTACACCCACCAAGACTGCAGCCAGCAATCCTGCCGACAGCAATAACCCGGAGACCCTCTTCC
AGTTCTCGGACTCAGAGCTTAGGCATGGTAGGAGTGATCAGTGATCCATTGCACCTTTATTCCCTCAGCATATGC
CTGAGTCGATCTTTTATGCTTTTAAAAATGTTTCCCGTTGGTCTCATTGGAATCTGCCTCCTAATGATTTTTTTC
AGGAAAACCTGTTTGTTATCTCATTCAAAGCACTGGACAGAGAATGTTACTGTGAATAGAGCACATATTACT
CTTTTACGAACCTAGCATGATGCCAACAAGACTATTCTTGAAAGAGCAAAGGTTCTGTAAATTTAATTAGGGC
TAGATTTGAGCTGCTTGTAAGTCACAGGTTTTCCAGATGTCTGCCAACAAGAAATGACTCATACTGTGATGATAC
CTTTTGCTTTGCCCTGTGGACAATGTGGGTTTTTGAAATTTGCACCCCTTCAAACAATGATTTATCAGAGAAAGGG
GTCTGTTTTCAAAAAAGATTCTGTAATGAATTTTATGTGTGGCATATACTTATTTCTTGAGAGAAGATTTTAACT
TATTGTTTTTATTTATGGTTACATATGATGATAACCTGCTATTATTAACTTTTTCTAAAAAGTGAAAAAAAT
AAAAAAGATATAAGAACTCAAGGTCCCATACTCTGTATTCCGGATCCATCTGAGATGCATGCTAAGCTATGTGTA
TGTTTTTAATTTTGCACGTCTTTTCTGGCAATTTGTTTTAATGGTTATTGCAGAATATTAAGGTACATGTCTC
TCTGTTTTAAGTAATATTGCACCTTTATAAAAAAGTATGAATAAAGCAAACTATTTTATAAAGTGCACTGTTTTAA
GCATTTGCACGTGATTTTTGCCATTTATTTTCACTTTTAAATTTGTCCTCACATGCCTCTTCTACTTTG
TATGCAACAAGTAGAATGGGGCCTTGTTGTGTGATGTAGTCAGCCACTTATGCACCAATGTGAGGAAAACCTAAA
GGGAAATTAACATAACACTGTGCTTCATATTTGTACACTGTGTTGTACTACAGTGAGGAATTTCTCTCTGTAGT

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FIGURE 392B

CATATATTATGTACATAATATTTTAGAATCATACCTATGACTTGTTTGGAAATTTTCTGTTGAATTTTAAATCC
AGAAAGCATATTTTATAAACTTATGCAGAGCACTTTTATTGCTCAAAAGTTCTGAATTCATACAGAAAACAAGTA
CTATGTGATGAAAACATTTTATTGAAAGATTGCGGCATTTAAAAATACAATTAATTCGTTCCCTATGCAAAAAAA
AAAAAA

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FIGURE 393

MEEEGSSSGAAGTSADGGDGGEQLLTVKHELRTANLTGHAKEVGIENFELLKVLGTGAYGKVFLVRKISGHDTG
KLYAMKVLKKATIVQAKTTEHTRTERQVLEHIRQSPFLVTLHYAFQTETKLHLILDYINGGELFTHLSQRERFT
EHEVQIYVGEIVLAEHLHKLGIYRDIKLENILLDSNGHVVLTDGFLSKEFVADETERAYSFCGTIEYMAPDIV
RGGDSGHDKAVDWWSLGVLMYELLTGASPFTVDGEKNSQAEISRRILKSEPPYPQEMSALAKDLIQRLLMKDPKK
RLGCGPRDADEIKEHLFFQKINWDDLAACKVPAPFKPVIRDELVDVSNFAEEFTEMDPTYSPAALPQSSEKLFQGY
SfVAPSILFKRNAVIDPLQFHMVERPGVTNVARSAMMKDSPFYQHYDLDLKDKPLGEGSFSICRKCVHKKSNO
ALQVKIISKREANTQKEITALKLCEGHPNIVKLHEVFHDQLHTFLVMELLNGGELFDALRKKKHFSETEASYIM
RKLVSALSHMHDLGVVHRDLKPENLLFTDENDNLEIKIIDFGFARLKPPDNQPLKTPCFTLHSCRPELLNQNGYD
ESCDLWSLGVILYTMLSGQVPFQSHDRSLTCTSAVEIMKKIKKGDFFEGEAWKNVSQEAKDLIQGLLTVDPNKR
LKMSGLRYNEWLQDGSQSSNPLMTPDILGSSGAHVHTCVKATFHAFNKYKREGFCLQNVDKAPLAKRRKMKKTS
TSTETRRGSSESSSSSSSHGKTTPTKTLQPSNPADSNNPETLFQFSDSELRHGRSDQ

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FIGURE 394

TATATTGGCAGTTATTGAGGGTAAAGCAATATATTGTAACAGAATGTATAAATATTTTTGATAAAACAGTCTATA
TTTTATTAAAAAATGAATTATAACCCATTTTCAGTTTTGCCTGCATCATAAGAGTGAGCACTCCATTGCTTTCTT
TCCTGGCCACACTGCTACAATCCAGCACTAACTATCCATGTCCAGGGTAAGGATCGAGATCGAGAAGCCCACT
GCCAGTGAAAAAGCTACGTCTTTACTGCATAAATTAGAGGGAAGCAATTCGGAACAACGGAACCTTCAAACATA
AATACTGAATTATCGAACACTTGCCAGGCACCTTCAGCAGAAGACAAGGAACTGAAGAAGCTTTTTAGATGAGGA
ATTCCTCACTATGATTCCCTGTCTGCGCAGATGCAATTCAACAACCTCTTCAAGAAAAATTGAAGCAGTGTTG
CCACAACTATATGGTGGTCAAGAAGCAAGAATACATCAGACACCCCTGACCTTGAAACATACGTGCTGGTACAC
ACCTCTGCTGGATGCCTTATCTCTGGATAGTTTTACAGCAGTTCCAACCCCTGGAATCAACACCTTTCTCAGGTGT
AGCCAACCAAATCCACACTCTGTGTGAAAGGCCCCACATATGGAGAAGTAAAGGATGGTGCTTTGGATGTAAAAAG
ACAACACAAGTGCCAGGCCCCACAAGTGGCCCCAGCCAGGAACGAATCTCTCAGGCTGCATCAGGATGAATGA
TGACCCAAGTATGGAAGAGAATGGTGTGTAACCGTGTGTCTGAGAGCCTGCTGCAGTCCAGGGGATATTCTC
ACTACCATTACCCAGACACACTTCATCGACAGACGGTACTATAACTTCAAGTGATCCTGGATTAGAAATTCTGAA
TATGGCTTCTTGTGACCTTGACAGAACTCGCTCTGTAAGAAAGAGGAGGATACAAGATCAGCTTCTCCACGAT
AGAGGCCCAAGGCACAAGTCCAGCTCATGATAATATTGCATTCCAAGACTCTACGAGTAAGGATAAAACCATATT
AAATCTGGAAGCCAAAGAGGAACCAGAAACAATAGAAGAACATAAAAAAGAACATGCTTCAGGAGACTCTGTGGT
TTCCCTCTTCTGTAAACCACTGTGAAATCGGTAAACGTTAGACAAAGTGAGAACACTTCTGCTAATGAGAAGGA
GGTGGAGGCAGAATTTCTCAGATTATCTTTGGGATTTAAGTGTGACTGGTTTACCTTGGAGAAGAGAGTGAAGCT
TGAAGAGAGGTCCCGTGAAGTGGCAGAAGAAAATTTGAAGAAAGAAATCACTAACTCTTTAAACTATTAGAGTC
TTTAACACCTCTGTGTGAAGATGACAACCAGGCACAGGAAATCATTAAGAAGCTGGAGAAGAGTATAAAGTTTCT
TAGCCAGTGTGCAGCACGAGTGGCCAGTAGGGCTGAGATGTTGGGAGCCATCAATCAGGAAAGCCGGGTAGTAA
AGCAGTTGAAGTGATGATTACGACGTAGAAAACCTTGAAGAGGATGTATGCCAAAGAGCACGCTGAATTAGAAGA
ACTGAAACAGGTTCTTCTGCAGAATGAAAGGTCTTTCAATCCTCTTGAAGATGATGATGACTGCCAAATTA
ACGTTACAGCTTCTCTAAACTCCAAGCCATCTTCTCTACGAAGAGTGACTATTGCCTCTTTACCCAGAAATATTGG
AAATGCAGGAATGGTGGCTGGGATGGAATAATGATCGATTTCAGTAGAAGGTCAAGCAGTTGGCGTATTTTGGG
GTCAAAGCAGAGTGAACACCGTCCCTCATTACCTCGATTTATTAGCACCTATTCTGGGCAGATGCTGAAGAAGA
AAAATGTGAATAAAACTAAAGATGACTCAGAGCCATCTGGAGAAGAAACAGTAGAAAGGACAAGGAAGCCAAG
TCTTTCTGAAAAGAAAAATAATCCATCAAAGTGGGATGTCTCTTCAGTTTATGACACAATAGCTTCTGGGCAAC
AAATCTCAAGTCTCCATCAGAAAGGCTAATAAGGCCCTCTGGCTCTCTATTGCATTATTGTACTGTTTGCAGC
TTTGATGAGCTTCTCACAGGCCAATTATTCCAGAAGTCTGTGGATGCCGCTCCACACAGCAAGAGGACTCATG
GACGTCTCTAGAACATATCTTGTGGCCATTTACCAGACTCCGACACAATGGGCCACCACCAGTGTGACAGCAGGA
CATCCTAATATATGGATCTTGATTTTTAAGTTTCAGTATCTGAACCTTCGTAAATTAGTAACCTTTAGCTGGGAAA
GTATAGCATGAAACCAGAGGTTCTCAGAATGACCGTAAGATAGCTTACATTTCTCTTTTTGCCTTTATCTCCCC
AACTAAAATACAATGGG

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FIGURE 395

LESTPFSGVANQIHTLCERPTYGEVKDGDALDVKRQHKCPGPTSGPSPGTNLSGCIRMNDPDSMEENGVERVCPES
LLQSRGYSSLPLPRHTSSTDGTITSSDPGLEILNMASCDLDRNSLCKKEEDTRSASPTIEAQGTSPAHDNIAFQD
STSKDKTILNLEAKEEPETIEEHKKEHASGDSVVSPLPVTTVKSVNVRQSENTSANEKEVEAEFLRLSLGFKCDW
FTLEKRVKLEERSRDWAEENLKKEITNSLKLESITPLCEDDNQAQEIIKKLEKSIKFLSQCAARVASRAEMLGA
INQESRVSKAVEVMIQHVENLKRMYPKEHAELEELKQVLLQNERSFNPLEDDDDCQIKKRSASLNSKPSSLRRVT
IASLPRNIGNAGMVAGMENNDRFRRSSSWRILGSKQSEHRPSLPRFISTYSWADAEKCEKTKDDSEPSGEE
TVERTRKPSLSEKKNNPSKWDVSSVYDTIASWATNLKSSIRKANKALWLSIAFIVLFAALMSFLTGLFQKSVDA
APTQQEDSWTSLEHILWPFTRLRHNGPPP

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FIGURE 396A

CGAAAGGCCGGCCTTGGCTGCGACAGCCTGGGTAAGAGGTGTAGGTCGGCTTGGTTTTCTGCTACCCGGAGCTGG
GCAAGCGGGTGGGAGAACAGCGAAGACAGCGTGAGCCTGGGCCGTTGCCCTCGAGGCTCTCGCCCGGCTTCTCTTG
CCGACCCGCCACGTTTGTGGATTAACTTTCAGGTTGCCGGCGCCCGCCCGCCGCTGGCCTCGCGGTGTGAG
AGGGAAGCACCCGTGCCTGTGGCTGGTGGCTGGCGCCTGGAGGGTCCGCACACCCGCCCGCCGCGCGCTTTGC
CCGCGGCAGCCGCGTCCCTGAACCGCGGAGTCGTGTTGTGTTGACCCGCGGGCGCCGGTGGCGCGCGGCCGAG
GCCGGTGTGCGCGGGGCGGGCGGTGCGCGCGGAGGCAGAGGAAGAGGGAGCGGGAGCTCTGCGAGGCCGGGCGC
CGCCATGGAACTGGGCCCGAGCCCCGACCGCGCCGCTGCTCTTCGCTGCAGCCCCCTCCCGCTGCGAGCC
CGTCGTGAAGGCCTATTTGGCGCTTCAGCCGCCGGGGACTGTCGCTGTACCAACCTGACCGTCACTATGGA
CCAGCTGCAGGGTCTGGGCAGTGATTATGAGCAACCACTGGAGGTGAAGAACAACAGTAATCTGCAGAGAATGGG
CTCCTCCGAGTCAACAGATTTCAGTTTCTGTCTAGATTCTCCTGGGCCATTGGACAGTAAAGAAAACCTTGAAAA
TCCTATGAGAAGAATACATTCCCTACCTCAAAAGCTGTTGGGATGTAGTCCAGCTCTGAAGAGGAGCCATTCTGA
TTCTCTTGACCATGACATCTTTAGCTCATCGACCCAGATGAGAACAAGGAAAATGAAGCCTTTGAGTTTAAGAA
GCCAGTAAGACCTGTATCTCGTGGCTGCCTGCACTCTCATGGACTCCAGGAGGGTAAAGATCTCTTCACACAGAG
GCAGAACTCTGCCCAGCTCGGAATGCTTTCTCAAAATGAAAGAGATAGCAGTGAACCAGGGAATTTTATTCTCT
TTTTACACCCAGTCACCTGTGACAGCCACTTTGTCTGATGAGGATGATGGCTTCGTGGACCTTCTCGATGGAGA
GAATCTGAAGAATGAGGAGGAGACCCCTCGTGATGGCAAGCCTCTGGACAGCTCCTCTCGTCATGAGAACTAC
AAACCTTGACAACCGATGCAAGCTGTTTGACTCCCTTCCCTGTGTAGCTCCAGCACTCGGTCACTGTTGAAGAG
ACCAGAACGATCTCAAGAGGAGTCTCCACCTGGAAGTACAAAGAGGAGGAAGAGCATGTCTGGGGCCAGCCCCAA
AGAGTCAACTAATCCAGAGAAGGCCCATGAGACTCTTCATCAGTCTTTATCCCTGGCATCTTCCCCCAAAGGAAC
CATTGAGAACATTTTGACAATGACCCAAGGGACCTTATAGGAGACTTCTCCAAGGGTTATCTCTTTCATACAGT
TGCTGGGAAACATCAGGATTTAAATATCATCTCTCCAGAAATTATGGCATCTGTTTTGAATGGCAAGTTTGCCAA
CCTCATTAAAGAGTTTGTATCATCGACTGTGATACCCATATGAATACGAGGGAGGCCACATCAAGGGTGCAGT
GAACTTGACATGGAAGAAGAGGTTGAAGACTTCTTATTGAAGAAGCCATTGTACCTACTGATGGCAAGCGTGT
CATTGTTGTGTTTCACTGCGAGTTTCTTCTGAGAGAGGTCCCCGCATGTGCCGGTATGTGAGAGAGAGATCG
CCTGGGTAAATGAATACCCCAAACCTCCACTACCCCTGAGCTGTATGTCTGAAGGGGGGATACAAGGAGTTCTTTAT
GAAATGCCAGTCTTACTGTGAGCCCCCTAGCTACCGGCCCATGCACCACGAGGACTTTAAAGAAGACCTGAAGAA
GTTCCGCACCAAGAGCCGACCTGGGCAGGGGAGAAGAGCAAGAGGGAGATGTACAGTCTGTGAAGAAGCTCTG
AGGGCGGCAGGACCAGCCAGCAGCCCCAAGCTTCCCTCCATCCCCCTTTACCCTCTTTGCTGCAGAGAACTT
AAGCAAAGGGGACAGCTGTGTGACATTTGAGAGGGGGGCTGGGACTTCCATGCCTTAAACCTACCTCCCACACT
CCCAAGGTTGGAGCCCAGGGCATCTTGCTGGCTACGCCTCTTCTGTCCCTGTTAGACGTCTCCGTCCATATCAG
AACTGTGCCACAATGCAGTTCTGAGCACCCTGTCAAGCTGCTCTGAGCCACAGTGGGATGAACCAGCCGGGGCCT
TATCGGGCTCCAGCCATCTCATGAGGGGAGAGGAGACGGAGGGGAGTAGAGAAGTTACACAGAAATGCTGCTGGC
CAAATAGCAAAGACAACCTGGGAAGGAAAGGTCTTTGTGGGATAATCCATATGTTTAAATTTATTCAACTTCATCA
ATCACTTTATTTTATTTTTTTTCTAACTCCTGGAGACTTATTTTACTGCTTCATTAGGTTGAAATACTGCCATT
CTAGGTAGGGTTTTATTATCCCAGGACTACCTCGGCNNNNNNNNNNNNNNNNNNNNNGAAGTGGGTAAGAAAAT
GCAAACCTGTTATAAGTTATCGGACAGAAAGCTAGGTGCTCTGTCAACCCAGGAGGCGCTGTGGTACTGGGGCT
GCTGCTATTTAAGCCAAGAACTGAGGTCTGGTGAGAGCGTTGGACCCAGGCTTGGCTGCCTGACATAAGCTAAA
TCTCCCAGACCCACCACTGGCTACCGATATCTATTTGGTGGGAGGTGTGGCCCTGTTCTTCCCTACCCAGTTCC
ATGACATTGGCTGGTATAGGAGCCACAGTCAGGAAAGCACTTGAAGCAGCATCTGTTGGGCCACCCCGGCTCAG
TGCTGGAATGTTGCAGTGTAGGTTTCCCAGGCAAGGGGGGTGGGGGTAGGTGGGCTCCACAGGATGGGGAGGAG
CATGTCCACTGAGTATCTTCCTTATGTTGCTGTGATATTGATAGCTTTTATTTTCTAATTTTTAAAAAATGGTCA
TATTATGAGTCAAAGAGTATCAAATCAGTGTGGATGGACACCCAAGGGTGAAGAGAGGGGCTGGAAGCCCTGG
GCATTAGGAGAAGGGAGTGGGTGCTGGCATGGACATGACTGGATAGAATTTCTCAGGAGGGAGCTTGGTGGATT
TTGAAGGTAAAACCTTTCTGGGTTTATCATGTTTAAATTTTAGAGACAGGGAGTGATGAATCATACCGGTTGTCC
CCTTATCTAACTCCATAAAAGTGGGAATTTCAAAAGAACACCTCATCCAAGGAGCTGGGGCAGACTTCATTGATT
CTAGAGAGACCTGTTTCAGTGCCTACTCATCCCTGCCCTCTGGTGCCAGCCTCCTTACCATCACGGCTTCACTGA
GGTGTAGGTGGGTTTTTCTTAAACAGGAGACAGTCTCTCCCTCTTACCTCAACTTCTTGGGGTGGGAATCAGTG
ATACTGGAGATGGCTAGTTGCTGTGTACGGGTTTGAAGTTACATTTGGCTATAAAACAATCTTGTGGGAAAAAT

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FIGURE 396B

GTGGGGGAGAGGACTTCTTCCTACACGCGCATTGAGACAGATTCCAAC TGGTTAATGATATTGTTTGTAAAGAAAG
AGATTCTGTTGGTTGACTGCCTAAAGAGAAAGGTGGGATGGCCTTCAGATTATACCAGCTTAGCTAGCATTACTA
ACCAACTGTTGGAAGCTCTGAAAATAAAAGATCTTGAACCCAT

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FIGURE 397

MELGPSPAPRLLLFACSPPPASQPVVKALFGASAAGGLSPVTNLTVTMDQLQGLGSDYEQPLEVKNNNSNLQRMGS
SESTDGFCLDSPGPLDSKENLENPMRRIHSLPQKLLGCSPALKRSHSDSLDHDIFQLIDPDENKENEAFEFKKP
VRPVSRGCLHSHGLQEGKDLFTQRQNSAQLGMLSSNERDSSEPGNFIPLFTPQSPVTATLSDEDDGFVDLLDGEN
LKNEEETPSCMASLWTAPLVMRTTNLDNRCKLFDSPSLCSSSTRSVLKRPERSQEESPPGSTKRRKSMGASPKPE
STNPEKAHETLHQSLSLASSPKGTIENILDNDPRDLIGDFSKGYLFHTVAGKHQDLKYISPEIMASVLNGKFANL
IKEFVIIDCRYPYEYEGGHIKGAVNLHMEEVEDEFLKKPIVPTDGKRVIVVFHCEFSSERGPRMCRYVRERDRL
GNEYPKLHYPELYVLKGGYKEFFMKCQSYCEPPSYRPMHHEDFKEDLKKFRTKSRTWAGEKSKREMY SRLKKL

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FIGURE 398A

CGGGCAGCGTGGACCCCGGATGAGTTGCTTTTAGGCTTGCTGGCCCCGCGGGGCTGTCCAGGCACGCGAGGCCCT
CAGGTACGCCCTCTCTTCCCTGCAGGATCCGGCCCTCAAAGACGAGGGTCACGCACGCGTTACAACCCCGAAACA
GTAGCACAAGATTTAATTTTTAAAGAGCGTGTTCCTCGGGGCTTGCCGTTTCGTTCCAGCCTCAGGAAT
TTATGGTCGCCTTTTTGAATGAGCAACAAAATGCTTCAACAAGTTCCAGAAAACATAAATTTTCTGCTGAAGAA
GAGAAAATCTTGGAGTTTTGGACTGAATTTAATTGTTTTAGGAATGCTTAAAGCAATCAAAACATAAACCAAAA
TTTACCTTCTATGATGGTCCTCTTTTGCAACTGGACTGCCTCACTATGGACATATACTTGCGGGTACAATTAAA
GATATAGTTACAAGATATGCTCACCAGAGTGGGTTTCATGTTGACAGAAGATTGGATGGGATTGCCATGGCTTA
CCTGTGGAATATGAAATTGATAAGACACTGGGAATCAGAGGACCAGAGGATGTGGCCAAAATGGGGATTACAGAG
TATAACAATCAGTGCCGAGCAATTGTGATGAGATATTCTGCTGAGTGAAGTCTACTGTTAGCAGACTTGGCCGA
TGGATTGACTTTGACAATGACTATAAACTCTGTATCCACAATTCATGGAATCAGTCTGGTGGGTCTTCAAACAA
CTCTATGATAAAGGCCTTGTTTATAGAGGTGTGAAAGTCATGCCCTTCTACGGCATGTAACACTCCACTTTCC
AACTTCGAGTCACACCAGAATTATAAGGATGTTCAAGATCCTTCAGTATTTGTAACTTCCCTTTGGAAGAAGAT
GAAACTGTATCTTTAGTTGCTTGGACAACCACTCCCTGGACTCTACCTAGTAACCTTGCTGTGTGTGTTAATCCA
GAAATGCAATATGTGAAAATTAAAGATGTTGCCAGAGGACGATTACTCATTTTAAATGGAAGCCAGATTGTCAGCC
CTCTATAAATTGGAGAGTGACTATGAGATCCTTGAAAGATTTCTGGTGCCTATCTTAAAGGCAAGAAGTACAGG
CCCCTGTTTGACTATTTCTGAAGTGTAAAGAGAATGGCGCTTTCACTGTGCTTGTGACAACATATGTGAAGGAA
GAAGAAGGCACAGGGGTGTCCACCAAGCTCCTTACTTCGGTGTGAGGACTATCGGGTCTGTATGGACTTTAAC
ATTATTCGAAAGACTCACTCCCTGTTTGCCCTGTGGATGCTTCAGGCTGCTTCACAACGGAGGTGACAGATTTT
GCAGGACAGTATGTGAAGGATGCTGACAAAAGTATCATCAGGACTTTGAAGGAACAAGGCCGACTTCTGGTTGCC
ACCACCTTCACTCACAGCTACCTTTTTTGCTGGAGATCAGACACTCCTCTAATTTACAAAGCAGTGCCAGCTGG
TTTGTGCGAGTGGAGAACATGGTGGACCAGCTCCTAAGGAACAATGACCTGTGCTACTGGGTCCCAGAGTTGGTA
CGAGAAAAACGATTTGGAAATTGGCTGAAAGATGCACGTGACTGGACAATTTCCAGAAACAGATACTGGGGCACC
CCCATCCCCTGTGGGTGAGGATGACTTTGAGGAGGTGGTATGCATTGGGTGAGTGGCGGAACCTGAAGAAGT
TCAGGAGCAAAGATCTCAGATCTCCACAGAGAGAGTGTGACCACCTGACCATTCCTTCACGCTGTGGGAAGGGA
TCCTTGACCCGCATCTCTGAAGTGTGTTGACTGTTGGTTGAGAGTGGCAGCATGCCCTATGCTCAGGTTTATTAC
CCGTTTGAAACAAGAGGGAGTTTGAGGATGCTTTTCTGCAGATTTCAATGCGGAGGGCATCGACCAAACCAGA
GGATGGTTTTATACCCTGCTGGTGTGGCCACGGCCCTCTTTGGACAACCGCCTTTCAAGAACGTAATTGTGAAT
GGGCTTGCTGCTGGCAAGTGATGGCCAAAAAATGAGCAAAACGGAAAAAGAAATTATCCAGATCCAGTTTCCATCATC
CAGAAGTATGGTGTGATGCCCTCAGATTATATCTGATTAACTCCCTGTGGTGAGAGCAGAAAACCTCCGCTTT
AAAGAAGAGGGTGTGCGGGACGTCTTAAGGATGTACTGCTCCCATGGTACAATGCCTATCGCTTCTTAATCCAG
AACGTTCTGAGGCTCCAGAAGGAGGAAGAAATAGAATTTCTCTACAATGAGAACACGGTTAGAGAAAGCCCCAAC
ATTACAGACCGGTGGATCCTGTCTTCATGCAGTCTCTCATTGGCTTCTTTGAGACTGAAATGGCAGCTTATAGG
CTTTATACTGTGGTGCCTCGCTGGTCAAGTTTGTAGATATTCTGACCAATTGGTATGTTAGAATGAACCGCAGA
AGATTAAAGGGTGAAAATGGGATGGAGGATTGTGTGATGGCCCTAGAAAACCTTGTTTAGTGTCTGCTTTCTCTT
TGCAGACTTATAGCTCCCTACACACCTTTTCTCACTGAATTGATGTACCAGAATCTAAAGGTGCTGATTGACCT
GTTTCTGTTTCAAGGACAAGGACACACTCAGCATTCACTACCTCATGTGCCCCGTGTTGAGAAGAATTGATTGAC
AAGAAAACAGAGAGTGCAGTATCTCAGATGCAGTCTGTGATTGAACTTGGAAAGAGTGATCAGAGACCGAAAAACT
ATTCCCATAAAGTATCCTTTGAAAGAAATTGTGGTTATCCATCAAGATCCAGAAGCTCTTAAAGATATCAAGTCT
TTGGAGAAGTATATCATTGAGGAACCTCAATGTTTGGAAAAGTTACTGTCTACAGATAAAAAACAAGTATGGCATT
CGGCTAAGGGCAGAACCAGATCACATGGTCTGGGGAAAGCGTCTGAAGGGAGCCTTTAAGGCAGTGATGACGTCC
ATCAAGCAGTTGAGCAGTGAGGAGCTGGAGCAGTTCCAGAAGACTGGGACCATTGTTGTGGAAGGCCATGAATTG
CACGATGAAGACATCCGCCTCATGTACACCTTTGATCAGGCCACAGGTGGGACTGCGCAATTTGAAGCACACTCA
GATGCTCAGGCTTTGGTCCCTCTTAGATGTCACTCCTGACCAGTCAATGGTAGATGAAGGAATGGCTCGGGAAGTC
ATCAATCGCATACAGAACTTCGCAAAAAGTGCAATCTGGTTCCAAGTATGAAATCACAGTGTACTATAAAGCA
AAGTCTGAAGGAACATATCTGAATAGTGTTATTGAAAGCCACACAGAGTTTCAATTTACCACCATAAAGGCTCCC
TTGAAACCATATCCAGTTTCTCCATCGGATAAAGTCCTTATTCAAGAAAAACACAGTTGAAGGGATCTGAACTG
GAAATTACACTCACCAGAGGATCTTCCCTTCTGGTCTGTGTGATATGTCAATCTTAACATTTGTGCAAAAT
GGCAGTGAACAAGGTGGAGTATTGCTCCTGGAATAAAGGTGACAATAGGTTGGACCTTTTAAAGCTGAAG

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FIGURE 398B

AGTGTTGTCAGTACTGATTTTTGGTGTGAAAAATACAGAGCTGGCTGTCTTCCATGATGAAACAGAAATACAAAAC
CAAACGACTTACTGAGTCTTAGTGGAACACTTTGTGTGACTGCAGGATCGGCTCCCTCTCTGATCAACAGT
TCTAGTACTCTTCTTTGTGAGTATATCAACCTACAGCTCCTGAATGCAAAGCCACAAGAGTGTTAATGGGGACA
GTGGGCACCTCTCCTGCTTGAAAACCCACTTGGGCAGAATGGACTCACCCACCAAGGTCTTCTGTATGAAGCAGCC
AAGGTGTTTGGCCTTCGGAGCAGGAAGCTAAAGCTGTTTCTGAATGAGACCCAAACGCAGGAAATTACAGAAGAC
ATCCCCGTGAAGACTTTGAATATGAAGACTGTGTATGTTTCTGTGTTACCAACAACAGCAGACTTCTAGCATGTA
CTTATCAATGTTGTTTCGGTCAGCCCTTCCCTAATTACACCTATCCCCTACACATACATGCACATAGACACACACA
TGAACACACTGAAGATATTTCTTCAGGTGTGTGTAAAATATGCTGCTTGGATTGAAATTCAAATGGGATTGATT
AGTCAAGTAACTTGAGACCTCACAGTAATCTTCACACTTAACCTTAGACACCTATGCAGTCATGTTGGGAGCAGG
TTACAATGTTACTTCAGCCACAGTTTATTTCTATTCTTGAGTTCTTAAGTACAGAAGATAGAAGTGATTTAAAT
GGCATAGTATATATATCATTTTCTGGCCTTTTAAATTTATTTGAGACCTCTTGATGAAATGGACATATTATATA
TTTCTGCCACCTGGATTTTCTGGATAATTTGATGGAATATTTTAAGTTTCAGTAAATCAGAACAATAAACAAC
TCAGATAT

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FIGURE 399

MLQQVPENINFPAEEEEKILEFWTEFNCFQECLKQSKHKPKFTFYDGPPFATGLPHYGHILAGTIKDIVTRYAHQS
GFHVDRRFGWDCHGLPVEYEIDKTLGIRGPEDVAKMGITEYNNQCRAIVMRYSAEWKSTVSRLGRWIDFDNDYKT
LYPQFMESVWWVFKQLYDKGLVYRGVKVMPFSTACNTPLSNFESHQNYKDVQDPSVFTFPLEEDETIVSLVAWTT
TPWTLPSNLAVCVNPEMQYVKIKDVARGRLILMEARLSALYKLES DY EILERFPGAYLKGGKYRPLFDYFLKCK
ENGAFTVLVDNYVKEEEGTGVVHQAPYFGAEDYRVCMDFNIIRKDSLPCVPVDASGCFTTEVTDFAGQYVKDADK
SIIRTLKEQGRLLVATTFTHSYPFCWRS D TPLIYKAVPSWFVRVENMVDQLLRNNDLCYWVPELVREKRFGNWLK
DARDWTISRNRWGTPIPLWVSDDFEEVVCIGSVAEELEELSGAKISDLHRESVDHLTIPSRCGKGS LHR ISEVFD
CWFESGSMPIYAQVHYPPFENKREFEDAFPADFIAEGIDQTRGWFTLLVLATALFGQPPFKNVIVNGLVLASDGQK
MSKRKKNYDPVSI IQKYGADALRLYLINSPVVRAENLRFKEEGVRDVLKDVLLPWYNAYRFLIQNVLR LQKEEE
IEFLYNENTVRESPNITDRWILSFMQSLIGFFETEMAAYRLYTVPRLVKFVDILTNNWYVRMNRRLKGENGMED
CVMALETLSVLLSLCRLIAPYTPFLTEL MYQNLKVLIDPVSVDKDTLSIHYLM LPRVREELIDKKTESAVSQM
QSVIELGRVIRDRKTIP IKYPLKEIVVIHQDPEALKDIKSLEKYIIEELNVRKVT LSTDKNKYGIRLRAEPDHMV
LGKRLKGAFKAVMTSIKQLSSEEELEQFQKTGTIVVEGHELHDEDIRLMYTFDQATGGTAQFEAHSDA QALVLLDV
TPDQSMVDEGMAREVINRIQKL RKKCNLVP TDEITVYYKAKSEGTYLNSVIESHTEFI FTTIKAPLKPYPVSPSD
KVL IQEKTQLKGSELEITLTRGSSLP GPACAYVNLNICANGSEQGGVLLLENPKGDNRLDLLKLKSVVTSIFGVK
NTELAVFHDETEIQNQTDLLSLSGKTL CVTAGSAPSLINSSSTLLCQYINLQLLNAKPQECLMGTVGTLLLENPL
GQNGLTHQGLLYEAAKVFGLR SRKLKFLNETQTQEITEDIPVKTLNMKTVYVSVLPTTADF

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FIGURE 400

GAAAAGCGCGCGCGGGGATTCCAGGAGTCGTGGTTTCTTGCCCTTGATGTACTGGAGCAATCAGATCACACGGCGG
CTTGAGAGTGTAGTGCAAGGTTTTATGAGTGGAATTAGCCCTCAGCAGATGGGGGAGCCAGAAGGCAGTTGGAGT
GGGAAGAACCCAGGGACCATGGGCGCCTCCAGGCTCTATACCCTGGTGCTGGTCCTGCAGCCTCAGCGAGTTCTC
CTGGGCATGAAAAAGCGAGGCTTCGGGGCCGGCCGGTGGAATGGCTTTGGGGGCAAAGTGCAAGAAGGAGAGACC
ATCGAGGATGGGGCTAGGAGGGAGCTGCAGGAGGAGAGCGGTCTGACAGTGGACGCCCTGCACAAGGTGGGCCAG
ATCGTGTTTGAGTTCGTGGGCGAGCCTGAGCTCATGGACGTGCATGTCTTCTGCACAGACAGCATCCAGGGGACC
CCCGTGGAGAGCGACGAAATGCGCCCATGCTGGTTCCAGCTGGATCAGATCCCCTTCAAGGACATGTGGCCCGAC
GACAGCTACTGGTTTCCACTCCTGCTTCAGAAGAAGAAATTCCACGGGTACTTCAAGTTCAGGGTCAGGACACC
ATCCTGGACTACACACTCCGCGAGGTGGACACGGTCTAGCGGGAGCCCAGGGCAGCCCCTGGGCAGGAGACGTGG
CTGCTGAACAGCTGCAAACCATCTTACCTGGGGGCATTGAGTGCGCAGAGCCGGGTTTCATCTGGAATTAACT
GGATGGAAGGGAAAATAAAGCTATCTAGCGGTGAAAAA

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FIGURE 401

MSGISPQQMGEPEGSWSGKNPGTMGASRLYTLVLVLQPQRVLLGMKKRGFGAGRWNFGGKVVQEGETIEDGARRE
LQEESGLTVDALHKVGQIVFEFVGEPELMDVHVFC TDSIQGTPVESDEMPCWFQLDQIPFKDMWPDDSYWFPLL
LQKKKFHGYFKFQGQDTILDYTLREVDTV

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FIGURE 402

GGCACGAGGCAGGCCACCCGCCGCTAAGCTGAGAAGGGAGAGCGAGCTTAGGACCGCCTGCCCGGGCAACCCCG
AACCAAGCTTTAGCCGCCGAGGCCGCGTGTCCCAAAGGCCAGTCATCCCTCCTCTGTGTGGCATGGGAATTCAA
GGCCTGGCCAAACTAATTGCTGATGTGGCCCCCAGTGCCATCCGGGAGAATGACATCAAGAGCTACTTTGGCCGT
AAGGTGGCCATTGATGCCTCTATGAGCATTATCAGTTCCTGATTGCTGTTCCGCCAGGGTGGGGATGTGCTGCAG
AATGAGGAGGGTGAGACCACCAGCCACCTGATGGGCATGTTCTACCGCACCATTTCGCATGATGGAGAACGGCATC
AAGCCCGTGTATGTCTTTGATGGCAAGCCGCCACAGCTCAAGTCAGGCGAGCTGGCCAAACGCAGTGAGCGGCGG
GCTGAGGCAGAGAAGCAGCTGCAGCAGGCTCAGGCTGCTGGGGCCGAGCAGGAGGTGGAAAAATTCATAAGCGG
CTGGTGAAGGTCATAAGCAGCACAAATGATGAGTGCAAACATCTGCTGAGCCTCATGGGCATCCCTTATCTTGAT
GCACCCAGTGAGGCAGAGGCCAGCTGTGCTGCCCTGGTGAAGGCTGGCAAAGTCTATGCTGCGGCTACCGAGGAC
ATGGACTGCCTCACCTTCGGCAGCCCTGTGCTAATGCGACACCTGACTGCCAGTGAAGCCAAAAAGCTGCCAATC
CAGGAATTCACCTGAGCCGGATTCTGCAGGAGCTGGGCCTGAACCAGGAACAGTTTGTGGATCTGTGCATCCTG
CTAGGCAGTGACTACTGTGAGAGTATCCGGGGTATTGGGCCCAAGCGGGCTGTGGACCTCATCCAGAAGCACAA
AGCATCGAGGAGATCGTGCGGCGACTTGACCCCAACAAGTACCCTGTGCCAGAAAATTGGCTCCACAAGGAGGCT
CACCAGCTCTTCTTGGAACCTGAGGTGCTGGACCCAGAGTCTGTGGAGCTGAAGTGGAGCGAGCCAAATGAAGAA
GAGCTGATCAAGTTCATGTGTGGTGAAGCAGTTCTCTGAGGAGCGAATCCGCAGTGGGGTCAAGAGGCTGAGT
AAGAGCCGCCAAGGCAGCACCCAGGGCCGCTGGATGATTTCTTCAAGGTGACCGGCTCACTCTCTTCAGCTAAG
CGCAAGGAGCCAGAACCCAAAGGGATCCACTAAGAAGAAGGCAAAGACTGGGGCAGCAGGGAAGTTTAAAGGGGA
AAATTAAATGTGTTTCCCCATTATACCTCCTTCACCCAGAATATTTGCCGTCTTGTAACCTTAAGAGCTACAGCT
AGAGAAACCTTCACGGGGTGGAGAGAGGATTCTAAGGCTTTTCTAGCGTGACCCTTTTCAGTAGTGCTAGTCCCT
TTTTTACTTGATCTTAATGGCAAGAAGGCCACAGAGGTACTTTTCCTTTTTTAGCTCAGGAAAATATGTCAGGCT
CAAACCACTTCTCAGGCAGTTTAATGGACACTAAGTCCATTGTTACATGAAAGTGATAGATAGCAACAAGTTTTG
GAGAAGAGAGAGGGAGATAAAAGGGGGAGACAAAAGATGTACAGAAATGATTTCCCTGGCTGGCCAACTGGTGGCC
AGTGGGAGGTGATGGTGGACCTAGACTGTGCTTTTCTGTCTTGTTTCAGCCTTGACCCACCTTGAGAGAGAGCCAC
CAGGAAGGCGCATCTTAGCAGATGGGAGGAAGTCTGAGAGAAGATGGGCAGAAAGCTGGAGCCCCCTGGAGTTGG
CTGTGTCTGTGTTTGTGACTGATTACTGGCTGTGTCTTGGGTGGGCAGAACTCGAACTTGCTATGTAATTTGTG
TCTAGTTATTCAGAGGAGTAAGATGGTGATGTTACCTGGCAATCAGCTGAGTTGAGACTTTGGAATAAGACACT
GGTTTTCATGCGCTGTTTTTGTGTTTTAAAGTTATGAAGAAAAAAGTCAATAAAATTCTAAAAGTAAAAAAAAAAAA
AAAAAA

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FIGURE 403

MGIQGLAKLIADVAPSAIRENDIKSYFGRKVAIDASMSIYQFLIAVRQGGDVLQNEEGETTSHLMGMFYRTIRMM
ENGIKPVYVFDGKPPQLKSGELAKRSERRAEAEKQLQQAQAAGAEQEVEKFTKRLVKVTKQHNDECKHLLSLMGI
PYLDAPSEAEASCAALVKAGKVYAAATEDMDCLTFGSPVLMRHLTASEAKKLP IQEFHLSRILQELGLNQEQFVD
LCILLGSDYCESIRGIGPKRAVDLIQKHKSIEEIVRRLDPNKYPVPENWLHKEAHQLFLEPEVLDPESELKWSE
PNEEELIKFMCGEKQFSEERIRSGVKRLSKSRQGSTQGRLLDFFKVTGSLSSAKRKEPEPKGSTKKKAKTGAAGK
FKRGK

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FIGURE 404

AGTCCTGCGATTTTCGGGTGTAGAGGGAGCAGGGGCTGCGGGGACCTGGTGTGGGTGGAGTGGGGACAAGCGGTG
GAGAAGGGTACGCCAGGGTCGCTGAGAGACTCTGTTCTCCCTGGAGGGACTGGTTGCCATGAGAGCAGCCGTCTG
AGGGGACGCAGCCTGCACTACGCGCCCCAAGAGGCTGTGCGTGGCGAGCAGGTCACGTGACGGGAGCGCGGGCTT
TGGAAGGCGGCTGAACGTCAGGCCACCCGCCGCTAAGCTGAGAAGGGAGAGCGAGCTTAGGACCGCCTGCCCCGGG
GCAACCCGAACCAAGCTTTAGCCGCCGAGGCCGCGTGTCCCAAAGGCCAGTCATCCCTCCTCTGTGTTGCCATG

GGAATTCAAGGCCTGGCCAACTAATTGCTGATGTGGCCCCAGTGCCATCCGGGAGAATGACATCAAGAGCTAC
TTTGGCCGTAAGGTGGCCATTGATGCCTCTATGAGCATTATCAGTTCTGATTGCTGTTGCCAGGGTGGGGAT
GTGCTGCAGAATGAGGAGGGTGAGACCACCAGCCACCTGATGGGCATGTTCTACCGCACCATTTCGCATGATGGAG
AACGGCATCAAGCCCGTGTATGTCTTTGATGGCAAGCCGCCACAGCTCAAGTCAGGCGAGCTGGCCAAACGCAGT
GAGCGGCGGGCTGAGGCAGAGAAGCAGCTGCAGCAGGCTCAGGCTGCTGGGGCCGAGCAGGAGGTGGAAAAATTC
ACTAAGCGGCTGGTGAAGGTCACTAAGCAGCACAAATGATGAGTGCAAACATCTGCTGAGCCTCATGGGCATCCCT
TATCTTGATGCACCCAGTGAGGCAGAGGCCAGCTGTGCTGCCCTGGTGAAGGCTGGCAAAGTCTATGCTGCGGCT
ACCGAGGACATGGACTGCCTCACCTTCGGCAGCCCTGTGCTAATGCGACACCTGACTGCCAGTGAAGCCAAAAAG
CTGCCAATCCAGGAATTCACCTGAGCCGGATTCTGCAGGAGCTGGGCCTGAACCAGGAACAGTTTGTGGATCTG
TGCATCCTGCTAGGCAGTGACTACTGTGAGAGTATCCGGGGTATTGGGCCCCAAGCGGGCTGTGGACCTCATCCAG
AAGCACAAGAGCATCGAGGAGATCGTGCGGCGACTTGACCCCAACAAGTACCCTGTGCCAGAAAATTGGCTCCAC
AAGGAGGCTCACCAGCTCTTCTTGGAACCTGAGGTGCTGGACCCAGAGTCTGTGGAGCTGAAGTGGAGCGAGCCA
AATGAAGAAGAGCTGATCAAGTTCATGTGTGGTGAAAAGCAGTTCTCTGAGGAGCGAATCCGCAGTGGGGTCAAG
AGGCTGAGTAAGAGCCGCCAAGGCAGCACCCAGGGCCGCTGGATGATTTCTTCAAGGTGACCGGCTCACTCTCT
TCAGCTAAGCGCAAGGAGCCAGAACCCAAGGGATCCACTAAGAAGAAGGCAAAAGACTGGGGCAGCAGGGAAGTTT
AAAAGGGGAAAATAAATGTGTTTCCCCATTATACCTCCTTCACCCCAAGATATTTGCCGTCTTGTACCCTTAAGA
GCTACAGCTAGAGAAACCTTCACGGGGTGGAGAGAGGATTCTAAGGCTTTTCTAGCGTGACCTTTTTCAGTAGTG
CTAGTCCCTTTTTTACTTGATCTTAATGGCAAGAAGGCCACAGAGGTACTTTTCTTTTTTAGCTCAGGAAATA
TGTCAGGCTCAAACCACTTCTCAGGCAGTTTAATGGACACTAAGTCCATTGTTACATGAAAGTGATAGATAGCAA
CAAGTTTTGGAGAAGAGAGAGGGAGATAAAAGGGGGAGACAAAAGATGTACAGAAATGATTTCTGGCTGGCCAA
CTGGTGGCCAGTGGGAGGTGATGGTGGACCTAGACTGTGCTTTTCTGTCTTGTTCAGCCTTGACCCACCTTGAGA
GAGAGCCACCAGGAAGGCGCATCTTAGCAGATGGGAGGAAGTCTGAGAGAAGATGGGCAGAAAGCTGGAGCCCC
TGGAGTTGGCTGTGTCTGTGTTTGTGACTGATTACTGGCTGTGTCTTGGGTGGGCAGAACTCGAACTTGCTATG
TAATTTGTGTCTAGTTATTCAGAGGAGTAAGATGGTGATGTTACCTGGCAATCAGCTGAGTTGAGACTTTGGAA
TAAGACACTGGTTTTTCATGCGCTGTTTTTGTTTTAAAGTTATGAAGAAAAAGTCAATAAAATTTCTAAAAGTAAA
AAAAAAAAAAAAAAAA

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FIGURE 405

MGIQGLAKLIADVAPSAIRENDIKSYFGRKVAIDASMSIYQFLI AVRQGGDVLQNEEGETTSHLMGMFYRTIRMM
ENGIKPVYVFDGKPPQLKSGELAKRSERRAEAEKQLQQAQAAGAEQEVEKFTKRLVKVTKQHNDCKHLLSLMGI
PYLDAPSEAEASCAALVKAGKVYAAATEDMDCLTFGSPVLMRHLTASEAKKLP IQEFHLSRILQELGLNQEQFVD
LCILLGSDYCESIRGIGPKRAVDLIQKHKSIEEIVRRLDPNKYPVPENWLHKEAHQLFLEPEVLD PESVELKWSE
PNEEELIKFMCGEKQFSEERIRSGVKRLSKSRQGSTQGRLLDFFKVTGSLSSAKRKEPEPKGSTKKKAKTGAAGK
FKRGK

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FIGURE 406

GCACGCCCAGCGAGTTCCAGAGGCGCCAGTGGGAAGCTGCGGCGGCGGTGTCTCGCGTTCGGCGGGATTCTCTTC
GCTCCGGCTCGGCCTAGGTCTACGTCCCCAGCTCCAGCCGCGGCTCGGACTCGGTCTCTGACCCCCAACTCGGT
CCCCTAGTCCGGCCCCGGCTCCGGGCCCCCAACCCTCGCTCCGGCCCCGGCCCCGGCCCCCAGCCCCCTGCACCCCTCGG
CCCCGGCCCCAGGCCCCGGCCGCGGCGCTCCCGCCTGGAGCCGCGCGCGCCCCCAGCCCCCTGCACCCCTCGG
CCCCTCGCCTTCTCTTCCCGGCGCGGCCCCCGGCTTCCGCGCGCCGCCCCGCCACCAATCCTCTTGCTACCATG

TCCGTGGAGCTCGAGGAGGCCCTGCCAGTGACGACCGCCGAGGGAATGGCCAAGAAGGTGACCAAGGCTGGCGGC
TCGGCGGCGTTGTCCCCATCTAAGAAGAGGAAGAATAGCAAGAAGAAGAACCGCCGGGCAAGTACAGCCAGCTG
GTGGTGGAGACCATCCGTAGGCTGGGCGAGCGCAACGGCTCGTCGCTGGCCAAGATCTACACCGAGGCCAAGAAG
GTTCCGTGGTTCGACCAGCAGAAATGGGCGCACCTACCTCAAGTACTCGATCAAGGCGCTGGTGCAGAACGACACG
CTTCTGCAGGTGAAGGGCACCGGCGCCAACGGTTCTTCAAGCTCAACCGCAAGAAGCTGGAGGGCGGCGGGGAG
CGGCGCGGAGCCCCGGCGGCCGCCACCGCCCCGGCCCCCACC GCGCACAAAGCGAAGAAGGCAGCCCCGGGCGCG
GCCGGCTCCCGGCGCGCGGACAAGAAGCCCCGCCAGGGGCCAGAAGCCGGAGCAGCGCTCGCACAGAAGGGCGCT
GGCGCCAAGAAGGACAAAGGCGGCAAGGCCAAGAAGACGGCGGCCGCCGGGGGCAAGAAGGTGAAGAAGGCGGCC
AAGCCCAGCGTCCCCAAAGTGCCCAAGGGCCGCAAGTAGAGCGTGTGCGGCCGTCAGAGCGGCCGGCGTGGGCTTT
TCGGTGTTTTTGTTTTTCTACCCCAAGTGACGTAGATTTTGTACGGCTCACGCCGGCCGGGGCCGCGAGGCCTGG
TCTGAGCCTCAGGGAGGGGGCCCCGGGTCTCTCAGTCTTTCCCCTCCCCCAACGATGTAGCGTTTTTCGTTGTTT
GCTTTAGGTTTTTTGAAACAGCCCCGGCGACGCCTCTATTGGCTCTCGGCCTTGGCAACGGCCGTCGTCATGGTTA
CTGGCCCCCTAGGCGCCGATGGCCGAGGCCGCGCCTGCCACCGGGCGGGGTCGCTGGTTGGCCGGGCCCAGGCGC
GCGGGGACGCGGAGGCCGCGCATCCTTTCCAGCTCCCCACCCTCCTTGCCCTTGGGTGCGCGACAAACAATCGC
TCCGGGCTCAGGGCTGCGCGGCTCTTCCCTTCATTCCATGGGCCTTTTTTTGGGCACAATAAAGCGTTTAAACCT
TTC

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FIGURE 407

MSVELEEALPVTTAEGMAKKVTKAGGSAALSPSKKRKNSKKKNQPGKYSQLVVETIRRLGERNGSSLAKIYTEAK
KVPWFDQQNGRITYLKYSIKALVQNDTLLQVKGTGANGSFKLNRRKLEGGGERRGAPAAAATAPAPTAHKAKKAAPG
AAGSRRADKKPARGQKPEQRSHKKGAGAKKDKGGKAKKTAAAGGKKVKKAAKPSVPKVPKGRK

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FIGURE 408

ACGCGTCCGCTTCGGAATGAGAGACTCAACCATAATAGAAAGAATGGAGAACTATTAACCACCATTCTTCAGTGG
GCTGTGATTTTCAGAGGGGAATACTAAGAAATGGTTTTCCATACTGGAACCCAAAGGTAAAGACACTCAAGGACA
GACATTTTTTGGCAGAGCATAGATGAAAATGGCAAGTTCCCTGGCTTTCCTTCTGCTCAACTTTTCATGTCTCCCTC
TTCTTGGTCCAGCTGCTCACTCCTTGCTCAGCTCAGTTTTCTGTGCTTGGACCTCTGGGCCCATCTGGCCATG
GTGGGTGAAGACGCTGATCTGCCCTGTCACCTGTTCCCGACCATGAGTGCAGAGACCATGGAGCTGAGGTGGGTG
AGTTCCAGCCTAAGGCAGGTGGTGAACGTGTATGCAGATGGAAAGGAAGTGAAGACAGGCAGAGTGCACCATAT
CGAGGGAGAACTTCGATTCTGCGGGATGGCATCACTGCAGGGAAGGCTGCTCTCCGAATACACAACGTACAGCC
TCTGACAGTGGAAAGTACTTGTGTTATTTCCAAGATGGTGACTTCTACGAAAAAGCCCTGGTGGAGCTGAAGGTT
GCAGCATTGGGTCTGATCTTCACATTGAAGTGAAGGGTTATGAGGATGGAGGGATCCATCTGGAGTGCAGGTCC
ACTGGCTGGTACCCCCAACCCCAAATAAAGTGGAGCGACACCAAGGGAGAGAACATCCCGGCTGTGGAAGCACCT
GTGGTTGCAGATGGAGTGGGCCTGTATGCAGTAGCAGCATCTGTGATCATGAGAGGCAGCTCTGGTGGGGGTGTA
TCCTGCATCATCAGAAATTCCCTCCTCGGCCTGGAAAAGACAGCCAGCATATCCATCGCAGACCCCTTCTTCAGG
AGCGCCAGCCCTGGATCGCGGCCCTGGCAGGGACCCTGCCTATCTCGTTGCTGCTTCTCGCAGGAGCCAGTTAC
TTCTTGTGGAGACAACAGAAGGAAAAAATTGCTCTGTCCAGGGAGACAGAAAAGAGAGCGAGAGATGAAAGAAATG
GGATACGCTGCAACAGAGCAAGAAATAAGCCTAAGAGAGAAGCTCCAGGAGGAACTCAAGTGGAGGAAAAATCCAG
TACATGGCTCGTGGAGAGAAGTCTTTGGCCTATCATGAATGGAAAATGGCCCTCTTCAAACCTGCGGATGTGATT
CTGGATCCAGACACGGCAAACGCCATCCTCCTTGTTTCTGAGGACCAGAGGAGTGTGCAGCGTGTGAAGAGCCG
CGGGATCTGCCAGACAACCCTGAGAGATTTGAATGGCGTTACTGTGTCCTTGGCTGTGAAAACCTTCACATCAGGG
AGACATTACTGGGAGGTGGAAGTGGGGGACAGAAAAGAGTGGCATATTGGGGTATGTAGTAAGAACGTGGAGAGG
AAAAAAGGTTGGGTCAAAATGACACCGGAGAACGGATACTGGACTATGGGCCCTGACTGATGGGAATAAGTATCGG
GCTCTCACTGAGCCAGAACCAACCTGAAACTTCCTGAGCCTCCTAGGAAAGTGGGGATCTTCTGGACTATGAG
ACTGGAGAGATCTCGTTCTATAATGCCACAGATGGATCTCATATCTACACCTTCCGCACGCCTCTTTCTCTGAG
CCTCTATATCCTGTTTTGAGAATTTTGACCTTGGAGCCCACTGCCCTGACCATTTGCCCAATACCAAAAGAAGTA
GAGAGTTCCCCGATCCTGACCTAGTGCCTGATCATTCCCTGGAGACACCACTGACCCCGGGCTTAGCTAATGAA
AGTGGGGAGCCTCAGGCTGAAGTAACATCTCTGCTTCTCCCTGCCCACCCTGGAGCTGAGGTCTCCCTTCTGCA
ACAACCAATCAGAACCATAAGCTACAGGCACGCACTGAAGCACTTTACTGATATTTCATTCCATTATTCCATATGA
CAGTTGTTTTGAGTTTCGTACCACCTTATTGTCCCTTATACAGATAAGGAACTGGGGTGCAGAAAGGTGAATT
AACTTTACAAAGTAGACATGACAAGTGAACAGCAGAGCTGGGATCTAAACAGCAATAACTAACATTAACAGAGAA
TTTAAATGTTCTTAGTGCTGTGTTATAAGCTTTGGTGGATGTCACTCCTTTAATCCTCACACACCCTGTCCGG
TAGTCATATTTTGCAAGTATGGAAGCTGAGGCAGGGCAACATGAAGTAACTTACATAATTACATACAGTAATTTGT
GCAGTTGGGAGATGTTTCAGCCTTAGTCCCTGGCTAATTGCCTGTTCTTTTCCAGCCTGATTTTTTTTCCACAGG
AAGAGCCCATGTAGCCCTGAGGTTTCCTTCCCAGGACAGCTGCAGGGTAGAGATCATTTTAAGTGCTTGTGGA
GTTGACATCCCTATTGACTCTTTCCCAGCTGATATCAGAGACTTAGACCCAGCACTCCTTGGATTAGCTCTGCAG
AGTGTCTTGGTTGAGAGAATAACCTCATAGTACCAACATGACATGTGACTTGGAAAGAGACTAGAGGCCACACTT
GATAAATCATGGGGCACAGATATGTTCCACCCAAACAAATGTGATAAGTGATTGTGCAGCCAGAGCCAGCCTTCC
TTCAATCAAGGTTTCCAGGCAGAGCAAATACCCTAGAGATTCTCTGTGATATAGGAAATTTGGATCAAGGAAGCT
AAAAGAATTACAGGGATGTTTTTAATCCCACTATGGACTCAGTCTCCTGGAAATAGGTCTGTCCACTCCTGGTCA
TTGGTGGATGTTAAACCCATATTCTTTCAACTGCTGCCTGCTAGGGAAAAGTGTCTCCTCATTATCATCACTATT
ATTGCTCACCACCTGTATCCCTCTACTTGGCAAGTGGTTGTCAAGTTCTAGTTGTTCAATAAATGTGTTAATAAT
GAAAAAAAAA

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FIGURE 409

MKMASSLAFLLLNFHVSFLVQLLTPCSAQFSVLGSPGPILAMVGEDADLPCHLFPTMSAETMELRWVSSSLRQV
VNVYADGKEVEDRQSAPYRGRTSILRDGITAGKAALRIHNVTASDSGKYLCYFQDGDIFYEKALVELKVAALGSDL
HIEVKGIEDGGIHLECRSTGWYPQPQIKWSDTKGENIPAVEAPVVADGVGLYAVAASVIMRGSSGGGVSCIIRNS
LLGLEKTASISIAFPFRSAQFWIAALAGTLPISLLLLAGASYFLWRQQKEKIALSRETEREREMKEMGYAATEQ
EISLREKLQEELKWRKIQYMARGEKSLAYHEWKMALEKPADVILDPDTANAILLVSEDQRSVQRAEPRDLDPNP
ERFEWRYCVLGCENFTSGRHYWEVEVGDRKEWHIGVCSKNVERKKGWVKMTPENGYWTMGLTDGNKYRALTEPRT
NLKLPEPPRKVGIFLDYETGEISFYATDGSHIYTFPHASFSEPLYPVFRILTLEPTALTICPIPKVEVSSPDPD
LVDPHSLETPLTPGLANESGEPQAEVTSLLLPAHPGAEVSPSATTNQNHKLQARTEALY

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FIGURE 410

CGCACTCCCTGCTGGGTGAGCAGCACTGTAAAGATGAAGCTGGCTAACTGGTACTGGCTGAGCTCAGCTGTTCTT
GCCACTTACGGTTTTTTTGGTTGTGGCAAACAATGAAACAGAGGAAATTAAAGATGAAAGAGCAAAGGATGTCTGC
CCAGTGAGACTAGAAAGCAGAGGGAAATGCGAAGAGGCAGGGGAGTGCCCCCTACCAGGTAAGCCTGCCCCCCTTG
ACTATTCAGCTCCCGAAGCAATTCAGCAGGATCGAGGAGGTGTTCAAAGAAGTCCAAAACCTCAAGGAAATCGTA
AATAGTCTAAAGAAATCTTGCCAAGACTGCAAGCTGCAGGCTGATGACAACGGAGACCCAGGCAGAAACGGACTG
TTGTTACCCAGTACAGGAGCCCCGGGAGAGGTTGGTGATAACAGAGTTAGAGAATTAGAGAGTGAGGTAAACAAG
CTGTCTCTGAGCTAAAGAATGCCAAAGAGGAGATCAATGTACTTCATGGTCGCCTGGAGAAGCTGAATCTTGTA
AATATGAACAACATAGAAAATTATGTTGACAGCAAAGTGGCAAATCTAACATTTGTTGTCAATAGTTTGGATGGC
AAATGTTCAAAGTGTCAGCCAAAGAACAATAACAGTCACGTCCAGTTCAACATCTAATATATAAAGATTGCTCT
GACTACTACGCAATAGGCAAAGAAGCAGTGAGACCTACAGAGTTACACCTGATCCCCAAAATAGTAGCTTTGAA
GTTTACTGTGACATGGAGACCATGGGGGGAGGCTGGACAGTGCTGCAGGCACGTCTCGATGGGAGCACCAACTTC
ACCAGAACATGGCAAGACTACAAAGCAGGCTTTGGAAACCTCAGAAGGGAATTTTGGCTGGGGAACGATAAAATT
CATCTTCTGACCAAGAGTAAGGAAATGATTCTGAGAATAGATCTTGAAGACTTTAATGGTGTGCAACTATATGCC
TTGTATGATCAGTTTTATGTGGCTAATGAGTTTCTCAAATATCGTTTACACGTTGGTAACCTATAATGGCACAGCT
GGAGATGCATTACGTTTCAACAAACATTACAACCACGATCTGAAGTTTTTCACCACTCCAGATAAAGACAATGAT
CGATATCCTTCTGGGAACTGTGGGCTGTACTACAGTTTACGGCTGGTGGTTTGATGCATGTCTTTCTGCAAACTTA
AATGGCAAATATTATCACCAAAAATACAGAGGTGTCCGTAATGGGATTTTCTGGGGTACCTGGCCTGGTGTAAGT
GAGGCACACCCTGGTGGCTACAAGTCCTCCTTCAAAGAGGCTAAGATGATGATCAGACCCAAGCACTTTAAGCCA
TAAATCACTCTGTTCAATCCTCCAGGTATTCGTTATCTAATAGGGCAATTAATTCCTTCAGCACTTTAGAATATG
CCTTGTTTCATATTTTTCATAGCTAAAAATGTTTGACATCCTTTGAGATATTTTATTACTAAATCTGCC

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FIGURE 411

MKLANWYWLSSAVLATYGFLVVANNETEEIKDERAKDVCPVRLESRGKCEEAGECPYQVSLPPLTIQLPKQFSRI
EEVFKEVQNLKEIVNSLKKSCQDCKLQADDNGDPGRNGLLLPSTGAPGEVGDNRVRELESEVNKLSSELKNAKEE
INVLHGRLEKLNLVNMNNIENYVDSKVANLTFVVNSLDGKCSKCPSQEQIQSRPVQHLYKDCSDYYAIGKRSSE
TYRVTPDPKNSSFEVYCDMETMGGGWTVLQARLDGSTNFTRTWQDYKAGFGNLRREFWLGNDKIHLLTKSKEMIL
RIDLEDFNGVELYALYDQFYVANEFLKYRLHVGNYNGTAGDALRFNKHYNHDLKFFTPDKDNDRYPGNCGLYY
SSGWWFDACLSANLNGKYYHQKYRGVRNGIFWGTWPGVSEAHPPGGYKSSFKEAKMMIRPKHFKP

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FIGURE 412

TCCCAGCTGCGCGTTCGACGCGAGAGGGGCTGGAGTCGGCGTCCAGCCTAGAGCCCCGGTGGGAGCC
AGGCCGGGACGCGTGCACCAATGCCCTACCTGCTCATCAGCACCCAGATCCGCATGGAGGTGGGCCCCACTATGGT
GGGCGATGAACAGTCGGATCCAGAGCTGATGCAGCATCTGGGGGCTTCAAAGAGAAGAGCCTTGGGAAACAATT
TTATGAATACTACGTCGATGACCTCCCCGCATAGTCTGGACAAGCTGGAACGCAGGGGCTTCCGTGTGCTGAG
CATGACGGGGGTGGGCCAGACGCTGGTGTGGTGTCTGCACAAGGAGTTGACCTTCTCATGCTGATTTGCAGACGGG
GCACCCCTGTGGAGGGGCTGCTGTGGGCCCTGACCTCCAAGCTCCTGCCTCACCGTCTGCCTTGCTCCTCTCTTC
CCAAATCATCACCGCCATGGGCCAGCCCCAAAGGGCAGTGAATGGCCTTCTCTGAAACCCTGCGTCAAGCAGTG
GGAGAGGGCAGTGCCCGGTGCCCTGGTGTCTCCAGCTGCCCTCCTGCTTCGGGCCTGGGCCGAGGGCCTTGTGTA
GGCCATGTTCTCGGGCAGCTGCCCCGGGCCGGAGCTGGGCACTCCAGCGGCCCTGGCGCGTGGCTCCTGCATAG
CTAGCCCAAGCCAATAAAGGGCTGTGATGAGTGGCTGC

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FIGURE 413

MPYLLISTQIRMEVGPTMVGDEQSDPELMQHLGASKRRALGNNFYEYYVDDPPRIVLDKLERRGFRVLSMTGVGQ
TLVWCLHKE

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FIGURE 414

GCGTCTGCCAGGAGCTACGGCCGGAAGATGGCGGCGGCCGCGAGATTGTCGCTACTGGAGAAGTCCCTGGGACTG
AGTAAGGGGAATAAATACAGTGCTCAGGGCGAGCGACAGATTCCAGTTCTTCAGACAAACAATGGTCCAAGTCTA
ACAGGATTGACTACTATAGCAGCTCATCTAGTCAAGCAAGCCAACAAAGAATATTTGCTGGGGAGTACTGCAGAA
GAAAAAGCAATCGTTCAGCAGTGGTTAGAATACAGGGTCACTCAAGTAGATGGGCACTCCAGTAAAAATGACATC
CACACACTGTTGAAGGATCTTAATTCATATCTTGAAGATAAAGTCTACCTTACAGGGTATAACTTTACATTAGCA
GATATACTATTGTACTATGGACTTCATCGCTTTATAGTTGACCTGACAGTTCAAGAAAAGGAGAAATATCTTAAT
GTGTCTCGCTGGTTTTGTCACATTCAGCATTATCCAGGCATCAGGCAACATCTGTCTAGTGTGCTTCATCAAG
AACAGACTATATACTAATTCCCACTAGAAGCTGTCCATGCCATACAGAAGATCTATTAAGTGTTTTAAATGGA
AAATGTACTCTAGACCACAGGACTAATGTAAATTAATATACAGTCATTCAATTATTTGTTGAAGTTGATAGAATTT
TTGAAGTGTAACCTTGTGTCTGAATGTTTTATTTGTTCTTTAGCTGAAGTTTTGCAATTTTTATGTCAAAATTC
ATTGCTATTAAACAAGTTGAGATCCAGTTATAAATTAACCTTGTTTTTAGTAGATGACATTTATTTCAATAAAAG
TTGCAATCGGGCTTAATCTTAAATTTGGTGGTCATTTCAATGGTTGACATATTTGGCTATTTATTAACCTCTCT
TTCATATTCTAAAATTCATTTTCCCCTTATGGATATTTATGGTAGTTTGTTAAGAACTGATAAATGTGCCAAGG
AAGCCAAAAGGGAAGACAGATGGATTTGTTTTAAATGTTTATGTGAGCTAGTAAATGTGGGAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAA

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FIGURE 415

MAAAEELSLEKSLGLSKGNKYSAQGERQIPVLQTNNGPSLTGLTTIAAHLVKQANKEYLLGSTAEKAIVQQWL
EYRVTQVDGHSSKNDIHTLLKDLNSYLEDKVYLTGYNFTLADILLYYGLHRFIVDLTVQEKEKYLNVSRLFCHIQ
HYPGIRQHLSSVVFIGNRLYTNSH

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FIGURE 416

CCGGGACTTTGCAGGCAGCGGCGGGCGGGGGCGGAGCGGGATCGAGCCCTCGCCGAGGCCTGCCGCCATGGGCCC
GCGCCCGCCGCCCGCCTGTACCCGGGCGCGCGGGCCGTGAGCGTCATGGCCTTGGCCGGGGCCCCCTGCGGGC
GGCCCATGCGCGCCGGCGCTGGAGGCCCTGCTCGGGGCCGGCGCGCTGCGGCTGCTCGACTCCTCGCAGATCGTC
ATCATCTCCGCCGCGCAGGACGCCAGCGCCCCGCGGGCTCCCACCGGCCCCGCGGCGCCGCGGCCGGCCCCCTGC
GACCTTGACCTGCTGCTCTTCGCCACACCGCAGGCGCCCCGGCCACACCCAGTGCGCCGCGGGCCGCGCTCGGC
CGCCCCCGGGTGAAGCGGAGGCTGGACCTGGAACTGACCATCAGTACCTGGCCGAGAGCAGTGGGCCAGCTCGG
GGCAGAGGCCGCCATCCAGGAAAAGGTGTGAAATCCCCGGGGGAGAAGTCACGCTATGAGACCTCACTGAATCTG
ACCACCAAGCGCTTCCTGGAGCTGCTGAGCCACTCGGCTGACGGTGTCTGCGACCTGAACTGGGCTGCCGAGGTG
CTGAAGGTGCAGAAGCGGCGCATCTATGACATACCAACGTCCTTGAGGGCATCCAGCTCATTGCCAAGAAGTCC
AAGAACCACATCCAGTGGCTGGGCAGCCACACCACAGTGGGCGTCGGCGGACGGCTTGAGGGGTTGACCCAGGAC
CTCCGACAGCTGCAGGAGAGCGAGCAGCTGGACCACCTGATGAATATCTGTACTACGCAGCTGCGCCTGCTC
TCCGAGGACACTGACAGCCAGCGCCTGGCCTACGTGACGTGTGAGGACCTTCGTAGCATTGCAGACCCTGCAGAG
CAGATGGTTATGGTGATCAAAGCCCCCTCCTGAGACCCAGCTCCAAGCCGTGGACTCTTCGGAGAACCTTCAGATC
TCCCTTAAGAGCAAACAAGGCCCGATCGATGTTTTCTGTGCCCTGAGGAGACCGTAGGTGGGATCAGCCCTGGG
AAGACCCCATCCCAGGAGGTCACTTCTGAGGAGGAGAACAGGGCCACTGACTCTGCCACCATAGTGTACCACCA
CCATCATCTCCCCCTCATCCCTCACCACAGATCCCAGCCAGTCTCTACTCAGCCTGGAGCAAGAACCGCTGTTG
TCCCGGATGGGCAGCCTGCGGGCTCCCGTGGACGAGGACCGCCTGTCCCCGCTGGTGGCGGCCGACTCGCTCCTG
GAGCATGTGCGGGAGGACTTCTCCGGCCTCCTCCCTGAGGAGTTCATCAGCCCTTCCCCACCCACGAGGCCCTC
GACTACCACTTCGGCCTCGAGGAGGGCGAGGGCATCAGAGACCTCTTCGACTGTGACTTTGGGGACCTCACCCCC
CTGGATTTCTGACAGGGCTTGAGGGGACCAGGGTTTTCCAGAGTAGCTCACCTTGTCTCTGCAGCCCTGGAGCCCC
CTGTCCCTGGCCGTCTCTCCAGCCTGTTTGAAACATTTAATTTATACCCCTCTCCTCTGTCTCCAGAAGCTTCT
AGCTCTGGGGTCTGGCTACCGCTAGGAGGCTGAGCAAGCCAGGAAGGAAGGAGTCTGTGTGGTGTGTATGTGCA
TGCAGCCTACACCCACACGTGTGTACCGGGGTGAATGTGTGTGAGCATGTGTGTGTCATGTACCGGGGAATGA
AGGTGAACATAACCTCTGTGTGTGCACTGCAGACACGCCCCAGTGTGTCCACATGTGTGTGCATGAGTCCATCT
CTGCGCGTGGGGGGGCTCTAACTGCACTTTCGGCCCTTTTGCTCGTGGGGTCCACAAGGCCAGGGCAGTGCCT
GCTCCAGAACTCTGGTGCTCTGACCAGGCCAGGTGGGGAGGCTTTGGCTGGCTGGGCGTGTAGGACGGTGAGAGC
ACTTCTGTCTTAAAGGTTTTTCTGATTGAAGCTTTAATGGAGCGTTATTTATTTATCGAGGCCCTCTTGGTGAG
CCTGGGGAATCAGCAAAAGGGGAGGAGGGGTGTGGGGTTGATACCCAACTCCCTCTACCCTTGAGCAAGGGCAG
GGGTCCCTGAGCTGTTCTTCTGCCCCATACTGAAGGAACAGGACCTGGGTGATTTATTTATTGGGAAAGTGAGG
GAGGGAGACAGACTGACTGACAGCCATGGGTGGTCAGATGGTGGGGTGGGCCCTCTCCAGGGGGCCAGTTCAGGG
CCCAGCTGCCCCCAGGATGGATATGAGATGGGAGAGGTGAGTGGGGGACCTTCACTGATGTGGGCAGGAGGGGT
GGTGAAGGCCTCCCCAGCCAGACCCTGTGGTCCCTCCTGCAGTGTCTGAAGCGCCTGCCTCCCCACTGCTCTG
CCCCACCTCCAATCTGCACCTTGATTGCTTCCTAACAGCTCTGTTCCCTCCTGCTTTGGTTTTAATAAATATT
TTGATGACGTT

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FIGURE 417

MALAGAPAGGPCAPALEALLGAGALRLDSSQIVIIISAAQDASAPPAPTGPAAAPAGPCDPDLLLLFATPQAPRPT
PSAPRPALGRPPVKRRLDLETDHQYLAESSGPARGRGRHPGKGVKSPGEKSRYETSLNLTTRFLELLSHSADGV
VDLNWAAEVLKVQKRRIYDITNVLEGIQLIAKKSKNHIQWLGSHTTVGVGGRLEGLTQDLRQLQESEQQLDHLMN
ICTTQLRLLSEDTDSQRLAYVTCQDLRSIADPAEQMVMVIKAPPETQLQAVDSSSENFQISLKSQGPIDVFLCPE
ETVGGISPGKTPSQEVTSEENRATDSATIVSPPPSSPPSSLTTDPSQSLLSLEQEPLLSRMGSLRAPVDEDRLS
PLVAADSLLEHVREDFSGLLPEEFISLSPPHEALDYHFGLEEGERDLDFDCDFGDLTPLDF

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FIGURE 418

CCTTGCTATAGAAGACCTGGGACAGAGGACTGCTGTCTGCCCTCTCTGGTCACCCTGCCTAGCTAGAGGATCTGT
GACCCCAGCCATGAGGACCCTCGCCATCCTTGCTGCCATTCTCCTGGTGGCCCTGCAGGCCCAGGCTGAGCCACT
CCAGGCAAGAGCTGATGAGGTTGCTGCAGCCCCGGAGCAGATTGCAGCGGACATCCCAGAAGTGGTTGTTTCCCT
TGCATGGGACGAAAGCTTGGCTCCAAAGCATCCAGGCTCAAGGAAAAACATGGACTGCTATTGCAGAATACCAGC
GTGCATTGCAGGAGAACGTCGCTATGGAACCTGCATCTACCAGGGAAGACTCTGGGCATTCTGCTGCTAGGCTTG
CAGAAAAAGAAAAATGAGCTCAAAATTTGCTTTGAGAGCTACAGGGAATTGCTATTACTCCTGTACCTTCTGCTC
AATTCCTTTCCTCATCTCAAATAAATGCCTTGTTAC

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FIGURE 419

MRTLAILLAAILLVALQAQAEPLQARADEVAAAPEQIAAD IPEVVVSLAWDESLAPKHGSRKNMDCYCRIPACIA
GERRYGTCTIYQGRLWAFCC

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FIGURE 420

AGCGGGTGCGGGGCGGGACCGGCCCCGGCCTATATATTGGGTTGGCGCCGGCGCCAGCTGAGCCGAGCGGTAGCTG
GTCTGGCGAGGTTTTTATACACCTGAAAAGAAGAGAAATGTCAAGACGAAGTAGCCGTTTACAAGCTAAGCAGCAGCC
CCAGCCCAGCCAGACGGAATCCCCCAAGAAGCCAGATAATCCAGGCCAAGAAGAGGAAAACTACCCAGGATGT
CAAAAAAAGAAGAGAGGAGGTACCAAGAAACATCAGTATGAAATTAGGAATTGTTGGCCACCTGTATTATCTGG
GGGATCAGTCCTTGCATTATCATTGAAACACCTCACAAAGAAATAGGAACAAGTGATTTCTCCAGATTTACAAA
TTACAGATTTAAAAATCTTTTTATTAATCCTTCACCTTTGCCTGATTTAAGCTGGGGATGTTCAAAAGAAGTCTG
GCTAAACATGTTAAAAAAGGAGAGCAGATATGTTTCATGACAAACATTTTGAAGTTCTGCATTCTGACTTGGAACC
ACAGATGAGGTCCATACTTCTAGACTGGCTTTTAGAGGTATGTGAAGTATACACACTTCATAGGGAAACATTTTA
TCTTGACAAAGACTTTTTTGATAGATTTATGTTGACACAAAAGGATATAAATAAAAAATATGCTTCAACTCATTGG
AATTACCTCATTATTTCATTGCTTCCAACTTGAGGAAATCTATGCTCCTAACTCCAAGAGTTTGCTTACGTCAC
TGATGGTGCTTGCAGTGAAGAGGATATCTTAAGGATGGAACCTCATTATATTAAAGGCTTTAAATGGGAACTTTG
TCCTGTAACAATCATCTCCTGGCTAAATCTCTTCTCCAAGTTGATGCTCTTAAAGATGCTCCTAAAGTTCTTCT
ACCTCAGTATTCTCAGGAAACATTCATTCAAATAGCTCAGCTTTTAGATCTGTGATTCTAGCCATTGATTCATT
AGAGTTCCAGTACAGAATACTGACTGCTGCTGCCTTGTGCCATTTTACCTCCATTGAAGTGGTTAAGAAAGCCTC
AGGTTTGGAGTGGGACAGTATTTCAGAATGTGTAGATTGGATGGTACCTTTTGTCAATGTAGTAAAAAGTACTAG
TCCAGTGAAGCTGAAGACTTTTAAAGAAGATTCCATGGAAGACAGACATAATATCCAGACACATACAACTATTT
GGCTATGCTGGAGGAAGTAAATTACATAAACACCTTCAGAAAAGGGGGACAGTTGTCACCAGTGTGCAATGGAGG
CATTATGACACCACCGAAGAGCACTGAAAAACCACAGGAAAACACTAAAGAAGATAACTAAGCAAACAAGTTGG
AATTACCAAGATTGGGTAGAAGTGGTATCACTGAACTACTAAAGTTTTACAGAAAAGTAGTGCTGTGATTGATTG
CCCTAGCCAATTCACAAAGTTACACTGCCATTCTGATTTTTAAACCTTACAATTGGCACTAAAGAATACATTTAATT
ATTTCCCTATGTTAGCTGTTAAAGAAACAGCAGGACTTGTTTTACAAAGATGTCTTCATTCCCAAGGTTACTGGATA
GAAGCCAACCACAGTCTATACCATAGCAATGTTTTTCTTTAATCCAGTGTTACTGTGTTTATCTTGATAAACTA
GGAATTTTGTCACTGGAGTTTTGGACTGGATAAGTGCTACCTTAAAGGGTATACTAAGTGATACAGTACTTTGAA
TCTAGTTGTTAGATTCTCAAAATTCCTACACTCTTGACTAGTGCAATTTGGTTCTTGAAAATTAAATTTAACTT
GTTTACAAAGGTTTAGTTTTGTAATAAGGTGACTAATTTATCTATAGCTGCTATAGCAAGCTATTATAAACTTG
AATTTCTACAAATGGTGAAATTTAATGTTTTTTAACTAGTTTATTTGCCTTGCCATAACACATTTTTTTAACTAA
TAAGGCTTAGATGAACATGGTGTCAACCTGTGCTCTAAACAGTGGGAGTACCAAAGAAATTATAAACAAGATAA
ATGCTGTGGCTCCTTCCTAACTGGGGCTTTCTTGACATGTAGTTGCTTGCTAATAACCTTTTTGTATATCACAA
TTTGGGTGAAAACTTAAGTACCCTTTCAAACATTTTATATGAGGAAGTCACTTTACTACTCTAAGATATCCCTA
AGGAATTTTTTTTTTTAATTTAGTGTGACTAAGGCTTTATTTATGTTTGTGAACTGTTAAGGTCCTTTCTAAAT
TCCTCCATTGTGAGATAAGGACAGTGTCAAAGTGATAAAGCTTAACACTTGACCTAACTTCTATTTTCTTAAGG
AAGAAGAGTATTAAATATATACTGACTCCTAGAAATCTATTTATTAAGGACATGAAACTTGCTGTACATA
GGCTAGCTATTTCTAAATATTTTAAATTAGCTTTTCTAAAAAATAATCCAGCCTCATAAAGTAGATTAGAAAAC
TAGATTGCTAGTTTATTTTGTATCAGATATGTGAATCTCTTCTCCCTTTGAAGAACTATACATTTATTGTTAC
GGTATGAAGTCTTCTGTATAGTTTGTTTTTAACTAATATTTGTTTCAGTATTTTGTCTGAAAAGAAAACACCAC
TAATTGTGTACATATGTATTATATAAACTTAACCTTTTAATACTGTTTATTTTGTAGCCATTGTTTAAAAAATAA
AAGTTAAAAAAATTTAACTGCTTAAAAGTAAAAAATAAAAAAAAAAAAAA

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FIGURE 421

MSRRSSRLQAKQOPQPSQTESPQEAQIIQAKKRKTQDVKKRREEVTKKHQYEIRNCWPPVLSGGISPCIIETP
HKEIGTSDFSRTNYRFKNLFINPSPLPDLSWGCSKEVWLNMLKKESRYVHDKHFEVLHSDLEPQMRSILLDWLL
EVCEVYTLHRETFYLAQDFFDRFMLTQKDINKNMLQLIGITSLFIASKLEEIYAPKLQEFAYVTDGACSEEDILR
MELIILKALKWELCPVTIISWLNLFLOVDALKDAPKVLLPOYSQETFIQIAQLLDLCILAIIDSLEFQYRILTAAA
LCHFTSIEVVKKASGLEWDSISECVDMVFFVNVVKSTSPVKLKTFFKIPMEDRHNIQHTNYLAMLEEVNYINT
FRKGGQLSPVCNGGIMTPPKSTEKPPGKH

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FIGURE 422

AAACTTCCCGCACGCGTTACAGGAGCCAGGTGCGGTATAAGCGCCAGCGGCCTCGCCGCCCGTCAAGCTGTCCACA
TCCCTGGCCTCAGCCCGCCACATCACCTGACCTGCTTACGCCCAGATTTTCTTCAATCACATCTGAATAAATCA
CTTGAAGAAAGCTTATAGCTTCATTGCACCATGTGTGGCATTGTTGGCGCTGTTTGGCAGTGATGATTGCCTTTCT
GTTCAGTGTGTGAGTGCTATGAAGATTGCACACAGAGGTCCAGATGCATTCCGTTTTGAGAATGTCAATGGATAC
ACCAACTGCTGCTTTGGATTTCACCGGTTGGCGGTAGTTGACCCGCTGTTTGAATGCAGCCAATTTCAGTGAAG
AAATATCCGTATTTGTGGCTCTGTTACAATGGTGAAATCTACAACCATAAGAAGATGCAACAGCATTGTTGAATTT
GAATACCAGACCAAAGTGGATGGTGAGATAATCCTTCATCTTTATGACAAAGGAGGAATTGAGCAAACAATTTGT
ATGTTGGATGGTGTGTTTGCATTTGTTTTACTGGATACTGCCAATAAGAAAGTGTTCCTGGGTAGAGATACATAT
GGAGTCAGACCTTTGTTTAAAGCAATGACAGAAGATGGATTTTTGGCTGTATGTTTCAAGCTAAAGGTCTTGTT
ACATTGAAGCACTCCGCGACTCCCTTTTTTAAAAGTGGAGCCTTTTCTTCTGGACACTATGAAGTTTTGGATTTA
AAGCCAAATGGCAAAGTTGCATCCGTGGAATGGTTAAATATCATCACTGTGCGGATGAACCCCTGCACGCCCTC
TATGACAATGTGGAGAACTCTTCCAGTTTTGAGATAGAACTGTGAAGAACAACCTCAGGATCCTTTTTTAAT
AATGCTGTAAAGAAACGTTTGATGACAGACAGAAGGATTGGCTGCCTTTTATCAGGGGGCTTGGACTCCAGCTTG
GTTGCTGCCACTCTGTTGAAGCAGCTGAAAGAAGCCCAAGTACAGTATCCTCTCCAGACATTGCAATTGGCATG
GAAGACAGCCCCGATTTACTGGCTGCTAGAAAGGTGGCAGATCATATTGGAAGTGAACATTATGAAGTCCTTTTT
AACTCTGAGGAAGGCATTGAGGCTCTGGATGAAGTCATATTTTCTTGGAACTTATGACATTACAACAGTTCGT
GCTTCAGTAGGTATGTATTTAATTTCCAAGTATATTGGAAGAACACAGATAGCGTGGTGATCTTCTCTGGAGAA
GGATCAGATGAACTTACGCAGGGTTACATATATTTTACAAGGCTCCTTCTCCTGAAAAAGCCGAGGAGGAGAGT
GAGAGGCTTCTGAGGGAACCTATTTGTTTGATGTTCTCCGCGCAGATCGAACTACTGCTGCCCATGGTCTTGAA
CTGAGAGTCCCATTCTAGATCATCGATTTTCTTCTTATTACTTGTCTCTGCCACCAGAAATGAGAATTCCAAAG
AATGGGATAGAAAAACATCTCCTGAGAGAGACGTTTGAGGATTCCAATCTGATACCCAAAGAGATTCTCTGGCGA
CCAAAAGAAGCCTTCAGTGATGGAATAACTTCAGTTAAGAATTCTGTTTAAAGATTTTACAGGAATACGTTGAA
CATCAGGTTGATGATGCAATGATGGCAAATGCAGCCAGAAATTTCCCTTCAATACTCCTAAAACCAAAGAAGGA
TATTACTACCGTCAAGTCTTTGAACGCCATTACCCAGGCCGGGCTGACTGGCTGAGCCATTACTGGATGCCCAAG
TGGATCAATGCCACTGACCTTCTGCCCCGACGCTGACCCACTACAAGTCAGCTGTCAAAGCTTAGGTGGTCTTT
ATGCTGTAATGTGAAAGCAAATATTTCTTCGTGTTGGATGGGGACTGTGGGTAGATAGGGGAACAATGAGAGTCA
ACTCAGGCTAACTTGGGTGTGAAAAAATAAAAGTCCTAAATCT

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FIGURE 423

MCGIWALFGSDDCLSVQCLSAMKIAHRGPDAFRFENVNGYTNCCFGFHLAVVDPLFGMQPIRVKKYPYLWLCYN
GEIYNHKKMQQHFEFEYQTKVDGEIILHLYDKGGIEQTICMLDGVFAFVLLDTANKKVFLGRDTYGVRPLFKAMT
EDGFLAVCSEAKGLVTLKHSATPFLKVEPFLPGHYEVLDLKPNGKVASVEMVKYHHCRCDEPLHALYDNVEKLFPG
FEIETVKNNLRILFNNAVKKRLMTDRRIGCLLSGGLDSSLVAATLLKQLKEAQVQYPLQTFAIMEDSPDLLAAR
KVADHIGSEHYEVLFNSEEGIQALDEVIFSLETYDITTVRASVGMYLISKYIRKNTDSVVIFSGEGSDELTQGYI
YFHKAPSPEKAEESERLLRELYLFDVLRADRTTAAHGLELRVPFLDHRFSSYYLSLPPEMRIPKNGIEKHLLRE
TFEDSNLIPKEILWRPKEAFSDGITSVKNSWFKILQEYVEHQVDDAMMANAAQKFPFNTPKTKEGYYYRQVFERH
YPGRADWLSHYWMPKWINATDPSARTLTHYKSAVKA

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FIGURE 424

GGCACGAGGCAGCAAAATGGCGCCAGAACTAGTGGCGGGCTGAGGACGCCGTACCCCTCGGAAGGCAGCCCTGCG
GTCCCTTTGCCGCCCGTTCCCTCCCGGACATGGAGGACGTGGAGGCGCGCTTCGCCACCTCTTGACAGCCCATCC
GCGACCTACCAAGAACTGGGAGGTGGACGTGGCGGCCAGCTGGGCGAGTATCTGGAGGAGCTGGATCAGATCT
GCATTTCTTTTGACGAAGGCAAGACCACAATGAACTTCATTGAGGCAGCGTTGTTGATCCAGGGCTCTGCCTGCG
TCTACAGTAAGAAGGTGGAATACCTCTACTCACTCGTCTACCAGGCCCTTGATTTTCATCTCTGGAAGAGGCGGG
CCAAGCAGCTCTCTTCGGTGCAGGAGGACAGGGCCAATGGGGTTGCCAGCTCCGGGGTCCCCAGGAGGCAGAGA
ATGAGTTCCTGTCGCTGGATGACTTCCCTGACTCCCGGACTAACGTGGATCTCAAGAATGATCAGACGCCCAGTG
AGGTCCTCATCATCCCCCTCTGCCCATCGCCCTGGTGGCCCCCTGATGAAATGGAGAAGAACAACAATCCCCCTGT
ACAGCCGTCAGGGTGAGGTCTGGCCAGCCGGAAGGATTCAGGATGAACACGTGCGTTCCCCACCCAGAGGGG
CCTTCATGTTGGAGCCAGAGGGCATGTCCCCCATGGAACCAGCGGGCGTTTCCCCCATGCCAGGGACCCAGAAGG
ACACCGGGAGGACTGAGGAGCAGCCAATGGAAGTTTCCGTGTGCAGGAGCCCTGTCCCAGCACTCGGCTTCTCCC
AGGAGCCAGGCCCTCTCCAGAAGGCCCGATGCCCCCTGGGTGGGGGCGAGGACGAGGATGCAGAGGAGGCAGTAG
AGCTTCCTGAGGCCTCGGCCCCCAAGGCCGCTCTGGAGCCCAAGGAGTCCAGGAGCCCGCAGCAGGTGGGACCCA
CATGGAGGCCTGCAGAACCTGAGCTGTGAACTGGCAACCCTGGCTCTGGGGCCGAGTCACCTTGACACAAGGAGGA
CAGTGGTATGGCCTTGGCCCCAGACCACTGGTCTGGGGCAGAAGCCACCTGTCTTGACAGCCCGTCTGCAACCA
GCCCTTTTGAAGAGCAGCTTCTGTGTTCCCTCCCTCTCTGAGCAGAACTGATGCTCCTCAGAGTAGTGGGCTGGC
GTCCAAGGATTTGAGCCCTGTCGAGCTCACGGCAACCTGGGATGGCCGCCGTTGCCAAGGCGCTCTCTGCAGT
CGGGCTGGTAGGAGGGAGTGTCTGGAGGCCATTGCTGCCTCCCTCAACCCCGGGGTCAACTGTACCCAGCCTAG
AGCCAAGAAATCCTTCCTTTTTATTTCATTAAACAAAATCAACCTGAAAAAAAAAAAAAAAAAAAA

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FIGURE 425

MALVAPDEMEKINNPLYSRQGEVLASRKDFRMNTCVPHPRRAFMLEPEGMSPMEPAGVSPMPGTQNDTGRTEEQP
MEVSVC RSPVPALGFSQEPGPS PERPMPLGGGEDEDAAEEAVELPEASAPKAALEPKESRSPQOSAALPRRYMLRE
REGAPEPASCVKETPDWQSLDPLNSLESKPFFKKGRPYSVPPCVEEALGQKRKRKGAAKLQDFHQWYLVAYADHA
DSRRLRRKGPSFADMEVLYWTHVKEQLETLRKLQRREVAEQWLRPAEEDHLEDSPGRPGGSR

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FIGURE 426

TTGGAACCAGAGAGAAGCCGGGATGGAAACTCCAAACACCACAGAGGACTATGACACGACCACAGAGTTTGACTA
TGGGGATGCAACTCCGTGCCAGAAGGTGAACGAGAGGGCCTTTGGGGCCCAACTGCTGCCCCCTCTGTACTCCTT
GGTATTTGTCATTGGCCTGGTTGGAAACATCCTGGTGGTCCTGGTCCTTGTGCAATACAAGAGGCTAAAAACAT
GACCAGCATCTACCTCCTGAACCTGGCCATTTCTGACCTGCTCTTCCTGTTACGCTTCCCTTCTGGATCGACTA
CAAGTTGAAGGATGACTGGGTTTTTGGTGATGCCATGTGTAAGATCCTCTCTGGGTTTTATTACACAGGCTTGTA
CAGCGAGATCTTTTTTCATCATCCTGCTGACGATTGACAGGTACCTGGCCATCGTCCACGCCGTGTTTGCCTTGCG
GGCACGGACCGTCACTTTTGGTGTCTATCACCAGCATCATCTTTGGGCCCTGGCCATCTTGCTTCCATGCCAGG
CTTATACTTTTCCAAGACCCAATGGGAATTCACCTACCCACACCTGCAGCCTTCACTTTTCTCACGAAAGCCTACG
AGAGTGGAAGCTGTTTCAGGCTCTGAACTGAACCTCTTTGGGCTGGTATTGCCTTTGTTGGTTCATGATCATCTG
CTACACAGGGATTATAAAGATTCTGCTAAGACGACCAAATGAGAAGAAATCCAAAGCTGTCCGTTTGATTTTGT
CATCATGATCATCTTTTTTCTCTTTTGGACCCCTACAATTTGACTATACTTATTTCTGTTTTCCAAGACTTCCT
GTTCACCCATGAGTGTGAGCAGAGCAGACATTTGGACCTGGCTGTGCAAGTGACGGAGGTGATCGCCTACACGCA
CTGCTGTGTCAACCCAGTGATCTACGCCTTCGTTGGTGAGAGGTTCCGGAAGTACCTGCGGCAGTTGTTCCACAG
GCGTGTGGCTGTGCACCTGGTTAAATGGCTCCCTTCTCTCCGTGGACAGGCTGGACAGGGTCAGCTCCACATC
TCCCTCCACAGGGGAGCATGAACTCTCTGCTGGGTTCTGAGACTCAGACCATAGGAGGCCAACCCTAAATAAGCAGG
CGTGACCTGCCAGGCACACTGAGCCAGCAGCCTGGCTCTCCAGCCAGGTTCTGACTCTTGGCACAGCATGGAGT
CACAGCCACTTGGGATAGAGAGGGAATGTAATGGTGGCCTGGGGCTTCTGAGGCTTCTGGGGCTTCAGTCTTTTC
CATGAACTTCTCCCCTGGTAGAAAGAAGATGAATGAGCAAAACCAAATATTCCAGAGACTGGGACTAATGTACCA
GAGAAGGGCTTGGACTCAAGCAAGATTTTCTGATTTGTGACCATTAGCATTTGTCAACAAAGTCACCCACTTCCCA
CTATTGCTTGCACAAACCAATTAAACCCAGTAGTGGTGACTGTGGGCTCCATTCAAAGTGAGCTCCTAAGCCATG
GGAGACACTGATGTATGAGGAATTTCTGTTCTTCCATCACCTCCCCCCCCCGCCACCCTCCCCTGCCAAAGAA
CTTGGAATAGTGATTTCCACAGTGACTCCACTCTGAGTCCCAGAGCCAATCAGTAGCCAGCATCTGCCTCCCCCT
TCACTCCCACCGCAGATTTGGGCTCTTGGAATCCTGGGGAACATAGAACTCATGACGGAAGAGTTGAGACCTAAC
GAGAAATAGAAATGGGGAAGTACTGCTGGCAGTGGAATAAGAAAGCCCTTAGGAAGAATTTTTATATCCACTAA
AATCAAACAATTCAGGGAGTGGGCTAAGCACGGGCCATATGAATAACATGGTGTGCTTCTTAAATAGCCATAAA
GGGGAGGGACTCATCATTTCCATTTACCTTCTTTTCTGACTATTTTTCAGAATCTCTCTTCTTTTCAAGTTGGG
TGATATGTTGGTAGATTCTAATGGCTTTATTGCAGCGGTTAATAACAGGCAAAAGGAAGCAGGGTTGGTTTCCCT
TCTTTTGTCTTCTCATCTAAGCCTTCTGGTTTTATGGGTGAGAGTCCGACTGCCATCTTGACTTGTGAGCAAA
AAAAATAATAATAATAATAAAGGCCTGCTGTGTAAGCTGACAGTATTGTAGCTGATAGGGGGTTGGGAGGA
AGTGTCTACTAGGAGGGTGGGTGAGATCTGTGTTGATGT

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FIGURE 427

METPNTTEDYDTTTEFDYGDATPCQKVNERAFGAQLLPPLYSLVFVIGLVGNILVVLVLVQYKRLKNMTSIYLLN
LAISDLLFLETLFPWIDYKLKDDWVFGDAMCKILSGFYTGLYSEIFFIILLTIDRYLAIVHAVFALRARTVTFG
VITSIIIWALAILASMPGLYFSKTQWEFTHHTCSLHFPHESLREWKLFQALKLNLFGLVLPLLVMIICYTGIKI
LLRRPNEKKSKAVRLIFVIMIIFFLFWTPYNLTILISVFQDFLETHECEQSRHLDLAVQVTEVIAYTHCCVNPVI
YAFVGERFRKYLRQLFHRRVAVHLVKWLPFLSVDRLDRVSSTSPSTGEHELSAGF

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FIGURE 428

GGCACGAGCCCAGAAACAAAGACTTCACGGACAAAGTCCCTTGGAACCAGAGAGAAGCCGGGATGGAAACTCCAA
ACACCACAGAGGACTATGACACGACCACAGAGTTTGACTATGGGGATGCAACTCCGTGCCAGAAGGTGAACGAGA
GGGCCTTTGGGGCCCAACTGCTGCCCCCTCTGTACTCCTTGGTATTTGTCATTGGCCTGGTTGGAAACATCCTGG
TGGTCCTGGTCCTTGTGCAATACAAGAGGCTAAAAACATGACCAGCATCTACCTCCTGAACCTGGCCATTTCTG
ACCTGCTCTTCTGTTCACGCTTCCCTTCTGGATCGACTACAAGTTGAAGGATGACTGGGTTTTTGGTGATGCCA
TGTGTAAGATCCTCTCTGGGTTTTATTACACAGGCTTGTAACAGCGAGATCTTTTTTCATCATCCTGCTGACGATTG
ACAGGTACCTGGCCATCGTCCACGCCGTGTTTGCTTGCGGGCACGGACCGTCACTTTTGGTGTCATCACCAGCA
TCATCATTGGGCCCTGGCCATCTTGGCTTCCATGCCAGGCTTATACTTTTCCAAGACCCAATGGGAATTCACCTC
ACCACACCTGCAGCCTTCACTTTCTCAGAAAGCCTACGAGAGTGGAAGCTGTTTCAGGCTCTGAAACTGAACC
TCTTTGGGCTGGTATTGCCTTTGTTGGTCATGATCATCTGCTACACAGGGATTATAAAGATTCTGCTAAGACGAC
CAAATGAGAAGAAATCCAAAGCTGTCCGTTTGATTTTTGTCATCATGATCATCTTTTTTCTCTTTTGGACCCCT
AC/ATTTGACTATACTTATTTCTGTTTTCCAAGACTTCCTGTTACCCATGAGTGTGAGCAGAGCAGACATTTGG
ACCTGGCTGTGCAAGTGACGGAGGTGATCGCCTACACGCACTGCTGTGTCAACCCAGTGATCTACGCCCTTCGTTG
GTGAGAGGTTCCGGAAGTACCTGCGGCAGTTGTTCCACAGGCGTGTGGCTGTGCACCTGGTTAAATGGCTCCCT
TCCTCTCCGTGGACAGGCTGGAGAGGGTCAGCTCCACATCTCCCTCCACAGGGGAGCATGAACTCTCTGCTGGGT
TCTGACTCAGACCATAGGAGGCCAACCCAAAATAAGCAGGCGTGACCTGCCAGGCACACTGAGCCAGCAGCCTGG
CTCTCCCAGCCAGGTTCTGACTCTTGGCACAGCATGGAGTCACAGCCACTTGGGATAGAGAGGGAATGTAATGGT
GGCCTGGGGCTTCTGAGGCTTCTGGGGCTTCAGTCTTTTCCATGAACTTCTCCCCTGGTAGAAAGAAGATGAATG
AGCAAAACCAAATATTCCAGAGACTGGGACTAAGTGTACCAGAGAAGGGCTTGGACTCAAGCAAGATTTAGATT
TGTGACCATTAGCATTGTGCAACAAAGTCACCCACTTCCCACTATTGCTTGCACAAACCAATTAAACCCAGTAGT
GGTGACTGTGGGCTCCATTCAAAGTGAGCTCCTAAGCCATGGGAGACACTGATGTATGAGGAATTTCTGTTCTTC
CATCACCTCCCCCCCCCGCCACCCTCCCACTGCCAAGAACTTGGAATAGTGATTTCCACAGTGACTCCACTCT
GAGTCCCAGAGCCAATCAGTAGCCAGCATCTGCCTCCCCTTCACTCCCACCGCAGGATTTGGGCTCTTGGAAATCC
TGGGGAACATAGAACTCATGACGGAAGAGTTGAGACCTAACGAGAAATAGAAATGGGGGAACACTGCTGGCAGT
GGAATAAGAAAGCCCTTAGGAAGAATTTTATATCCACTAAAATCAAACAATTCAGGGAGTGGGCTAAGCACGG
GCCATATGAATAACATGGTGTGCTTCTTAAAATAGCCATAAAGGGGAGGGACTCATCATTTCCATTTACCCTTCT
TTTCTGACTATTTTTTCAGAATCTCTCTTCTTTTCAAGTTGGGTGATATGTTGGTAGATTCTAATGGCTTTATTGC
AGCGATTAATAACAGGCAAAAGGAAGCAGGGTTGGTTTCCCTTCTTTTTGTTCTTCATCTAAGCCTTCTGGTTTT
ATGGGTCAGAGTTCGCACTGCCATCTTGGACTTGTGAGCAAAAAAAAAAAAAAAAAA

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FIGURE 429

METPNTTEDYDTTTEFDYGDATPCQKVNERAFGAQLLPPLYSLVFVIGLVGNILVVLVLVQYKRLKNMTSIYLLN
LAISDLLFLETLFPWIDYKLKDDWVFGDAMCKILSGFYTGlySEIFFIILLTIDRYLAIVHAVFALRARTVTFG
VITSIIIWALAILASMPGLYFSKTQWEFTHHTCSLHFPHESLREWKLFOALKLNLFGLVLPLLVMIICYTGIIKI
LLRRPNEKKSKAVRLIFVIMIIFFLFWTPYNLTILISVFQDFLFTHCEQSRHLDLAVQVTEVIAYTHCCVNPVI
YAFVGERFRKYLRQLFHRRVAVHLVKWLPFLSVDRLERVSSTSPSTGEHELSAGF

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FIGURE 430

AAGGACACGGGCAGCAGACAGTGGTCAGTCCTTTCTTGGCTCTGCTGACACTCGAGCCACATTCCGTACCTGC
TCAGAATCATGCAGGTCTCCACTGCTGCCCTTGCTGTCCTCCTCTGCACCATGGCTCTCTGCAACCAGTTCTCTG
CATCACTTGCTGCTGACACGCCGACCGCCTGCTGCTTCAGCTACACCTCCCGGCAGATTCCACAGAATTTCATAG
CTGACTACTTTGAGACGAGCAGCCAGTGCTCCAAGCCCGGTGTCACTTCCTAACCAAGCGAAGCCGGCAGGTCT
GTGCTGACCCCAAGTGAGGAGTGGGTCCAGAAATATGTCAGCGACCTAGAGCTGAGTGCCTGAGGGGTCCAGAAGC
TTCGAGGCCCAGCGACCTCGGTGGGCCAGTGGGGAGGAGCAGGAGCCTGAGCCTTGGGAAACATGCGTGTGACCT
CCACAGCTACCTCTTCTATGGACTGGTTGTTGCCAAACAGCCACACTGTGGGACTCTTCTTAACCTAAATTTTAA
TTTATTTATACTATTTAGTTTTTGTAAATTTATTTTCGATTTACAGTGIGTTTGTGATTGTTTGCTCTGAGAGTT
CCCCTGTCCCCTCCCCCTCCCTCACACCGCGTCTGGTGACAACCGAGTGGCTGTCATCAGCCTGTGTAGGCAGT
CATGGCACCAAAGCCACCAGACTGACAAATGTGTATCGGATGCTTTTGTTTCAGGGCTGTGATCGGCCTGGGGAAA
TAATAAAGCACGCTCTTTTAAAAGGT

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FIGURE 431

MQVSTAALAVLLCTMALCNQFSASLAADTPTACCFSYTSRQIPQNFADYFETSSQCSKPGVIFLTKRSRQVCAD
PSEEWVQKYVSDLELSA

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FIGURE 432

GCTACACTAGAGCAGAGTACGAGTCTGAGGCGGAGGGAGTAATGGCAGGACAAGCGTTTAGAAAGTTTCTTCCAC
TCTTTGACCGAGTATTGGTTGAAAGGAGTGCTGCTGAAACTGTAACCAAAGGAGGCATTATGCTTCCAGAAAAAT
CTCAAGGAAAAAGTATTGCAAGCAACAGTAGTCGCTGTTGGATCGGGTTCTAAAGGAAAGGGTGGAGAGATTCAAC
CAGTTAGCGTGAAAGTTGGAGATAAAAGTTCTTCTCCAGAATATGGAGGCACCAAAGTAGTTCTAGATGACAAGG
ATTATTTCTTATTAGAGATGGTGACATTCTTGGAAGTACGTAGACTGAAATAAGTCACTATTGAAATGGCATC
AACATGATGCTGCCCATTCCACTGAAGTTCTGAAATCTTTCGTCATGTAAATAATTTCCATATTTCTCTTTTATA
ATAAACTAATGATAACTAATGACATCCAGTGTCTCCAAAATTGTTTCCTTGACTGATATAAACACTTCCAAATA
AAAATATGTAAAT

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FIGURE 433

MAGQAFRKFLPLFDRVLVERSAAETVTKGGIMLPEKSQGKVLQATVVAVGSGSKGKGGEIQPVSVKVGDKVLLPE
YGGTKVVLDDKDYFLFRDGDILGKYVD

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FIGURE 434

CTCCGCTGCTGTCGCCAGGAGTCACTTCACGAGAAGCCAGGTCAACAACCGTCGGCCCTTGCTCTGGAAAAGTAAAA
GTGGATCCTGCCACGTTTCGGAGCTCCCTGGCGCCTCGCCCGGCTGGAGCTAGAGAACTCGTCCTGTGGCGGCCCC
CGGCGTGGGGCGGGACAGCGGCCCTGGAGGGGGCAGTCCCGGGAGAACCTGCGGCGGCCGGAGCGGTAAAAAT
AAGTGAATAAAGAAGCAGACCTGGGAATCACCTAACATGTCGAGGAGGAGATTGATTGCCGAAGTATTTAGGC
CTACTAACTACAACCTCCTCAAATTTCCAATAAAAAATGGAAAACTTTAATAATTTCTATATACTTACATCTAAAGAG
CTAGGGAGAGGAAAAATTTGCTGTGGTTAGACAATGTATATCAAAATCTACTGGCCAAGAATATGCTGCAAAATTT
CTAAAAAAGAGAAGAAGAGGACAGGATTGTGCGGCAGAAATTTTACACGAGATTGCTGTGCTTGAATTGGCAAAG
TCTTGTCCTCCGTGTTATTAATCTTCATGAGGTCTATGAAAATACAAGTGAAATCATTGATATTGGAATATGCT
GCAGGTGGAGAAAATTTTCAGCCTGTGTTTACCTGAGTTGGCTGAAATGGTTTCTGAAAATGATGTTATCAGACTC
ATTAAACAAATACTTGAAGGAGTTTATTATCTACATCAGAATAACATTGTACACCTTGATTTAAAGCCACAGAAT
ATATTACTGAGCAGCATATACCCTCTCGGGGACATTAATAATAGTAGATTTTGGAAATGTCTCGAAAAATAGGGCAT
GCGTGTGAACCTTCGGGAAATCATGGGAACACCAGAATATTTAGCTCCAGAAATCCTGAACTATGATCCCATTACC
ACAGCAACAGATATGTGGAATATTGGTATAATAGCATATATGTTGTTAACTCACACATCACCATTTGTGGGAGAA
GATAATCAAGAAACATACCTCAATATTTCTCAAGTTAATGTAGATTATTCGGAAGAACTTTTTATCAGTTTCA
CAGCTGGCCACAGACTTTATTCAGAGCCTTTTAGTAAAAAATCCAGAGAAAAGACCAACAGCAGAGATATGCCTT
TCTCATTCTTGGCTACAGCAGTGGGACTTTGAAAACCTGTTTTCACCCTGAAGAACTTCCAGTTCTCTCAAAT
CAGGATCATTCTGTAAGGTCTCTGAAGACAAGACTTCTAAATCCTCCTGTAATGGAACCTGTGGTGATAGAGAA
GACAAAGAGAATATCCCAGAGGATAGCAGCATGGTTTCCAAAAGATTTGTTTTGATGACTCATTACCCAATCCC
CATGAACCTGTTTCAGATTTGCTCTGTAGCACTTTTTCTTTGACTCATTGTTGGACTGAATTTGAAATTTTATAT
CCACTCCAGTGAGATTATGATTTGTAGCTTCATATATGACATGTTTATATTGTAATGCACTTTCCATGGAATA
ATTTAGGGAAAGTGTTTTAAATGTTAAATTACTAGTTGCTAGCATGTTATGATTTTCATATCCTGAGATAGCTCTGCA
GATAAGAAAATATTTAAATATATGACAAAAAGTAAAATTGTACATGTGAAAG

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FIGURE 435

MSRRRFDCRSISGLLTTPQIPIKMENFNNFYILTSKELGRGKFAVVRQCISKSTGQEYAAKFLKKRRRGQDCRA
EILHEIAVLELAKSCPRVINLHEVYENTSEIILILEYAAGGEIFSLCLPELAEMVSENDVIRLIKQILEGVYYLH
QNNIVHLDLKPQNILLSSYPLGDIKIVDFGMSRKIGHACELREIMGTPEYLAPEILNYDPITTATDMWNIGIIA
YMLLTHTSPFVGEDNQETYLNISQVNVVDYSEETFSSVSQLATDFIQSLLVKNPEKRPTAEICLSHSHWLQQWDFEN
LFHPEETSSSSQTQDHSVRSSDKTSKSSCNGTCGDREDKENIPEDSSMVSKRFRFDDSLPNPHELVSDLLC

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FIGURE 436

TAACTGAGCGAGGAGCAATTGATTAATAGCTCGGCGAGGGGACTCACTGACTGTTATAATAACACTACACCAGCA
ACTCCTGGCTTCCCAGCAGCCGGAACACAGACAGGAGAGAGTCAGTGGCAAATAGACATTTTTCTTATTTCTTAA
AAAACAGCAACTTGTTTGCTACTTTTATTTCTGTTGATTTTTTTTTTCTTGGTGTGTGTGGTGGTTGTTTTAAGT
GTGGAGGGGAAAAGGAGATACCATCCCAGGCTCAGTCCAACCCCTCTCCAAAACGGCTTTTCTGACACTCCAGGT
AGCGAGGGAGTTGGGTCTCCAGGTTGTGCGAGGAGCAAATGATGACCGCCAAGGCCGTAGACAAAATCCCAGTAA
CTCTCAGTGGTTTTGTGCACCAGCTGTCTGACAACATCTACCCGGTGGAGGACCTCGCCGCCACGTCGGTGACCA
TCTTTCCCAATGCCGAACCTGGGAGGCCCTTTGACCAGATGAACGGAGTGGCCGGAGATGGCATGATCAACATTG
ACATGACTGGAGAGAAGAGGTCGTTGGATCTCCCATATCCCAGCAGCTTTGCTCCCGTCTCTGCACCTAGAAACC
AGACCTTCACTTACATGGGCAAGTTCTCCATTGACCCTCAGTACCCTGGTGCCAGCTGCTACCCAGAAGGCATAA
TCAATATTGTGAGTGCAGGCATCTTGCAAGGGGTCACTTCCCCAGCTTCAACCACAGCCTCATCCAGCGTCACCT
CTGCCTCCCCCAACCCACTGGCCACAGGACCCCTGGGTGTGTGCACCATGTCCCAGACCCAGCCTGACCTGGACC
ACCTGTACTCTCCGCCACCGCTCCTCCTCCTTATTCTGGCTGTGCAGGAGACCTCTACCAGGACCCCTTCTGCGT
TCTGTGACGAGCCACCACCTCCACCTCTTCTCTCTGGCCTACCCACCACCTCCTTCTATCCATCCCCCAAGC
CAGCCACGGACCCAGGTCTCTTCCCAATGATCCCAGACTATCCTGGATTCTTTCCATCTCAGTGCCAGAGAGACC
TACATGGTACAGCTGGCCACAGCCGTAAGCCCTTTCCCTGCCCACTGGACACCCCTGCGGGTGCCCCCTCCACTCA
CTCCACTCTCTACAATCCGTAACCTTTACCCTGGGGGGCCCCAGTGCTGGGGTGACCGGACCAGGGGCCAGTGGAG
GCAGCGAGGGGACCCCGCTGCCTGGTAGCAGCTCAGCAGCAGCAGCAGCCGCCGCCGCCGCCCTATAACCCAC
ACCACCTGCCACTGCGGCCATTCTGAGGCCTCGCAAGTACCCCAACAGACCCAGCAAGACGCCGGTGCACGAGA
GGCCCTACCCGTGCCAGCAGAAGGCTGCGACCGGCGGTTCTCCCGCTCTGACGAGCTGACACGGCACATCCGAA
TCCACACTGGGCATAAGCCCTTCCAGTGTGCGATCTGCATGCGCAACTTCAGCCGCAGTGACCACCTCACCACCC
ATATCCGCACCCACACCGGTGAGAAGCCCTTCGCCTGTGACTACTGTGGCCGAAAGTTTGCCCGGAGTGATGAGA
GGAAGCGCCACACCAAGATCCACCTGAGACAGAAAGAGCGGAAAAGCAGTGCCCCCTCTGCATCGGTGCCAGCCC
CCTCTACAGCCTCCTGCTCTGGGGGCGTGACGCTGGGGGTACCCTGTGCAGCAGTAACAGCAGCAGTCTTGCGG
GAGGGCCGCTCGCCCCTTGCTCCTCTCGGACCCGGACACCTTGAGATGAGACTCAGGCTGATACACCAGCTCCCA
AAGGTCCCGGAGGCCCTTTGTCCACTGGAGCTGCACAACAACTACCACCTTTTCTGTCCCTCTCTCCCTTT
GTTGGGCAAAGGGCTTTGGTGGAGCTAGCACTGCCCCCTTTCCACCTAGAAGCAGGTTCTTCTTAAACTTAGCC
CATTCTAGTCTCTCTTAGGTGAGTTGACTATCAACCCAAGGCAAAGGGGAGGCTCAGAAGGAGGTGGTGTGGGGA
TCCCTGGCCAAGAGGGCTGAGGTCTGACCCTGCTTTAAAGGGTTGTTGACTAGGTTTTGCTACCCCACTTCCC
CTATTTTGACCCATCACAGGTTTTTGACCCTGGATGTCAGAGTTGATCTAAGACGTTTTCTACAATAGGTTGGG
AGATGCTGATCCCTTCAAGTGGGGACAGCAAAAAGACAAGCAAACTGATGTGCACTTTATGGCTTGGGACTGAT
TTGGGGGACATTGTACAGTGAGTGAAGTATAGCCTTTATGCCCACTCTGTGGCCCTAAAATGGTGAATCAGAGC
ATATCTAGTTGTCTCAACCTTGAAGCAATATGTATTATATACTCAGAGAACAGAAGTGAATGTGATGGGAGGA
ACGTAGCAATATCTGCTCCTTTTCGAGTTGTTTGAGAAATGTAGGCTATTTTTTTCAGTGTATATCCACTCAGATT
TTGTGTATTTTGTAGTACCCACACTGTTCTCTAAATCTGAATCTTTGGGAAAAATGTAAAGCATTATGATC
TCAGAGGTTAACTTATTTAAGGGGGATGTACATATTCTCTGAACTAGGATGCATGCAATTGTGTTGGAAGTGC
CTTGGTGCCTTGTGTGATGTAGACAAATGTTACAAGGCTGCATGTAAATGGGTTGCCTTATTATGGAGAAAAAA
ATCACTCCCTGAGTTTAGTATGGCTGTATATTTATGCCATTATAATTTGGAATTTTTTTTAGAAAGTATATTTT
TGTATGCTTTGTTTTGTGACTTAAAGTGTTACCTTTGTAGTCAAATTCAGATAAGAATGTACATAATGTTACC
GGAGCTGATTTGTTTGGTCATTAGCTCTTAATAGTTGTGAAAAATAAATCTATTCTAACGCAAAACCACTAACT
GAAGTTCAGATATAATGGATGGTTTGTGACTATAGTGTAAATAAATACTTTTCAACAAT

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FIGURE 437

MMTAKAVDKIPVTLSGFVHQLSDNIYPVEDLAATSVTIFPNAELGGPFQDMNGVAGDGMINIDMTGEKRSLDLPY
PSSFAPVSAPRNQTFTYMGKFSIDPQYPGASCYPEGIINIVSAGILQGVTSASTTASSSVTSASPNPLATGPLG
VCTMSQTQPDLDHLYSPPPPPPPYSGCAGDLYQDPSAFLSAATTSTSSSLAYPPPPSYSPKPADDPGLFPMIPD
YPGFFPSQCQRDLHGTTAGPDRKPFPCPLDTLRVPPPLTPLSTIRNFTLGGPSAGVTGPGASGGSEGPRLPGSSSA
AAAAAAAAAYNPHHLPLRPILRPRKYPNRPSKTPVHERPYPCPAEGCDRRFSRSDELTRHIRIHTGHKPFQCRIC
MRNFSRSDHLTTTHIRHTGEKPFACDYCGRKFARSDEKRRHTKIHRLRQKERKSSAPSASVPAPSTASCSGGVQPG
GTLCSSNSSSLGGGPLAPCSSRTRTP

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FIGURE 438A

ATGAACCTCTGAAACTGCCGGCATCTGAGGTTTCTCCAAGGCCCTCTGAAGTGCAGCCCATAATGAAGGTCTT
GGCGGCAGGAGTTGTGCCCCCTGCTGTTGGTTCTGCACTGGAAACATGGGGCGGGGAGCCCCCTCCCCATCACCCC
TGTC AACGCCACCTGTGCCATACGCCACCCATGTCAACAACCTCATGAACCAGATCAGGAGCCAACTGGCACA
GCTCAATGGCAGTGCCAATGCCCTCTTTATTCTCTATTACACAGCCCAGGGGGAGCCGTTCCCCAACAACCTGGA
CAAGCTATGTGGCCCCAACGTGACGGACTTCCCGCCCTTCCACGCCAACGGCACGGAGAAGGCCAAGCTGGTGGA
GCTGTACCGCATAGTCGTGTACCTTGGCACCTCCCTGGGCAACATCACCCGGGACCAGAAGATCCTCAACCCCAG
TGCCCTCAGCCTCCACAGCAAGCTCAACGCCACCGCCGACATCCTGCGAGGCCTCCTTAGCAACGTGCTGTGCCG
CCTGTGCAGCAAGTACCACGTGGGCCATGTGGACGTGACCTACGGCCCTGACACCTCGGGTAAGGATGTCTTCCA
GAAGAAGAAGCTGGGCTGTCAACTCCTGGGGGAAGTATAAGCAGATCATCGCCGTGTTGGCCAGGCCTTCTAGCA
GGAGGTCTTGAAGTGTGCTGTGAACCGAGGGATCTCAGGAGTTGGGTCCAGATGTGGGGGCCTGTCCAAGGGTGG
CTGGGGCCCAGGGCATCGCTAAACCCAAATGGGGGCTGCTGGCAGACCCGAGGGTGCCTGGCCAGTCCACTCCA
CTCTGGGCTGGGCTGTGATGAAGCTGAGCAGAGTGGAACCTTCCATAGGGAGGGAGCTAGAAGAAGGTGCCCTT
CCTCTGGGAGATTGTGGACTGGGGAGCGTGGGCTGGACTTCTGCCTCTACTTGTCCCTTTGGCCCCCTTGCTCACT
TTGTGCAGTGAACAACTACACAAGTCATCTACAAGAGCCCTGACCACAGGGTGAGACAGCAGGGCCCAGGGGAG
TGGACCAGCCCCCAGCAAATTATCACCATCTGTGCCCTTTGCTGCCCCCTTAGGTTGGGACTTAGGTGGGCCAGAGG
GGCTAGGATCCCAAAGGACTCCTTGTCCCTAGAAGTTTGATGAGTGGAAGATAGAGAGGGGCCTCTGGGATGGA
AGGCTGTCTCTTTTGAGGATGATCAGAGAAGTTGGGCATAGGAACAATCTGGCAGAAGTTTCAGAAGGAGGTC
ACTTGGCATT CAGGCTCTTGGGGAGGCAGAGAAGCCACCTTCAGGCCTGGGAAGGAAGACACTGGGAGGAGGAGA
GGCCTGGAAGCTTTGGTAGGTTCTTCGTTCTCTTCCCCGTGATCTTCCCTGCAGCCTGGGATGGCCAGGGTCTG
ATGGCTGGACCTGCAGCAGGGGTTTGTGGAGGTGGGTAGGGCAGGGGCAGGTTGCTAAGTCAGGTGCAGAGGTTT
TGAGGGACCCAGGCTCTTCTCTGGGTAAAGGTCTGTAAAGAGGGGCTGGGGTAGCTCAGAGTAGCAGCTCACAT
CTGAGGCCCTGGGAGGTCTTGTGAGGTACACAGAGGTACTTGAGGGGGACTGGAGGCCGTCTCTGGTCCCCAGG
GCAAGGGAAACAGCAGAACTTAGGGTCAGGGTCTCAGGGAACCTTGAGCTCCAAGCGTGCTGTGCGTCTGACCTGG
CATGATTTCTATTATTATGATATCTTATTTATATTAAGTTTATTGGTGCTTTCAGTGGCCAAGTTAATTTCCCTT
TCCCTGGTCCCTACTCAACAAAATATGATGATGGCTCCCGACACAAGCGCCAGGGCCAGGGCTTAGCAGGGCCTG
GTCTGGAAGTCGACAATGTTACAAGTGGAATAAGCTTACGGGTGAAGCTCAGAGAAGGGTCGGATCTGAGAGAAT
GGGGAGGCCTGAGTGGGAGTGGGGGGCCTTGCTCCACCCCATCCCTACTGTGACTTGCTTTAGCGTGT CAGGG
TCCAGGCTGCAGGGGCTGGGCCAATTTGTGGAGAGGCCGGGTGCCTTTCTGTCTTGCTTCCAGGGGGCTGGTTCA
CACTGTTCTTGGGCGCCCCAGCATTGTGTTGTGAGGCGCACTGTTCTTGCCAGATATTGTGCCCCCTGGAGCAGT
GGGCAAGACAGTCCTTGTGGCCACCCCTGTCTTGTCTGTGTCCTCATGCTGCCCTGAAATAGCGCCCTGGA
ACAACCCCTGCCCCTGACCCAGCATGCTCCGACACAGCAGGGAAGCTCCTCCTGTGGCCCGACACCCATAGACG
GTGCGGGGGGCTGGCTGGGCCAGACCCAGGAAGGTGGGGTAGACTGGGGGGATCAGCTGCCATTGCTCCCAA
GAGGAGGAGAGGGAGGTGCAGACGCTGGGACTCAGACCAGGAAGCTGTGGGCCCTCTGCTCCACCCCATCC
CACTCCCACCCATGTCTGGGCTCCAGGCAGGGAACCCGATCTCTTCTTGTGCTGGGGCCAGGCGAGTGGAGA
AACGCCCTCCAGTCTGAGAGCAGGGGAGGGAAGGAGGCAGCAGAGTTGGGGCAGCTGCTCAGAGCAGTGTCTGG
CTTCTTCTCAAACCCCTGAGCGGGCTGCCGGCCTCCAAGTTCTCCGACAAGATGATGGTACTAATTATGGTACTT
TTCACTCACTTTGCACCTTTCCCTGTGCTCTCTAAGCACTTTACCTGGATGGCGCGTGGGCAGTGTGCAGGCAG
GTCTTGAGGCCTGGGGTTGGGGTGGAGGGTGGCGCCCGAGTTGTCCATCTGTCCATCCCAACAGCAAGACGAGG
ATGTGGCTGTTGAGATGTGGGCCACACTCACCTTGTCCAGGATGCAGGGACTGCCTTCTCCTTCCCTGCTTCATC
CGGCTTAGCTTGGGGCTGGCTGCATTCCCCAGGATGGGCTTCGAGAAAGACAAACTTGTCTGGAAACCAGAGTT
GCTGATTCCACCCGGGGGGCCCGGCTGACTCGCCCATCACCTCATCTCCCTGTGGACTTGGGAGCTCTGTGCCAG
GCCACCTTGCGGCCCTGGCTCTGAGTCGCTCTCCACCCAGCCTGGACTTGGCCCCATGGGACCCATCCTCAGT
GCTCCCTCCAGATCCCGTCCGGCAGCTTGGCGTCCACCCTGCACAGCATCACTGAATCACAGAGCCTTTGCGTGA
AACAGCTCTGCCAGGCCGGGAGCTGGGTTTCTCTTCCCTTTTTATCTGCTGGTGTGGACCACACCTGGGCCTGGC
CGGAGGAAGAGAGAGTTTACCAAGAGAGATGTCTCCGGGCCCTTATTTATTATTTAAACATTTTTTTTAAAGCA
CTGCTAGTTTACTTGTCTCTCCTCCCCATCGTCCCATCGTCTCTTGTCCCTGACTTGGGGCACTTCCACCCT
GACCCAGCCAGTCCAGCTCTGCCCTTGCCGGCTCTCCAGAGTAGACATAGTGTGTGGGGTTGGAGCTCTGGCACCC
GGGGAGGTAGCATTTCCCTGCAGATGGTACAGATGTTCTGCCTTAGAGTCATCTCTAGTTCCCCACCTCAATCC

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FIGURE 438B

CGGCATCCAGCCTTCAGTCCCGCCCACGTGCTAGCTCCGTGGGCCCCACCGTGCGGCCCTTAGAGGTTTCCCTCCTT
CCTTTCCACTGAAAAGCACATGGCCTTGGGTGACAAATTCCTCTTTGATGAATGTACCCTGTGGGGATGTTTCAT
ACTGACAGATTATTTTTATTTATTCAATGTCATATTTAAATATTTATTTTTTATACCAAATGAATCACTTTTTT
TTTAAGAAAAAAAAGAGAAATGAATAAAGAATCTACTCTTCG

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FIGURE 439

MKVLAAGVVPLLLVLHWKHGAGSPLPITPVNATCAIRHPCHNNLMNQIRSQLAQLNGSANALFIIYYTAQGEPPF
NNLDKLCGPNVTDFFPPFHANGTEKAKLVELYRIVVYLGTSLGNITRDQKILNPSALSLHSKLNATADILRGLLSN
VLCRLCSKYHVGHVDVTYGPDTSGKDVFQKKKLGCQLLGKYKQIIAVLAQAF

FIGURE 440A

[illegible]

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FIGURE 440B

AACTCCCTCCCCATTTAGATTATTTATTAACATATTTTAAAAATCAGATGAGTTCTATAAATAATTTAGAGAAG
TGAGAGTATTTATTTTTGGCATGTTTGGCCCACCACACAGACTCTGTGTGTGTATGTGTGTGTTTATATGTGTAT
GTGTGTGACAGGAAAATCTGTAGAGAAGAGGCACATCTATGGCTACTGTTCAAATACATAAAGATAAAATTTATTT
TCACACAGTCCACAAGGGGTATATCTTGTAGTTTTTCAGAAAAGCCTTTGGAAATCTGGATCAGGAAATAGATACC
ATGGTTTTGTGCAATTATGTAGTAAAAAAGGCAAAATCTTTTCACCTCTGGCTATTCTTGAGACCCAGGAAGTCAG
GAAAAGCCTTTTCAGCTCACCCATGGCTGCTGTGACTCCTACCAGGGCTTTCTTGGCTTTGGCGAAGGTCAGTGTA
CAGACATTCCATGGTACCAGAGTGCTCAGAAAGTCAAGATAGGATATGCCTCACCCCTCAGCTACTCCTTGTTTTA
AAGTTCAGCTCTTTGAGTAACTTCTTCAATTTCTTTCAGGACACTTGGGTTGAATTCAGTAAGTTTCCTCTGAAG
CACCTGAAGGGTGCCATCCTTACAGAGCTAAGTGGAGACGTTTCCAGATCAGCCCAAGTTTACTATAGAGACTG
GCCCAGGCACTGAATGTCTAGGACATGCTGTGGATGAAGATAAAGATGGTGGAAATAGGTTTTATCACATCTCTTA
TTTCTCTTTTCCCCTTACTCTCTACCATTTCTTTTATGTGGGGAAACATTTTAAGGTAATAAATAGGTTACTTAC
CATCATATGTTTCATATAGATGAACTAATTTTGGCTTAAGTCAGAACAACCTGGCCCCCAATTGAAGTCATATTT
GTGGGGGGAAATGGCATAACGAATATTATATTATATTGGATATTTATGTTACACAGGAATTTGCTTTACTGCTT
TGTAATAAAAGGGAAAACCTCCGGGTATATGT

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FIGURE 441

MGLPEPGPLRLLALLLLLLLLLLLLLLLRLQHLAAAAADPLLGGQGPKECEKDQFQCRNERCIPSVWRCDEDDDCLDH
SDEDDCPKKTCA DSDFTCDNGHCIHERWKCDGEEEC PDGSDESEATCTKQVCPAEKLSCGPTSHKCVPASWRC DG
EKDCEGGADEAGCATLCAPHEFQCGNRSCLA AVFVCDGDDDCGDGSDERGCADPACGPREFRCGGDGGGACIPER
WVCDRQFDCEDRSDEAAELCGRPGPGATSAPAA CATVSQFACRSGE CVHLGWRC DGDRDCKDKSDEAD C PLGTCR
GDEFQCGDGT CVLA IKHCNQEQDCPDGSDEAGCLQGLNECLHNNGGCSHICTDLKIGFECTCPAGFQLLDQKTCG
DIDECKDPDACSQICVNYKGYFKCECYPGYEMDLLTKNCKAAGGKSPSLIFTNRYEVRRIDLVKRNY SRLIPMLK
NVVALDVEVATNRIYWCDLSYRKIYSAYMDKASDPKEQEV LIDEQLHSPEGLAVDWVHKHIYWTDSGNKTISVAT
VDGGRRTLF SRNLSEPRAI AVDPLRGFMYWSDWGDQAKIEKSG LNGVDRQTLVSDNIEWP NGITLDLLSQRLYW
VDSKLHQLSSIDFSGGNRKTLISSTDFLSHPFGIAVFEDKVFWTDL ENEAIF SANRLNGLEISILAENLNNPHDI
VIFHELKQPRAPDACELSVQPNGGCEYLCLPAPQISSHSPKYTCACPD TMWLGPDMKRCYRAPQSTSTTTLASTM
TRTVPATTRAPGTTVHRSTYQNHSTETPSLTA AVPSSVSVPRAPSI SPSTLSPATSNHSQHYANEDSKMGSTVTA
AVIGIIVPIVVIALLCMSGYLIWRNWK RKNTKSMNFDNPVYRKTTEEEDEDELHIGRTAQIGHVYPAAISSFDRP
LWAEPCLG ETREPDPAPALKEFVLPGEPRSQLHQLPKNPLSELPVVKSKRVALSLEDDGLP

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FIGURE 442

TAGGATGGAAAGGCAGATGTAAAGTCCCTCATGGCGAAATATAACACGGGGGGCAACCCGACAGAGGATGTCTCA
GTCAATAGCCGACCCTTCAGAGTCACAGGGCCAAACTCATCTTCAGGAATACAAGCAAGAAAGAACTTATTCAAC
AACCAAGGAAATGCCAGCCCTCCTGCAGGACCCAGCAATGTACCTAAGTTTGGGTCCCCAAAGCCACCTGTGGCA
GTCAAACCTTCTTCTGAGGAAAAGCCTGACAAGGAACCCAAGCCCCGTTTCTAAAGCCCCTGAGAGCAGGCCAA
AGATTTCGGAACACCAGCCAGCTTGACCACCAGAGACCCGAGGCGAAAGTGGGATTTCTGAAACCTGTAGGCCCC
AAGCCCATCAACTTGCCCAAAGAAGATTCCAAACCTACATTTCCCTGGCCTCCTGGAAACAAGCCATCTCTTCAC
AGTGTAACCAAGACCATGACTTAAAGCCACTAGGCCCGAAATCTGGGCCTACTCCTCCAACCTCAGAAAATGAA
CAGAAGCAAGCGTTTCCCAAATTGACTGGGGTTAAAGGGAAATTTATGTGAGCATCACAAGATCTTGAACCCAAG
CCCCCTTTCCCAAACCCGCTTTGGCCAGAAGCCGCCCTAAGTACCGAGAACTCCCATGAAGACGAAAGCCCC
ATGAAGAATGTGTCTTCATCAAAAGGGTCCCCAGCTCCCCTGGGAGTCAGGTCCAAAAGCGGCCCTTTAAACCA
GCAAGGGAAGACTCAGAAAATAAAGACCATGCAGGGGAGATTTCAAGTTTGCCCTTTCTGGAGTGGTTTTGAAA
CCTGCTGCGAGCAGGGGAGGCCTAGGTCTCTCCAAAATGGTGAAGAAAAAAGGAAGATAGGAAGATAGATGCT
GCTAAGAACACCTTCAGAGCAAAAATAAATCAGGAAGAGTTGGCCTCAGGGACTCCTCCTGCCAGGTTCCCTAAG
GCCCCTTCTAAGCTGACAGTGGGGGGGCCATGGGGCCAAAGTCAGGAAAAGGAAAAGGGAGACAAGAATTCAGCC
ACCCCGAAACAGAAGCCATTGCCTCCCTTGTTTTACCTTGGGTCCACCTCCACCAAAACCCAACAGACCACCAAT
GTTGACCTGACGAAATTCCACAAAACCTCTTCTGGAAACAGTACTAGCAAAGGCCAGACGTCTTACTCAACAACCT
TCCCTGCCACCACCTCCACCATCCCATCCGGCCAGCCAACCACCTTGCCAGCATCTCACCCATCACAACCACCA
GTCCCAAGCCTACCTCCCAGAAAACATTAAACCTCCGTTTGACCTAAAAAGCCCTGTCAATGAAGACAATCAAGAT
GGTGTACGCACCTCTGATGGTGTCTGGAATCTAGATGAGGAACAAGACAGTGAAGGAGAAAACATATGAAGACATA
GAAGCATCCAAAGAAAGAGAGAAGAAAAGGGAAAAGGAAGAAAAGAGAGTTAGAGCTGGAGAAAAAGGAACAG
AAAGAGAAAGAAAAGAAAGAACAAGAAATAAAGAAGAAATTTAAACTAACAGGCCCTATTCAAGTCATCCATCTT
GCAAAAGCTTGTTGTGATGTCAAAGGAGGAAAGAATGAAGTGAAGCTTCAAGCAAGGAGAGCAAAATGAAATCATC
CGCATCACAGACAACCCAGAAGGAAAATGGTTGGGCAGAACAGCAAGGGGTTTATATGGCTATATTAACAACCT
GCTGTAGAGATTGACTATGATTCTTTGAAACTGAAAAAAGACTCTCTTGGTGCCCTTCAAGACCTATTGAAGAT
GACCAAGAAGTATATGATGATGTTGCAGAGCAGGATGATATTAGCAGCCACAGTCAGAGTGGAGTGGAGGGATA
TTCCCTCCACCACCAGATGATGACATTTATGATGGGATTGAAGAGGAAGATGCTGATGATGGTTCCCTGCTCCT
CCTAAACAATTGGACATGGGAGATGAAGTTTACGATGATGTGGATACCTCTGATTTCCCTGTTTCATCAGCAGAG
ATGAGTCAAGGAACATAATTTTGGAAAAGCTAAGACAGAAGAAAAGGACCTTAAGAAGCTAAAAAGCAGGAAAAA
GAAGAAAAAGACTTCAGGAAAAAATTTAAATATGATGGTGAATTTAGAGTCCTATATTTCAACTAAAGTTACAACCT
TCCATAACTTCTAAAAAGTGGGGAACCCAGAGATCTACAGGTAAAACCTGGTGAATCTCTAGAAGTTATACAAACC
ACAGATGACACAAAAGTTCTCTGCAGAAATGAAGAAGGGAAATATGGTTATGTCCTTCGGAGTTACCTAGCGGAC
AATGATGGAGAGATCTATGATGATATTGCTGATGGCTGCATCTATGACAATGACTAGCACTCAACTTTGGTCATT

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FIGURE 443

MAKYNTGGNPTEDVSVNSRPFRTGPNSSSGIQARKNLFNNQGNASPPAGPSNVPKFGSPKPPVAVKPSSEKPD
KEPKPPFLKPTGAGQRFGTASLTTRDPEAKVGFLKPVGPKPINLPKEDSKPTFPWPPGNKPSLHSVNDHDLKP
LGPKSGPTPPTSENEQQAFFPKLTGVKGKFMASQDLEPKPLFPKPAFGQKPPLSTENSHEDESPMKNVSSSKGS
PAPLGVRSGPLKPAREDSSENKDHAGEISSLPFPGVVLKPAASRGGLGLSKNGEEKKEDRKIDAANKTFQSKIN
QEELASGTPPARFPKAPSKLTVGGPWGQSQEKEKGDKNSATPKQKPLPPLFTLGPPPPKPNRPPNVDLTKEFKTS
SGNSTSKGQTSYSTTSLPPPPPSHPASQPPLPASHPSQPPVPSLPPRNIKPPFDLKSPVNEDNQDGVTHSDGAGN
LDEEQDSEGETYEDIEASKEREKKREKEKKRLELEKKEQKEKEKEQEIKKKFKLTGPIQVIHLAKACCDVKGG
KNELSFQGEQIEIIRITDNPEGKWLGRARGSYGYIKTTAVEIDYDSLKLKDSLGAAPSRPIEDDQEVYDDVAE
QDDISSHSQSGSGGIFPPPPDDDIYDGIEEDADDGFPAPPKQLDMGDEVYDDVDTSDFPVSSAEMSQGTNFGKA
KTEEKDLKLLKKQEKEEKDFRKKFKYDGEIRVLYSTKVTTSTSKKWGTRDLQVKPGESLEVIQTDDTKVLCRN
EEGKYGYVLRSYLADNDGEIYDDIADGCIYDND

FIGURE 444A

[illegible]

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FIGURE 445

GSAPGREKEVGGRGAQPAGPEGMFEDKPHAEGAAVVAAAGEALQALCQELNLDEGSAAEALDDFTAIRGNYSLEG
EVTHWLACSLYVACRKSIIPTVGKGIMEGNCVSLTRILRSAKLSLIQFFSKMKKWMDSNLPQEFREIERLERN
FEVSTVIFKKYEPIFLDIFQNPYEEPPKLPRSRKQRRIPCSVKDLFNFCWTLFVYTKGNFRMIGDDLVSNSYHLLL
CCLDLIFANAIMCPNRQDLLNIHHLKVYHLIFILLTLRLLKSHPGIIAVLCELHDGLLVEAKGIKEHYFKPYISK
LFDRKILKGECLLDLSSFTDNSKAVNKEYEEYVLTVVILMRGSFGSRRRRGNGTPRKFTRDTPLGKLTAAQANVEY
NLQQHFEEKRSFAPSTPLTGRRYLREKEAVITPVASATQSVSRQLSIVAGLKNAPSDQLINIFESCVRNPNVENIM
KILKGIGETFCQHYTQSTDEQPGSHIDFAVNRLKLAELIYYKILETVMVQETRRLHGMDMSVLEQDIFHRSLMA
CCLEIVLFAYSSPRTFPWIIIEVLNLQPFYFYKVIEVVIRSEEGLSRDMVKHLNSIEEQILESLSLAWSHDSALWEAL
QVSANKVPTCEEVIFPNNFETGNGGNVQGHLPMPMSPLMHPRVKEVRTDSGSLRRDMQPLSPISVHERYSSPTA
GSAKRRLFGEDPPKEMLMDKIITEGTLKLIAPSSSITAENVSIPLPGQTLLTMATAPVTGTTGHKVTIPLHGVAND
AGEITLIPLSMNTNQESKVKSPVSLTAHSLIGASPKQTNLTAKQEVHSTGINRPKRTGSLALFYRKVYHLASVRL
RDLCLKLDVSNELRRKIWTCTFEFTLVHCPDLMKDRHLDQLLLCAFYIMAKVTKEERTFQEIMKSYRNQFPQANSHV
YRSVLLKSIPREVVAYNKNINDDFEMIDCDLEDATKTPDCSSGPVKEERGDLIKFYNTIYVGRVKSFALKYDLAN
QDHMDAPPLSPFPHIKQPGSPRRISQQHSIYISPHKNGSGLTPRSALLYKFNGSPSKSLKDINNMIHQGEQRT
KKRVIAIDSDAESPAKRVCQENDDVLLKRLQDVVSERANH

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FIGURE 446

GGGGCCAGTCGTTGCGCGGAAAGCATTGTCTCCACCTCATCATAACAACAATTAATTTCTCTGGGGCCTGAG
GAGGGCAGAATTTCAACCTTCGGTGTGCTTGGGAGTGGCGATTGTGATTTACACGACAAAATGCCGAGGTGCTCG
GTGGAGTCATGGCAGTGCCCTTTGTGGAAGACTGGGACTTGGTGCAAACCCTGGGAGAAGGTGCCTATGGAGAAG
TTCAACTTGCTGTGAATAGAGTAAGTGAAGAAGCAGTCGCAGTGAAGATTGTAGATATGAAGCGTGCCGTAGACT
GTCCAGAAAATATTAAGAAAGAGATCTGTATCAATAAAATGCTAAATCATGAAAATGTAGTAAAATTCTATGGTC
ACAGGAGAGAAGGCAATATCCAATATTTATTTCTGGAGTACTGTAGTGGAGGAGAGCTTTTTGACAGAATAGAGC
CAGACATAGGCATGCCTGAACCAGATGCTCAGAGATTCTTCCATCAACTCATGGCAGGGGTGGTTTATCTGCATG
GTATTGGAATAACTCACAGGGATATTAAACCAGAAAATCTTCTGTTGGATGAAAGGGATAACCTCAAAATCTCAG
ACTTTGGCTTGGCAACAGTATTTCCGGTATAATAATCGTGAGCGTTTGTGAACAAGATGTGTGGTACTTTACCAT
ATGTTGCTCCAGAATCTTGAAGAGAAGAGAATTCATGCAGAACCAAGTTGATGTTTGGTCTGTGGAATAGTAC
TTACTGCAATGCTCGCTGGAGAATTGCCATGGGACCAACCCAGTGACAGCTGTCAGGAGTATTCTGACTGGAAAG
AAAAAAAAACATAACCTCAACCTTGGAAAAAATCGATTCTGCTCCTCTAGCTCTGCTGCATAAAATCTTAGTTG
AGAATCCATCAGCAAGAATTACCATTCCAGACATCAAAAAAGATAGATGGTACAACAAACCCCTCAAGAAAGGGG
CAAAAAGGCCCCGAGTCACTTCAGGTGGTGTGTCAGAGTCTCCAGTGGATTTTCTAAGCACATTCAATCCAATT
TGGACTTCTCTCCAGTAAACAGTGCTTCTAGTGAAGAAAATGTGAAGTACTCCAGTTCTCAGCCAGAACCCCGCA
CAGGTCTTTCTTATGGGATACCAGCCCCTCATACATTGATAAATGGTACAAGGGATCAGCTTTTCCCAGCCCA
CATGTCCTGATCATATGCTTTTGAATAGTCAGTTACTTGGCACCCCAGGATCCTCACAGAACCCCTGGCAGCGGT
TGGTCAAAAAGATGACACGATTCTTTACCAAATTGGATGCAGACAAATCTTATCAATGCCTGAAAGAGACTTGTG
AGAAGTTGGGCTATCAATGGAAGAAAAGTTGTATGAATCAGGTTACTATATCAACAACCTGATAGGAGAAACAATA
AACTCATTTTCAAAGTGAATTTGTTAGAAATGGATGATAAAATATTGGTTGACTTCCGGCTTTCTAAGGGTGATG
GATTGGAGTTCAAGAGACACTTCCTGAAGATTAAAGGGAAGCTGATTGATATTGTGAGCAGCCAGAAGGTTTGGC
TTCCTGCCACATGATCCGACCATCGGCTCTGGGGAATCCTGGTGAATATAGTGCTGCTATGTTGACATTATTCTT
CCTAGAGAAGATTATCCTGTCTGCAAACTGCAAATAGTAGTTCTTGAAGTGTTCACTTCCCTGTTTATCCAAAC
ATCTTCCAATTTATTTTGTGTTGTTTCGGCATACAAATAATACCTATATCTTAATTGTAAGCAAACTTTGGGGAAA
GGATGAATAGAATTCATTTGATTATTTCTTCATGTGTGTTTAGTATCTGAATTTGAACTCATCTGGTGGAACC
AAGTTTCAGGGGACATGAGTTTTCCAGCTTTTATACACACGTATCTCATTTTTATCAAAACATTTGTTTAATTC
AAAAAGTACATATTTCTTCCATGTTGATTTAATTCTAAGATGAACCAATAAAGACATAATTCTTGCAAAAAAAA
AAAAAAAAAAAAAAAAAA

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FIGURE 447

MAVPFVEDWDLVQTLGEGAYGEVQLAVNRVTEEAVALVKIVDMKRAVDCPENIKKEICINKMLNHENVVKFYGHRR
EGNIQYLFLEYCSGGELFDRIEPDIGMPEPDAQRFHQLMAGVVYLHGIGITHRDIKPENLLLDERDNLKISDFG
LATVFRYNNRERLLNKMCGTLPYVAPELLKRREFHAEPVDVWSCGIVLTAMLAGELPWDQPSDSCQEYSDWKEKK
TYLNPWKKIDSAPLALLHKILVENPSARITIPDIKKDRWYNKPLKKGAKRPRVTSGGVSESPSGFSKHIQSNLDF
SPVNSASSEENVKYSSSQPEPRTGLSLWDTSPSYIDKLVQGISFSQPTCPDHMLLNSQLLGTGSSQNPWQRLVK
RMTRFFTKLDADKSYQCLKETCEKLGQWKKSCMNQVTISTDRRNNKLIFKVNLLEMDDKILVDFRLSKGDGLE
FKRHFLKIKGKLIDIVSSQKVWLPAT

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FIGURE 448

GGGGCCAGTCGTTTCGCCGGAAGCATTGTCTCCACCTCATCATAACAACAATTAATTTCTCTGGGGCCTGAG
GAGGGCAGAATTTCAACCTTCGGTGTGCTTGGGAGTGGCGATTGTGATTTACACGACAAAATGCCGAGGTGCTCG
GTGGAGTCATGGCAGTGCCCTTTGTGGAAGACTGGGACTTGGTGCAAACCCTGGGAGAAGGTGCCTATGGAGAAG
TTCAACTTGCTGTGAATAGAGTAACTGAAGAAGCAGTCGCAGTGAAGATTGTAGATATGAAGCGTGCCGTAGACT
GTCCAGAAAATATTAAGAAAGAGATCTGTATCAATAAAATGCTAAATCATGAAAATGTAGTAAAATTTCTATGGTC
ACAGGAGAGAAGGCAATATCCAATATTTATTTCTGGAGTACTGTAGTGGAGGAGAGCTTTTTGACAGAATAGAGC
CAGACATAGGCATGCCTGAACCAGATGCTCAGAGATTCTTCCATCAACTCATGGCAGGGGTGGTTTATCTGCATG
GTATTGGAATAACTCACAGGGATATTAACCAGAAAATCTTCTGTTGGATGAAAGGGATAACCTCAAAATCTCAG
ACTTTGGCTTGGCAACAGTATTTCCGTATAATAATCGTGAGCGTTTGTGAACAAGATGTGTGGTACTTTACCAT
ATGTTGCTCCAGAATTTCTGAAGAGAAGAGAATTTTCATGCAGAACCAGTTGATGTTTGGTCCTGTGGAATAGTAC
TTACTGCAATGCTCGCTGGAGAATTGCCATGGGACCAACCCAGTGACAGCTGTCAGGAGTATTCTGACTGGAAAG
AAAAAAAACATACCTCAACCTTGGAAAAAATCGATTCTGCTCCTCTAGCTCTGCTGCATAAAAATCTTAGTTG
AGAATCCATCAGCAAGAATTACCATTCAGACATCAAAAAAGATAGATGGTACAACAAACCCCTCAAGAAAGGGG
CAAAAAGGCCCCGAGTCACCTCAGGTGGTGTGTCAGAGTCTCCAGTGGATTTTCTAAGCACATTCAATCCAATT
TGGACTTCTCTCCAGTAAACAGTGCTTCTAGTGAAGAAAATGTGAAGTACTCCAGTTCTCAGCCAGAACCCCGCA
CAGGTCTTTTCTTATGGGATACCAGCCCTCATAACATTGATAAATTGGTACAAGGGATCAGCTTTTCCAGCCCA
CATGTCCTGATCATATGCTTTTGAATAGTCAGTTACTTGGCACCCAGGATCCTCACAGAACCCCTGGCAGCGGT
TGGTCAAAAGAATGACACGATTCTTTACCAAATTGGATGCAGACAAATCTTATCAATGCCTGAAAGAGACTTGTG
AGAAGTTGGGCTATCAATGGAAGAAAAGTTGTATGAATCAGGTTACTATATCAACAACCTGATAGGAGAAACAATA
AACTCATTTTCAAAGTGAATTTGTTAGAAATGGATGATAAAATATTGGTTGACTTCCGGCTTTCTAAGGGTGATG
GATTGGAGTTCAAGAGACACTTCTGAAGATTAAAGGGAAGCTGATTGATATTGTGAGCAGCCAGAAGGTTTGGC
TTCTGCCACATGATCGGACCATCGGCTCTGGGGAATCCTGGTGAATATAGTGCTGCTATGTTGACATTATTCTT
CCTAGAGAAGATTATCCTGTCTGCAAACTGCAAAATAGTAGTTCTGGAAGTGTTCACTTCCCTGTTTATCCAAC
ATCTTCCAATTTATTTTGTGTTGTTTCGGCATACAAATAATACCTATATCTTAATTGTAAGCAAACTTTGGGGAAA
GGATGAATAGAATTCATTTGATTATTTCTTCATGTGTGTTTAGTATCTGAATTGAAACTCATCTGGTGGAAACC
AAGTTTCAGGGGACATGAGTTTCCAGCTTTTATACACACGTATCTCATTTTATCAAAACATTTGTTTAATTC
AAAAAGTACATATTTCTTCCATGTTGATTTAATTCTAAGATGAACCAATAAAGACATAATTCTTGCAAAAAAAA
AAAAAAAAAAAAAAAAAAAA

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FIGURE 449

MAVPFVEDWDLVQTLGEGAYGEVQLAVNRVTEEAVAVKIVDMKRAVDCPENIKKEICINKMLNHENVVKFYGHRR
EGNIQYLFLEYCSGGELFDRIEPDIGMPEPDAQRFFHQLMAGVVYLHGIGITHRDIKPENLLDERDNLKISDFG
LATVFRYNNRERLLNKMCGTLPYVAPELLKRREFHAEPVDVWSCGIVLTAMLAGELPWDQPSDSCQEYSDWKEKK
TYLNPWKKIDSAPLALLHKILVENPSARITIPDIKKDRWYNKPLKKGAKRPRVTSGGVSESPSGFSKHIQSNLDF
SPVNSASSEENVKYSSSQPEPRTGLSLWDTSPSYIDKLVQGISFSQPTCPDHMLLNSQLLGTGSSQNPWQRLVK
RMTRFFTKLDADKSYQCLKETCEKLG YQWKKSCMNQVTISTDRRNNKLIFKVN LLEMDDKILVDFRLSKGDGLE
FKRHFLKIKGKLIDIVSSQKVWLPAT

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FIGURE 450

TTTAAGGCGCCGGGTTTCCGGGGCTCCTGGCCCCGCTTATTCCGCGGGGGTTCGGCGGGGTTCGGCCTGGGCGCCCCG
CGCCGCCGCTGCGCTTTGTCCGCTGGGCACACTGCTTCTGGGAGGGGGCGGCAGACATGGTGGCGGCCGCCGCC
CCTCCTCGGCCCTAGCATGCCCGCGGCCGCTCGCGGCTACCCGGCTTGCCGGTCCCGAGCGGCAGCCCCGGGGTG
GCGATGGGGTTCGCGCCGAGGCAGCGGAGGTTCTGCGGGCGACTGGAGGTTGGCAGTGGGCGGGAGAAAGAGGAAG
GCAGGCGCGGCTGGGCCTCGGCCTCTGGCGCCGCGTACCCTTTGTCTCGGCAGCCTGACGGCCCCGCCGGGCTC
TCCGGAGAGGGGAACGGGCGGCGAGGGTGGCGGGTCTGGGCGCCCTGTGCTGCGGGGCCGAGAGGCGCTCGGGT
CGCGGCGGGACCGGCCGACCAGACAGGGTTAATGGAAGAGCCTGGCCAGTCCCGCGCGGGGGCCCCGCAGCGAC
AGCCTTGGCCGCGGGGACTGGAGTCCTGAGGGGGAGAAGCCTGCCGTTCTTGAAGGCTCGGGACTTCTGCCCCAAA
GACTTCGCCGCCGAGAACTGCGGGTGCACTGCCTCAGGGAAGAAGTTGAGAAATTTGCCAGGTCATCTCTGCCAG
GGCACAGTTCATCACTGTGTGTTTTAGTGTGTTTCGGTGAAGCTCTCCAAGTGTGTTGAATCAGCGTGCCTAGCCT
CAAGGGTGCACTCGTGAAACTGAAACCAAAGGAATGATACAGGCCTGCTTTGTGTGTGTCTTCCCACTTTAAGCT
TGTTTTCAGTACAAATACTCTTGCTTTAAACCTGATTGGACTGTGGCGAGCGGACATCTGTTCAAAGGAGGGGCC
GAGACCACAGTACTTCTGAAGGGGGCTTGATAATGTGGAACATTTTAAGTTTTCTCTCCGACTGTTTTGCTCT
CTCAATTCAGGCAAGTTACTGAAGTACGTTTTTTATCTAGAAAAAGGTTTGATGTAGTCTGTAAATGGTCCCTGT
AAAGTACATTGCCATCTCAGAATTAAGATCCACTCTCATTTATTATGCAGAAGTTAGTGGTCATTCTTTCCCTG
TAGATAGTTTATCTCATGTAAAGACCCACCCAGCTTGGTTTAAATTTTTTCTCACTGACGTATAACCATCAGCT
TTGATACTTCCATTTTCAGGCTCAGACTTTGAATTTAAGGAACTAAAGATGACTTTATTTTCTTTTCTCTTGGT
TTTTTTTCCAAAAACAAAAATAATCCATTACATGTTAACATAGATGATAAGAGTGACATCTTGCAATTTTGC
AAATCTTTTAAATGCCTGGTTTAATAGAAGATTCTCAGATCTACGTCAGACTGTTGTGGTTAGCACACCATGTAA
CCTCTGGAACACTCCACTGTACACTCATACTTTTTT

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FIGURE 451

MPRPFRGY PACRSRAAAPGWRWGRAEAAEVL RATGGWQWAGERGRQARLGLGLWRRGTLCLGSLTAPPGSPERGT
GGEGGGSWAPCAAGPRGARVAAGPAGPDRVNGRAWFVPRGAPAATALAAGTGVLGRSLPF

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FIGURE 452

ATCCTGTTGTGCCTATCACCTGTTGAAGTTGCCAGTCTTAAGGAAGGGATCAATTTCTTTTCGCAATAAGAGCACT
GGCAAAGACTACGTCTTGTACAAGAATAAGAGCCGACTGAGGGCATGCAAGAATATGTGCAAGCACCAAGGAGGC
CTGTTTCATAAAAGATATCGAGGATTTAGCCGGAAGTTGTTGAAATGGATGAAAACAACGGACTTTTGCTTTTAGA
ACTGAATCCTCCTAACCCTTGGGACTTACAGCCCAGATCTCCTGAAGAGTTGGCTTTTGGAGAAGTACAGATAAC
ATATCTCACTCATGCCTGCATGGACCTCAAGTTAGGAGACAAGAGAATGGTGTGTTGACCCTTGGTTAATCGGTCC
TGCTTTTGGCCGTGGATGGTGGTTGCTCCATGAGCCTCCATCTGATTGGCTGGAGAGGCTGTGCCAGGCAGACCT
CGTTTACATCAGTCATCTGCACTCAGACCACCTGAGTTACCCACACTGAAAAAGCTTGCTGGGAGAAGACCAGA
TATTCCTATTTATGTTGGAACACAGAAAGGCCTGTATTTTGGAAATCTGAATCAGAGCGGTGTCCAGTTGACTAA
TATCAATGTCGTGCCATTTGGAATATGGCAGCAGGTGGACAAAAATCTTCGATTTCATGATCTTGATGGATGGTGT
TCATCCTGAGATGGACACTTGCATTATTGTGGAGTACAAAAGTTCATAAAATACTCAATACAGTAGACTGCACCAG
ACCCAATGGGGGAAGGCTGCCTATGAAGGTTGCTCTAATGATGAGTGATTTTGGCTGGAGGAGCATCAGGCTTTCC
AATGACTTTTCAGTGGTGGAAAATTTACGGAGGAATGGAAAGCCCAATTCATTAAAACAGAAAGGAAGAAGCTCCT
GAACTACAAGGCTTGGCTGGTGAAGAACCTGCAACCCCGAATTTATTGTCCCTTTGCTGGGTATTTTGTGGAATC
TCACCCATCAGACAAGTACATCAAGGAAACAAACACCAAAAAATGACCCAAATGAACTCAACAATCTTATCAAGAA
AAACTCTGATGTGATAACATGGACCCCTCGACCGGGAGCCACCCTTGATCTGGGAAGAATGCTGAAGGATCCAAC
AGACAGCAAGGGCATCATAGAGCCTCCAGAGGGGACAAAAATTTACAAGGATTCTTGGGATTTTGAACCTTATTT
GGAAATCTTGAATGCTGCTCTAGGAGATGAAATATTTCTTCACTCATCCTGGATAAAAGAATACTTCACTTGGGC
TGGATTTAAAGATTACAACCTTGTGGTCAGGATGATTGAGACAGATGAGGACTTCAATCCTTTTCTGGAGGATA
TGACTATTTGGTTGACTTTTTAGATTTATCCTTCCCAAAAGAAAGACCACAACGAGAACATCCCTATGAGGAAAT
CCATAGCCGGGTGGATGTCATCAGACACGTGGTGAAGAATGGTCTACTCTGGGATGAGTTGTATATAGGATTCCA
AACACGGCTCCAGCGGGATCCTGACATATACCATCACCTGTTTTGGAATCATTTTCAAATAAACTCCCCCTCAC
ACCACCCAATGGAAGTCATTCCTGATGTGCTGTGAGCAGAATGGGCCTGCGATTTTGAAGAATGCAAAACCAC
ATGAAAATTTCAAGAATTCATGATCTGATGCAAAATAAAAAATTTATCATTACATCTTGAACCCAGGAAGCTTAC
AGCAAAGAGACTATGCTTTATGACGTCAGCAATAGATAATTCCACGTTGCCTTTGTGATTTGTATATATAGCTTA
CATTTGTGGACCACTACATAGCCAGATTCAAAAAATTTTACTTGTTCATCCACAGTTCTCTACAGAAAAGAAC
AATGAACCCAATAGGAACAAATTCTCTGTGGAAAAACAAAGCATAGCTGTAGTAGATACGAATCCAATCACAGAGG
AAACAGGAAGAGAAAAACATCCAAGACTACAGTGAAAACTGGAAATGGTCTGTTTTCGTGATATTCGTATGATTA
AGATGCAAATTTTTTCTTAGGAAAATGTGATTGTTAACTAGCATTCTGTTTTACATGTTGACATTTCTAACACAC
ACACCACTGATTTGAACTTCAAAATTTATTTTCTGATTATATATGCTAGGTCTGATTCTGAAGATACAAGAATTC
AATGGTGGAAATTTGTCTCCTGAAATT

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FIGURE 453

MDENNGLLLLLELNPPNPWDLQPRSPHEELAFGEVQITYLTHACMDLKLGDKRMVFD PWLIGPAFARGWLLHEPPS
DWLERLCQADLVYISHLHSDHLSYPTLKKLAGRRPDIPYVGNTERP VFWNLNQSGVQLTNINVVPFGIWQQVDK
NLRFMILMDGVHPMDTCIIVEYKGHKILNTVDCTRPNGGRLPMKVALMMSDFAGGASGFPMTFSGGKFTEEWKA
QFIKTERKKLLNYKAWLVKNLQPRIYCPFAGYFVESHPSDKYIKETNTKNDPNELNNLIKKNSDVITWTPRPGAT
LDLGRMLKDPTDSKGIIEPPEGTKIYKDSWDFEPYLEILNAALGDEIFLHSSWIKEYFTWAGFKDYNLVVRMIET
DEDFNPFPGGYDYLVDFLDLSFPKERPQREHPYEEIHSRVDVIRHVKNGLLWDELYIGFQTRLQRDPDIYHHLF
WNHFQIKLPLTPPNWKSFLMCCEQNGFAILQECKTT

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FIGURE 454

AGCCGGCCGCTAAGAAGCCGAAAGATGTCAGGTCGGGCGCGGCGGCTGAGAAGGCGGACTCCAGACAGCGACCC
CAGATGAAGGTAAATGAATATAAAGAAAATCAAAACATCGCTTATGTGTCTCTGAGACCAGCACAGACTACAGTT
TTAATAAAAACAGCTAAGGTCTATCTTGCCCCCTTTTCACTCAGTAATTACCAGCTAGACCAGCTTATGTGCCCC
AAATCCCTATCAGAAAAGAATTCTAACAATGAAGTGGCGTGTAAGAAGACTAAAATAAAGAAAACCTTGCAGAAGG
ATTATACCTCCAAAGATGAAAAACACATCTTCCAAGGCAGAATCCACGCTGCAAAATTCATCCTCAGCTGTTTCAT
ACTGAAAGTAACAAGCTACAACCCAAGAGAACGGCAGATGCGATGAATCTCAGTGTTGATGTGGAAAGTAGTCAG
GATGGAGACAGTGATGAAGATACCACACCAGCCCTGGATTTTTCGGGATTGTCCACCCTACGAAAGGAAGAGACTG
AAGAACATATCAGAAAACGCAGACTTTTTTGTCTCTCTTCAGTTGTCTGAGTCTGCTGCAAGACTCCGTGAAATG
ATAGAGAAGAGACAGCCTCCTAAATCCAAAAGAAAGAACCTAAGAGAGAAAATGGGATTGGATGTAGAAGGTCA
ATGCGATTACTAAAAGTTGATCCTTCGGGAGTTTCATTACCAGCAGCTCCAACACCGCCGACATTAGTAGCAGAT
GAAACTCCTTTGTTACCTCCTGGGCCTTTAGAAAATGACTTCTGAAAAATCAAGAAGACAACAATGAACGATTTAAA
GGATTTCTGCACACATGGGCAGGAATGAGCAAGCCAAGTAGTAAGAACACTGAGAAGGGATTATCTAGCATTAAA
AGCTACAAAGCCAAATTTAAATGGCATGGTCATTAGTGAAAGATACCGTTTACAAAGTTACCACAGGCCCAATATTC
TCTATGGCTCTCCATCCATCAGAACTAGAACTTTGGTAGCAGTTGGGGCCAAATTTGGGCAAGTTGGACTTTGT
GATTTGACCCAGCAACCTAAAGAAGATGGAGTTTATGTTTTTACCCCCATAGTCAGCCAGTTAGCTGTCTTTAC
TTCTACCCGCCAATCCGGCCACATACTGTCACTGAGCTATGATGGCAGTTACGCTGTGGGGATTTTTTCCAGG
GCTATTTTTGAAGAGGTGTATAGAAATGAAAGAAGTAGCTTTTCTCTCTTCGACTTCTTGGCAGAAGATGCCTCC
ACTTTAATAGTAGGACACTGGGATGGAAATATGTCACTGGTGGATAGACGGACACCTGGAACCTCTTATGAGAAA
CTTACCAGTTCTTCTATGGGAAAAATAAGAAGCTGTTTCATGTCCACCCAGTGCATAGACAGTATTTTATCACTGCC
GGATTGAGGGATACTCATATTTATGATGCAAGGCGATTGAATCCAGGAGAAGTCAGCCTTTGATTTCTTTGACT
GAACATACAAAGAGCATTGCTTCCGCCTATTTTTTACCTCTTACTGGTAACAGAGTGGTGACCACATGTGCTGAT
TGTAATCTGAGAATTTTTGACAGCAGCTGTATATCTTCTAAGATTCCGCTCCTCACCACCATCAGGCACAACACT
TTCCTGCGGCGATGGCTGACCAGTTCCAAGCCATGTGGGATCCTAAACAAGAAGACTGTGTCTATAGTTGGCAGC
ATGGCCCATCCACGACGGGTAGAAATCTTCCATGAGACAGGAAAGAGGGTGCATTTCGTTTGGTGGAGAATACCTT
GTCTCTGTGTGTTCCATCAATGCCATGCACCCAACCTCGGTATATTTTTGGCTGGAGGTAATTCAGCGGGAAGATA
CATGTTTTTTATGAATGAAAAAAGCTGCTGAGTTTTTTGGTTTAGGAACATCAATTTGTTCAAATTGACCACTGTCT
AAGGAGCCTAGTAATCGGCGTGCCTTAGTGTTTATGTGGTAATGTGTTACATTTAGCAATTATAACATTGTTT
TATTAATAAGACTATAAGAAGAGTGACTTTTAGTAAGGGAGAAGTCTTGAGGGTTGCTTCTGCAGGACGGGGA
GGGAATTTGAGGGGAGGCTGAGGTGCCGTGAGGACTTTTTTTTTTTTTTTTTTTTGGAGATGGAGTTTTGCTCTT
GTTGCCCAGGCTGGAGTGCAATAGCGCGATCTTGGCTCACCGCAACCTCCGCCTCCAGGTTCAAGCGATTCTCC
TGCTCAGACTCCTAAGTAGCTGGGATTACAGGCACCTGCCACCACGCCTGGCTATTTTTTTTGTATTTTAGTAG
AGATGGGGTTTCATCATGTTGGCCAGGCTGGTCTCGAGCTCCTGACCTCAGGTGATCTGCCCCGCTCGGCCTCCA
AAAGTGCTGGAATTACAGGCGTGAGCCACCATGCCTGGCCATCAGAACTTGTAATCAAGACAGTATGTTGAGAAA
TTCTAACATTATAAATTACAAAGCTTTGACTATTAAAGTTTTTGTGATCT

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FIGURE 455

MSRSGAAAEKADSRQRPQMKVNEYKENQNIAYVSLRPAQTTVLIKTAKVYLAPFSLSNYQLDQLMCPKSLSEKNS
NNEVACKKTKIKKTCRRIIPPKMKNNTSSKAESTLQNSSSAVHTESNKLQPKRTADAMNLSVDVESSQDGDSEDT
TPALDFSGLSPIYERKRLKNI SENADFFASLQLSESAARLREMIKRQPPKSKRKKPKRENGIGCRRSMRLKQVDP
SGVSLPAAPTPTTLVADETPLLPPGLEMTSENQEDNNERFKGFLHTWAGMSKPSSKNTEKGLSSIKSYKANLNG
MVIS EDTVYKVTTGPIFSMALHPSETRTLAVGAKFGQVGLCDLTQQPKEDGVYVFHPSQPVSCLYFSPANPAH
ILSLSYDGTLCGDFSRAIFEEVYRNERSSFSSFDLAEDASTLIVGHWDGNMSLVDRRTPGTSYEKLTSSSMGK
IRTVHVHPVHRQYFITAGLRDTHIYDARRLNSRRSQPLISLTEHTKSIASAYFSPLTGNRVVTTCADCNLRIFDS
SCISSKIPLLTTIRHNTFTGRWLTRFQAMWDPKQEDCVIVGSMAPRRVEIFHETGKRVHSFGGEYLVSVCSINA
MHPTRYILAGGNSSGKIHVFMNEKSC

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FIGURE 456

TGGCGGCCGCCGGCGTCGCCGCCATGGACCTAGGACCCTTGAACATCTGTGAAGAAATGACTATTCTGCATGGAG
GCTTCTTGCTGGCCGAGCAGCTGTTCCACCCTAAGGCACTGGCAGAATTAACAAAGTCTGACTGGGAACGTGTTG
GACGGCCCATCGTGGAGGCCTTAAGGGAGATCTCCTCGGCTGCAGCACACTCCCAGCCCTTTGCCTGGAAGAAGA
AAGCCCTGATCATCATCTGGGCCAAGGTTCTGCAGCCGCACCCCGTGACCCCGTCCGACACAGAGACACGGTGGC
AGGAAGACCTGTTCTTCTCGGTGGGCAACATGATCCCCACCATCAACCACACCATCCTCTTCGAGCTGCTCAAAT
CCCTGGAAGCTTCTGGACTCTTTATCCAGCTCCTGATGGCCCTGCCACCACCATCTGCCATGCAGAACTAGAGC
GCTTCTGGAACATGTGACCGTTGACACTTCTGCCGAAGACGTGGCCTTCTTCTGACATCTGGTGGGAGGTGA
TGAAGCACAAGGGTCACCCGCAGGACCCCTGCTCTCCAGTTTAGTGCAATGGCCCATAAGTACCTGCCTGCCT
TAGATGAGTTCCCCCATCCTCCAAAGAGGCTTAGGTGACCCAGACGCGTGCCCCACCATGCCCTGTTGGCCA
TGCTGCTCCGCGGGCTGACACAGATCCAGAGTCGGATCCTGGGCCCGGGGAGGAAGTGCTGTGCGCTGGCCAACC
TGGCTGACATGCTGACTGTGTTTGCCTGACAGAGGACGACCCCCAGGAGGTGTCTGCAACCGTGATCTGGACA
AACTGGCCACGGTGATCTCTGTGTGGAACTCGGACACCCAGAATCCCTACCACCAGCAGGCGCTGGCAGAGAAGG
TGAAGGAGGCAGAACGGGATGTGAGCCTGACCTCGCTGGCCAAACTCCCAGTGAGACCATTTTCGTGGGCTGCG
AGTTCTTGACACCTGCTGCGGGAGTGGGGGGAGGAGTTGCAGGCCGTGCTCCGCAGCAGCCAGGGGACAAGTT
ACGACAGCTACCGGCTGTGCGACAGTCTGACTTCCTTCAGCCAGAACGCGACGCTCTACCTGAACCGCACCAGCC
TGTCGAAGGAGGACAGGCAGGTGGTCTCTGAGCTGGCGGAGTGTGTGAGGACTTCCTGAGGAAAACGAGCACGG
TGCTGAAGAACAGGGCCTTGGAGGATATCACAGCTTCCATTGCCATGGCCGTCTATCCAGCAGAAGATGGACCGCC
ATATGGAAGTGTGCTACATTTTTGCCTCTGAGAAGAAGTGGGCCTTCTCGACGAGTGGGTAGCCTGCCTGGGGA
GTAACAGGGCCCTCTTCCGAGAGCCAGACTTGGTGTTGAGGCTGCTGGAAACAGTGATAGACGTGAGCACAGCTG
ACAGAGCCATCCCTGAGTCTCAGATCCGGCAGGTGATCCACCTGATCCTGGAATGTTACGCAGACCTCTCCCTGC
CAGGTAATAAATAAAGTCCTTGAGGTATCCTGCGTTCCTGGGGGCGAAAGGGCCTCTCTGAAAAGTTGCTGGCTT
ATGTGGAGGGTTTTTCAGGAAGACCTCAATACAACCTTTTAACCAGCTCACTCAGAGTGCCTCCGAACAGGGCTTGG
CAAAAGCTGTGGCCTCCGTGGCCCGCCTGGTCATAGTGACCCGGAAGTCACGGTGAAGAAAATGTGCAGCCTGG
CTGTGGTCAATCTCGGCACCCACAAGTTTCTGGCCAGATTCTCACTGCCTTCCCTGCCCTTAGGTTTGTGGAAG
TGCAGGGTCCCAATTCTGCCACTTTTCATGGTGTGATGCCTCAAAGAAACCGTCTGGATGAAGTTCTCTACAC
CCAAGGAAGAAAAGCAATTTTTAGAGCTCCTGAACTGCCTGATGAGTCCCGTGAACCCCCAAGGGATTCCAGTGG
CTGCTCTTCTTGAGCCAGACGAGGTGCTGAAGGAATTTGCTGCTTCTTCTGAGGTTAGATGTTGAAGAGGTAG
ACCTCAGTCTGAGGATCTTCTAGACTCTAGAGGCAAACGCGTGCCGAGAGGAATACTGGCTCCAGACCTGCT
CCCCGTTTCCACTCCTCTTCAGCTTGTGCCAGCTCTTGGACCGCTTTAGCAAATACTGGCCGCTTCCCCAAGGAGA
AGCGGTGCCTCTCTTTGGATAGGAAGGATCTAGCGATCCATATCCTGGAGCTCCTGTGTGAGATTGTATCAGCCA
ATGCTGAGACCTTCTCCCGGATGTCTGGATCAAGTCCCTGTCTGGCTCCACCGCAAGTTAGAACAGCTAGACT
GGACTGTGGGCCTGAGGCTGAAGAGCTTCTTCGAGGGGCACCTTCAAGTGTGAAGTGCCAGCCACACTTTTTGAGA
TCTGTAAGCTTTCAGAAGACGAGTGACCTCCCAGGCCACCCAGGGTACGGGGCTGGCACGGGGCTCCTGGCCT
GGATGGAGTGTGCTGCGTCTCCAGCGGCATCTCGGAGAGGATGCTGTCTCTCTTGGTGGTGGACGTGGGCAATC
CTGAGGAGGTGAGACTGTTTCAGCAAAGGCTTTCTGGTGGCCCTGGTGCAAGTCATGCCTTGGTGCAGCCCTCAGG
AGTGGCAGCGCCTTACCAGCTGACCAGGAGACTGCTGGAGAAGCAGCTCCTCCATGTCCCTTATAGCCTGGAAT
ATATTCAGTTTGTTCCTGCTCAACCTGAAGCCCTTTGCCAGGAGTTGCAACTCTCCGTCTCTCTCTGAGGA
CTTTCCAGTTTCTCTGCAGCCATAGCTGTGTAATTGGCTTCCTCTGGAAGGCTGGAACCACGTGGTCAAACCTCC
TCTGTGGCAGTCTGACCCGCTCCTGGACTCAGTCAGGGCGATACAGGCAGCTGGCCCTTGGGTCAAGGACCAG
AGCAGGACCTGACCCAGGAAGCCCTGTTTGTGTTACACCCAGGTGTTCTGCCATGCTCTGCACATCATGGCCATGC
TCCACCCGGAGGTCTGTGAGCCACTCTACGTTTTAGCCTTGAAACCCTCACCTGCTATGAGACTTTGAGCAAGA
CCAACCCCTTCTGTGAGCTCCTTGCTCCAGAGGGCACACGAGCAGCGCTTCTTAAAGTCCATTGCTGAGGGCATTG
GCCCTGAAGAACGGCGCCAAACCCTGTTGCAGAAGATGAGCAGCTTCTGACTTGGCGTGGGGAGCTGGGCCCCAA
CATGGCGGGTCTGCAGAAGATCAGCAGCTTCTTACCTGTGCGGGAGCGAAAAAGCTGGGCTTCAACATGGCAGGT
CTGTAGGGGTGAGACCCGAGCAGCCTGGACTTTACAGTTATGTGAAACTGTCCACAAAAAGTCATGGCAATAATG
GTGTAAAGAAAATAGTTTCTTGGGTATTTGTAACGTACAAACTATCATAAAATTTCTCCTCTTTCGCATCTCAAA
AAAAAAAAAAAAAAAAAAAAA

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FIGURE 457

MDLGPLNICEEMTILHGGFLLAEQLFHPKALAEELTKSDWERVGRPIVEALREISSAAAHSQPFWWKKKALIIWA
KVLQPHPVTPSDTETRWQEDLFFSVGNMIPTINHTILFELLKSLEASGLFIQLLMALPTTICHAELERFLEHVTV
D TSAEDVAFFLDIWWVEVMKHKGHPQDPILLSQFSAMAHKYLPADEFPHPPKRLRSDPDACPTMPLLAMLLRGLTQ
IQSRILGPGRKCCALANLADMLTVFALTEDDPQEV SATVYLDKLATVISVWNSDTQNPYHQQALAEKVKEAERDV
SLTSLAKLPSETIFVGCEFLHLLREWGEELQAVLRSSQGTSYDSYRLCDSLTSFSQ NATLYLNRTSLSKEDRQV
VSELAECVRDFLRKTSTVLKNRALEDITASIAMAVIQQKMDRHMEVCYIFASEKKWAFSDEWVACLGSNRALFRE
PDLVLRLLLETVIDVSTADRAIPESQIRQVIHLILECYADLSLPGKNKVLGILRSWGRKGLSEKLLAYVEGFQED
LNTTFNQLTQSASEQGLAKAVASVARLVIVHPEVTVKKMCSLAVVNLGTHKFLAQILTAF PALRFVEVQGPNSSA
TFMVSC LKETVWMKFSTPKEEKQFLELLNCLMSPVKPQGIPVAALLEPDEV LKEFVLPFLRLDVEEVDLSLRIFI
Q TLEANACRE EYWLQTCSPFPLLFSLCQLLDRFSKYWPLPKEKRCLSLDRKDLAIHILELLCEIVSANAETFSPD
VWIKSLSWLHRKLEQLDWTVGLRLKSFFEGHFKCEVPATLFEICKLSEDEWTSQAHPGYGAGTGLLAWMECCCVS
SGISERMLSLLVVDVGNPEEVRLF SKGFLVALVQVMPWCSPQEWQRLHQLTRRLLEKQLLHVPYSLEYIQFVPLL
NLKPFAQELQLSVLFLRTFQFLCSHSCRNWLPLEGWNHVVKLLCGSLTRLLDSVRAIQ AAGPWVQGPEQDLTQEA
LFVYTQVFCHALHIMAMLHPEVCEPLYVLALET LTCYETLSKTNPSVSSLLQRAHEQRFLKSIAEGIGPEERRQT
LLQKMSSF

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FIGURE 458

CGACGCGGGAGCCGCACGCGCCGGACGAGGCTCGCTGCGCTCCCTGTTGCCAGCGCGGGCCCGTTGAGGCGGAG
CCCTCAGTTCCCGGCCAGGACACGGTCTGGGCCGCCGAATCTCCGGCCGAAGAGCGGCGGCGGCAGCGGCGGAA
AAAAATGAAGAATGAAATTGCTGCCGTTGTCTTCTTTTACAAAGGCTAGTTCGAAAACATGATAAGTTGAAAAA
AGAGGCAGTTGAGAGGTTTGCTGAGAAATTGACCCTAATACTTCAAGAAAAATATAAAAAATCACTGGTATCCAGA
AAAACCATCGAAAGGACAGGCCTACAGATGTATTCGTGTCAATAAATTTAGAGAGTTGATCCTGATGTCCTGAA
AGCCTGTGAAAACAGCTGCATCTTGTATAGTGACCTGGGCTTGCCAAAGGAGCTCACTCTCTGGGTGGACCCATG
TGAGGTGTGCTGTCTAGAGATGGGGTTTACCCTGTTGGCCAGACTGCTCTCAAACCTCTGACCTCGTGATCCG
CCCGCCTTGGCCTCCCAAAGCGCTGGATTACAGGCGTGAGCCACTGCGCCCGCCTCCTCCTTTTTGATTATGTA
TGGAGAGAAAAACAATGCATTCAATTGTTGCCAGCTTTGAAAATAAAGATGAGAACAAGGATGAGATCTCCAGGAA
AGTTACCAGGGCCCTTGATAAGGTTACCTCTGATTATCATTACAGGATCCTCTTCTTCAGATGAAGAAACAAGTAA
GGAAATGGAAGTGAAACCCAGTTCGGTGACTGCAGCCGCAAGTCCTGTGTACCAGATTTAGAACTTATATTTCC
ACCTCTTCCAATGTGGCACCCCTTTGCCAGAAAAAGCCAGGAATGTATCGAGGGAATGGCCATCAGAATCACTA
TCCTCCTCCTGTTCCATTTGGTTATCCAAATCAGGGAAGAAAAATAAACCATATCGCCCAATTCCAGTGACATG
GGTACCTCCTCCTGGAATGCATTGTGACCGGAATCACTGGATTAATCCTCACATGTTAGCACCTCACTAACTTCG
TTTTTGATTGTGTTGGTGTCTATGTTGAGAAAAAGGTAGAATAAACCTTACTACACATTAAAAGTTAAAAGTTCTT
ACTAATAGTAGTGAAGTTAGATGGGCCAAACCATCAAACCTATTTTTATAGAAGTTATTGAGAATAATCTTTCTT
AAAAAATATATGCACITTAGATATTGATATAGTTTGAGAAATTTTATTAAAGTTAGTCAAGTGCCTAAGTTTTTA
ATATTGGACTTGAGTATTTATATATTGTGCATCAACTCTGTTGGATACGAGAACCCTGTAGAAGTGGACGATTTG
TTTTAGCCCCCTTGAGAATTTACTTTATGGAGCGTATGTAAGTTATTTATATACAAGGAAATCTATTTTATGTCG
TTGTTTAAGAGAATTGTGTGAAATCATGTAGTTGCAAATAAAAAATAGTTTGAGGCAAAAAAAAAAAAAAAAAA
AAAAAAAAAA

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FIGURE 459

MKNEIAAVVFFFTRLVRKHDKLKKEAVERFAEKLTLILQEKYKNHWYPEKPSKGQAYRCIRVNKFQRVDPDVLKA
CENSILYSDLGLPKELTLWVDPCEVCCRRDGVSPCWPDCSQTPDLVIRPPWPPKALDYRREPLRPASSFLIMYG
EKNNAFIVASFENKDENKDEISRKVTRALDKVTSDYHSGSSSSDEETSKEMEVKPSSVTAAASPVIQISELIFPP
LPMWHPLPRKKPGMYRGNGHQNHYPFVPFGYPNQGRKNKPYRPIPVTVVPPPGMHCDRNHWINPHMLAPH

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FIGURE 460

CAGGCCAGGACTCCACAAGGCTGGTCCCCTGCCCTGGAGCAACTTAAACAGGCCCTCTGGCCAGCCTGGAACCCCT
GAGATGGCCTCCAGCTCAGGCAGCAGTCCTCGCCCGGCCCTGATGAGAATGAGTTTCCCTTTGGGTGCCCTCCC
ACCGTCTGCCAGGACCCAAAGGAGCCCAGGGCTCTCTGCTGTGCAGGCTGTCTCTCTGAGAACCCGAGGAATGGC
GAGGATCAGATCTGCCCCAAATGCAGAGGGGAAGACCTCCAGTCTATAAGCCCAGGAAGCCGTCTTCGAACTCAG
GAGAAGGCTCACCCCGAGGTGGCTGAGGCTGGAATTGGGTGCCCTTTGCAGGTGTGCGCTGCTCCTTCAAGGGA
AGCCACAGTCTGTGCAAGAGCATGAGGTCACCTCCCAGACCTCCCACCTAAACCTGCTGTTGGGGTTTCATGAAA
CAGTGGAAGGCCCGGCTGGGCTGTGGCCTGGAGTCTGGGCCCATGGCCCTGGAGCAGAACCTGTGACACCTGCAG
CTGCAGGCAGCCGTGGAAGTGGCGGGGGACCTGGAGGTGCGATTGCTACCGGGCACCTGCTCCGAGAGCCAGGAG
GAGCTGGCCCTGCAGCACTTCATGAAGGAGAAGCTTCTGGCTGAGCTGGAGGGGAAGCTGCGTGTGTTTGAGAAC
ATTGTTGCTGTCTCAACAAGGAGGTGGAGGCCCTCCCACCTGGCCCTGGCCACCTCTATCCACCAGAGCCAGCTG
GACCGTGAGCGCATCCTGAGCTTGGAGCAGAGGGTGGTGGAGCTTCAGCAGACCTGGCCCAGAAAGACCAGGCC
CTGGGCAAGCTGGAGCAGAGCTTGCCTCATGGAGGAGGCCCTCCTTCGATGGCACTTTCTGTGGAAGATCACC
AATGTCACCAGGCGGTGCCATGAGTCGGCCTGTGGCAGGACCGTCAGCCTCTTCTCCCCAGCCTTCTACACTGCC
AAGTATGGCTACAAGTTGTGCCTGCGGCTGTACCTGAATGGAGATGGCACTGGAAAGAGAACCCATCTGTGCTC
TTCAICGTGATCATGAGAGGGGAGTATGATGCGCTGCTGCCGTGGCCTTTCCGGAACAAGGTACCTTCATGCTG
CTGGACCAGAACAACCGTGAGCACGCCATTGACGCCTTCCGGCCTGACCTAAGCTCAGCGTCCTTCAGAGGGCCC
CAGAGTGAAACCAACGTGGCCAGTGATGCCCACTCTTCTTCCCCCTCAGCAAACCTGCAGTCACCCAAGCACGCC
TACGTGAAGGACGACACAATGTTCTCAAGTGCATTGTGGAGACCAGCACTTAGGGTGGGCGGGGCTCCTGAGGG
AGCTCCAACCTCAGAAGGGAGCTAGCCAGAGGACTGTGATGCCCTGCCCTTGGCACCCAAGACCTCAGGGCACAAA
GATGGGTGAAGGCTGGCATGATCCAAGCAAGACTGAGGGGTGCACTTCGGGCTGGCCATCTGGTTAGGATGGCAG
GACGTGGGCTGGGCCCACAAAGGCAAAGGGTCCAGAAGGAGACAGGCAGAGCTGCTCCCCCTGTCACGGACCATG
CGACACTGGGAGGCCAGTGAGCCACTCCGGCCCCGAATGTTGAGGTGGACTCTCACCAAATGAGAAGAAAATGGA
ACCAGGCTTGGAACCGTAGGACCCAAGCAGAGAAGCTCTCGGGCTAGGAAGATCTCTGCAGGGCCGCCAGGGAGA
CCTGGACACAGGCCTGCTCTCTTTTTCTCCAGGGTCAGAAACAGGACCGGGTGAAGGGATGGGGTGCCAGTTTG
AATGCAGTCTGTCCAGGCTCGTCATTGGAGGTGAACAAGCAAACCCAGAGGGCTCCACTAGGACTTCAAATTGGG
GGTTGGATTGGAAGACTTTTAAGTTTCCTTCCAGCCCAGAAAGTCTCTCATTCTAGGCCTCCTGGCCCAGGTGAG
TCCTAGAGCTACAGGGGTTCTGGAAACATTGAGGAGCTTCCTGTCTCCAGCTCCTCACTCACCTTCAGTAACC
CCCCTGGACTGACCTGGTCCACAGGGCACCTGCCACCTGGGCCTGGCAGCTCAGCTTCCCCAACACGCAGGAG
CACACCCAGCCCCACATCCTGTGCCTCCATCAGCTAAACACCACGTCACCTTCATGCAGGTGAAACCCAGTCACT
GTGAGCTCCCAGGTGCAGCCAGAGGCACCTCAAGAAGAAGAGGGGCATAAACTTTCTCTTCTGCTAGAGGCC
CCACCTTTGGTGCTTTCCAGAATCCCGTAACACCTGATTAAGTGAAGGCATCCACTTCTTTTTCAGCAGACTGATCAG
GACCTCCAAGCCACTGAGCAATGTATAACCCCAAAGAAATAATTTTTAGAAATCTCTTTTGAAGTTTTCTTAAAAA
AAAAAAAAAAAA

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FIGURE 461

MASSSGSSPRPAPDENEFFPGCPPTVCQDPKEPRALCCAGCLSENPRNGEDQICPKCRGEDLQSI SPGSRLRTQE
KAHPEVAEAGIGCPFAGVGCSFKGSPQSVQEHEVTSQTSHLNLLLGFMKQWKARLGCGLESGPMALEQNLSDLQL
QAAVEVAGDLEVDCYRAPCSESQEELALQHFMKEKLLAELEGKLRVFENIVAVLNKEVEASHLALATSIHQSQLD
RERILSLEQRVVELQQTLAQKDQALGKLEQSLRLMEEASFDGTFWKITNVTRCHESACGRTVSLFSPAFTAK
YGYKLCLRLYLNGDGTGKRTHLSLFIVIMRGEYDALLPWPFERNKVTFMLLDQNNREHAIDAFRDLSSASFQRPQ
SETNVASGCPLFFPLSKLQSPKHAYVKDDTMFLKCIVETST

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FIGURE 462

AGACGCAAGACGCCGGGCCTACAGCGGGAGCGTGAGGAAAGCCGTGCGTTGCGTTCCAAGGCATCTGTGAGCCCG
CGGAGTATACACCATGAGCAAAGCTCACCCCTCCCGAGTTGAAAAAATTTATGGACAAGAAGTTATCATTGAAATT
AAATGGTGGCAGACATGTCCAAGGAATATTGCGGGGATTGATCCCTTTATGAACCTTGTGATAGATGAATGTGT
GGAGATGGCGACTAGTGGACAACAGAACAATATTGGAATGGTGGTAATACGAGGAAATAGTATCATCATGTTAGA
AGCCTTGGAACGAGTATTAAAATAATGGCTGTTTCAGCAGAGAAACCCATGTCCTCTCTCCATAGGGCCTGTTTTACT
ATGATGTAAAAATTAGGTCATGTACATTTTCATATTAGACTTTTTGTAAATAAACTTTTGTAATAGTCAAAAAT
GCTTCTCAGATGTTCTGAATATAGAATATCAGCTCTCATTCCAGTTTTTTCTAACATGAATTTTCCTGGTTGAC
ATTGATTTCAAAGGGTTTTATGCATTAAAGTGAAAGAATCTTATTAAATGCGAAAAAAAAAAAAAAAAAAAAAA
AAAAAA

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FIGURE 463

MSKAHPPELKKFMDKKLSLKLNGGRHVQGILRGFDPFMNLVIDECVEMATSGQQNNIGMVVIRGNSIIMLEALER
V

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FIGURE 464

CGGGAGGCGGCAGCGGCTGCAGCGTTGGTAGCATCAGCATCAGCATCAGCGGCAGCGGCAGCGGCCTCGGGCGGG
GCCGCGCGGACGGACAGGCGGACAGAAGCGCCAGGGGCGCGCTCCCGCCCGGGCCGGCCATGGAGGGCGCCTC
CTTCGGCGCGGGCCGCGCAGGGGCGCCCTGGACCCCGTGAGCTTTGCGCGGCGGGCCCCAGACCCCTGCTCCGGGT
CGCGTCTCTGGGTGTTCTCCATCGCCGTCTTCGGGCGCCATCGTCAACGAGGGCTACGTGAACACCGACAGCGGCC
CGAGCTGCGCTGCGTGTTCAACGGGAACGCGGGCGCCTGCCGCTTCGGCGTCGCGCTGGGCCTCGGAGCCTTCCT
CGCCTGCGCGCCCTTCCTGCTGCTCGATGTGCGCTTCCAGCAAATCAGCAGCGTCCGCGACCGCCGCGCGCGGT
GTTGCTGGACCTGGGCTTCTCAGGACTCTGGTCCTTCCTGTGGTTTCGTGGGCTTCTGCTTCCTCACCAATCAGTG
GCAGCGCACGGCGCCAGGGCCGGCCACGACGAGGCGGGGACGCGGCGCGGGCCGCCATCGCCTTCAGCTTCTT
CTCCATCCTCAGCTGGGTGGCGCTCACCCTGAAGGCCCTGCAGCGGTTCCGCTGGGCACCGACATGTCACCTCTT
CGCCACCGAACAGCTGAGCACCGGGGCGAGCCAGGCCTACCCCGGCTATCCGGTGGGCAGCGGCGTGAGGGGCAC
CGAGACCTACCAGAGCCCGCCCTTCACCGAGACCCCTGGACACCAGCCCCAAAGGGTACCAGGTGCCCGCCTACTATA
GCGGCTGGCAGGCACAGACCAGGGCTCCAAGGCCACCCACCAACGCAGGCCCCAGGGTCTCCGGGACCTCCCTT
GGGTCTTCCAGCTCAGTGCCGCGGACAGAGTAGGTGGCCGCTTTGCGCCATCCGGGGCCAAGAGGGGGTGAGCC
CGCGTGTCTGGGCTGCCCCTGCCAAGTTCCTCCAGTCCCTCAGCACCTGGCCCCAGGACTGAGGTCTTGAGAAGG
GGATAGCACTGCCCAGGACGTGTGTCCCTAGCCTGGAATGGACTGGCCTGGGGAAGGCTTTCCCTCTTGGGCCA
CACCTGCTCACTCTGGGGTTGGGGGTCCAGCTGCCCTCTACGATCAGGTGCAGGGGCTGCCCAGGACAAAGCGGG
GGCAGGGGAAAGACACCACCTCGCCCCAAGACTGGGGATCCTGGCCACTGTTCCCATCCCATGTCCCTGTGGGT
AGTGACTGTCTCGTTTCTGTTCATGGTGGTGCCTCCCGTCCGGAGCCACTCTCCACTTTCTCTCACAGGCTGCTAG
AACAGCCCAGCCCTGTCACTGTTGTGATCATGGTCCAGTCTTCGGGTTTACCTCCTAGTACTCCACAAGCTGCT
CCTCTCTCTGTGGCCCCGGCCCCCTGCCAGGTGTGGGTGGTTCTGGCCAGGAAGGCACAAGGTAGCTGTGGGCCA
AGACACCAGCCCTGTCTTAGCCCTTCAGTAAGACCTTGCCAGGAGAGGAGAAGGATGCCTGGGTGCCAGGCAAGA
CAAGCCCCCTCAGCAGGAGAGAGAGGCCAGAGGCTCCAGCTGGCCACCGTGCCCCACAAGATGGCCCCCTGTGTGGTT
CCCTTTACCTTGGCTTCCTGGCCAGTCCCTGCCTCTCCACCTGCACCCTGCTTCCTGGCCAGTCCCAGGTGG
AGTCCCTCTGCATAGCTGACTACTCATGCATTGCTCAAAGCTGGCTTTTACATTAAGTCAACACCAAACGTGGT
TGCCACATTTTCATCAGACAGACACCTCCCTCTGGAGATGCAGTTGAGTGACAACCTTGTTACATTGTAGCCTAGA
CCAATTCTGTGTGGATATTTAAGTGAACATGTTTACAATTTTTGTATATATCACTCTCTCCCTCTCCTGAAAGAC
CAGAGATTGTGTATTTTCAGTGTCCCATGTTCCGACTGCACCTTCTTTACAATAAAGACTGTAAGTGAAGTGAAGT
GTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 465

MEGASFGAGRAGAALDPVSFARRPQTLLRVASWVFSIAVFGPIVNEGYVNTDSGPRLRCVFNGNAGACRFGVALG
LGAFLACAAFLLLDVRFQQISSVRDRRAVLLDLGFSGLWSFLWFVGFCFLTNQWQRTAPGPATTQAGDAARAAI
AFSFFSILSWVALTVKALQRFRLGTDMSLFATEQLSTGASQAYPGYPVGSGVEGTETYQSPPFTETLDTSPKGYQ
VPAY

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FIGURE 466

ATACGACTACACCTGCTCCGGAGCCCCGCGGCGGTACCTGCAGCGGAGGAGCTCTGTCTTCCCCTTCATCTCACGC
GAGCCCCGGCGTCCCGCCGCGTGCGCCCCGGCGCAGCCCCGCCAGTCCGCCCCGAGCCCCGCCAGTCGCCGCGCTGC
ACGCCCCGGGGTGAACCCCTCTGCCCTCGCTGGGACAGAGGGCCCCCGCAGCCGTCATGCTTTCCGCCATCTACACAG
TCCTGGCGGGACTGCTGTTCCCTGCCGCTCCTGGTGAACCTCTGCTGCCCATACTTCTTCAGGACATAGGCTACT
TCTTGAAGGTGGCCGCCGTGGGCGGAGGGTGCGCAGCTACGGGCAGCGCGCGGCCGCGCACCATCCTGCGGG
CGTTCCTGGAGAAAGCGCGCCAGACGCCACACAAGCCTTTTCTGCTCTTCCGCGACGAGACTCTCACCTACGCGC
AGGTGGACCGGCGCAGCAATCAAGTGGCCCCGGGCGCTGCACGACCACCTCGGCCTGCGCCAGGGAGACTGCGTGG
CGTCCCTTATGGGTAAACGAGCCGGCCTACGTGTGGCTGTGGCTGGGGCTGGTGAAGCTGGGCTGTGCCATGGCGT
GCCTCAATTACAACATCCGCGCGAAGTCCCTGCTGCACTGCTTCCAGTGTGCGGGGCGAAGGTGCTGCTGGTGT
CGCCAGAACTACAAGCAGCTGTCTGAAGAGATACTGCCAAGCCTTAAAAAAGATGATGTGTCCATCTATTATGTGA
GCAGAACTTCTAACACAGATGGGATTGACTCTTTCCCTGGACAAAGTGGATGAAGTATCAACTGAACCTATCCCAG
AGTCATGGAGGTCTGAAGTCACTTTTTCCACTCCTGCCTTATACATTTATACTTCTGGAACCACAGGTCTTCCAA
AAGCAGCCATGATCACTCATCAGCGCATATGGTATGGAAGTGGCCTCACTTTTGTAAGCGGATTGAAGGCAGATG
ATGTCATCTATATCACTCTGCCCTTTTACCACAGTGCTGCACTACTGATTGGCATTACGGATGTATTGTGGCTG
GTGCTACTCTTGCCCTTGCGGACTAAATTTTCAGCCAGCCAGTTTTGGGATGACTGCAGAAAATACAACGTCACTG
TCATTCAGTATATCGGTGAAGTGTTCGGTATTTATGCAACTCACCACAGAAACCAAATGACCGTGATCATAAAG
TGAGACTGGCACTGGGAAATGGCTTACGAGGAGATGTGTGGAGACAATTTGTCAAGAGATTTGGGGACATATGCA
TCTATGAGTTCTATGCTGCCACTGAAGGCAATATTGGATTTATGAATTATGCGAGAAAAGTTGGTGCTGTTGGAA
GAGTAAACTACCTACAGAAAAAATCATAAATTATGACCTGATTAAATATGATGTGGAGAAAGATGAACCTGTCC
GTGATGAAAATGGATATTGCGTCAGAGTTCCCAAAGGTGAAGTTGGACTTCTGGTTTGCAAAATCACACAACCTTA
CACCATTTAATGGCTATGCTGGAGCAAAGGCTCAGACAGAGAAGAAAAAAGTGAAGATGTCTTTAAGAAAGGAG
ACCTCTATTTCAACAGTGGAGATCTCTTAATGGTTGACCATGAAAATTTTCATCTATTTCCACGACAGAGTTGGAG
ATACATTCGGGTGGAAGGGGAAAATGTGGCCACCCTGAAGTTGCTGATACAGTTGGACTGGTTGATTTTGTCC
AAGAAGTAAATGTTTATGGAGTGCATGTGCCAGATCATGAGGGTCGCATTGGCATGGCCTCCATCAAATGAAAG
AAAACCATGAATTTGATGGAAAGAACTCTTTAGCACATTGCTGATTACCTACCTAGTTATGCAAGGCCCCGGT
TTCTAAGAATACAGGACACCATTGAGATCACTGGAACCTTTTAAACACCGCAAAATGACCCTGGTGGAGGAGGGCT
TTAACCTGCTGTCATCAAAGATGCCTTGTATTTCTTGGATGACACAGCAAAAATGTATGTGCCTATGACTGAGG
ACATCTATAATGCCATAAGTGCTAAAACCTGAAACTCTGAATATTTCCAGGAGGATAACTCAACATTTCCAGAA
AGAACTGAATGGACAGCCACTTGATATAATCCAACCTTAATTTGATTGAAGATTGTGAGGAAATTTTGTAGGAA
ATTTGCATACCCGTAAAGGGAGACTTTTTTAAATAACAGTTGAGTCTTTGCAAGTAAAAAGATTTAGAGATTATT
ATTTTTCAGTGTGCACCTACTGTTTGTATTTGCAAACTGAGCTTGTGGAGGGAAGGCATTATTTTTTAAATAC
TTAGTAAATTAAATGAAC

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FIGURE 467

MLSAIYTVLAGLLFLPLLVLNLCOPYFFQDIGYFLKVAAGRRVRSYGQRRPARTILRAFLEKARQTPHKPFLLFR
DETLTYAQVDRRSNQVARALHDHLGLRQGDCAVLLMGNEPAYVWLWLGLVKLGACAMACLNYNIRAKSLLHCFQCC
GAKVLLVSPQLAAVEEILPSLKKDDVSIYYVSRTSNTDGIDSFLDKVDEVSTEPIPESWRSEVTFSTPALYIYT
SGTTGLPKAAMITHQRIWYGTGLTFVSGLKADDVIYITLPFYHSAALLIGIHGCIVAGATLALRTKFSASQFWDD
CRKYNVTVIQYIGELLRYLCNSPQKPNDRDHKVRLALGNGLRGDVWRQFVKRFGDICIYEFYAATEGNIGFMNYA
RKVGAVGRVNYLQKKIITYDLIKYDVEKDEFVRDENGVCVRVPKGEVGLLVCKITQLTPFNGYAGAKAQTEKKKL
RDVFKKGDLYFNSGDLLMVDHENFIYFHDRVGDTRWKGENVATTEVADTVGLVDFVQEVNVYGVHVPDHEGRIG
MASIKMKENHEFDGKKLFQHIADYLP SYARPREFLRIQDTIEITGTFKHKMTLVEEGFNPAVIKDALYFLDDTAK
MYVPMTEDIYNAISAKTLKL

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FIGURE 468

ATACGACTACACCTGCTCCGGAGCCCGCGGCGGTACCTGCAGCGGAGGAGCTCTGTCTTCCCCTTCATCTCACGC
GAGCCCGGCGTCCCGCCGCGTGCGCCCGGCGCAGCCCGCCAGTCCGCCCGGAGCCCGCCAGTCGCCGCGCTGC
ACGCCCGGGGTGAACCCTCTGCCCTCGCTGGGACAGAGGGCCCCGAGCCGTCATGCTTTCCGCCATCTACACAG
TCCTGGCGGGACTGCTGTTCTCGCCGCTCCTGGTGAACCTCTGCTGCCCATACTTCTTCCAGGACATAGGCTACT
TCTTGAAGGTGGCCGCCGTGGGCCGGAGGGTGCAGCTACGGGCAGCGGCGGCCGGCGCGCACCATCCTGCGGG
CGTTCCTGGAGAAAGCGCGCCAGACGCCACACAAGCCTTTTCTGCTCTTCCGCGACGAGACTCTCACCTACGCGC
AGGTGGACCGGCGCAGCAATCAAGTGGCCCGGGCGCTGCACGACCACCTCGGCCTGCGCCAGGGAGACTGCGTGG
CGCTCCTTATGGGTAACGAGCCGGCCTACGTGTGGCTGTGGCTGGGGCTGGTGAAGCTGGGCTGTGCCATGGCGT
GCCTCAATTACAACATCCGCGCGAAGTCCCTGCTGCACTGCTTCCAGTGTGCGGGGCGAAGGTGCTGCTGGTGT
CGCCAGAACTACAAGCAGCTGTGCAAGAGATACTGCCAAGCCTTAAAAAGATGATGTGTCCATCTATTATGTGA
GCAGAACTTCTAACACAGATGGGATTGACTCTTTCTGGACAAAGTGGATGAAGTATCAACTGAACCTATCCAG
AGTCATGGAGGTCTGAAGTCACTTTTCCACTCCTGCCTTATACATTTATACTTCTGGAACACAGGTCTTCCAA
AAGCAGCCATGATCACTCATCAGCGCATATGGTATGGAAGTGGCCTCACTTTTGTAAAGCGGATTGAAGGCAGATG
ATGTCATCTATATCACTCTGCCCTTTTACCACAGTGTGCACTACTGATTGGCATTACGGATGTATTGTGGCTG
GTGCTACTCTTGCTTGCCTTGCCTGACTAAATTTTTCAGCCAGCCAGTTTGGGATGACTGCAGAAAATACAACGTCCTG
TCATTAGTATATCGGTGAAGTGTTCGGTATTTATGCAACTCACCACAGAAACCAATGACCGTGATCATAAAG
TGAGACTGGCACTGGGAAATGGCTTACGAGGAGATGTGTGGAGACAATTTGTCAAGAGATTGGGGACATATGCA
TCTATGAGTTCTATGCTGCCACTGAAGGCAATATTGGATTTATGAATTATGCGAGAAAAGTTGGTGCTGTTGGAA
GAGTAACTACCTACAGAAAAAATCATAACTTATGACCTGATTAAATATGATGTGGAGAAAGATGAACCTGTCC
GTGATGAAAATGGATATTGCGTCAGAGTTCCCAAAGGTGAAGTTGGACTTCTGGTTTGCAAAATCACACAACCTA
CACCATTTAATGGCTATGCTGGAGCAAAGGCTCAGACAGAGAAGAAAAAAGTGAAGATGTCTTTAAGAAAGGAG
ACCTCTATTTCAACAGTGGAGATCTCTTAATGGTTGACCATGAAAATTTTCTATCTATTTCCACGACAGAGTTGGAG
ATACATTCCGGTGGAAAGGGGAAAAATGTGGCCACCCTGAAGTTGCTGATACAGTTGGACTGGTTGATTTGTCC
AAGAAGTAAATGTTTATGGAGTGCATGTGCCAGATCATGAGGGTCGCATTGGCATGGCCTCCATCAAAATGAAAG
AAAACCATGAATTTGATGGAAAGAACTCTTTCAGCACATTGCTGATTACCTACCTAGTTATGCAAGGCCCGGT
TTCTAAGAATACAGGACACCATTGAGATCACTGGAACCTTTTAAACACCGCAAAATGACCCTGGTGGAGGAGGGCT
TTAACCCTGCTGTCTATCAAAAGATGCCTTGTATTTCTTGGATGACACAGCAAAATGTATGTGCCTATGACTGAGG
ACATCTATAATGCCATAAGTGCTAAAACCTGAACTCTGAATATTCCAGGAGGATAACTCAACATTTCCAGAA
AGAACTGAATGGACAGCCACTTGATATAATCCAACCTTTAATTTGATTGAAGATTGTGAGGAAAATTTGTAGGAA
ATTTGCATACCCGTAAAGGGAGACTTTTTTAAATAACAGTTGAGTCTTTGCAAGTAAAAAGATTTAGAGATTATT
ATTTTTCAGTGTGCACCTACTGTTTGTATTTGCAAACTGAGCTTGTTGGAGGGAAGGCATTATTTTTTAAATAC
TTAGTAAATTAAATGAAC

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FIGURE 469

MLSAIYTVLAGLLFLPLLVLNLCPPYFFQDIGYFLKVAAGRRVRSYGQRRPARTILRAFLEKARQTPHKPFLLFR
DETLTYAQVDRRSNQVARALHDHLGLRQGDCAVLLMGNEPAYVWLWLGLVKLGACAMACLNYNIRAKSLLHCFQCC
GAKVLLVSPELQAAVEEILPSLKKDDVSIYYVSRTSNTDGIDSFLDKVDEVSTEPIPESWRSEVTFSTPALYIYT
SGTTGLPKAAMITHQRIWYGTGLTFVSGLKADDVIYITLPHYHSAALLIGIHGCIVAGATLALRTKFSASQFWDD
CRKYNVTVIQYIGELLRYLCNSPQKPNDRDHKVRLALGNGLRGDVWRQFVKRFGDICIYEFYAATEGNIGFMNYA
RKVGAVGRVNYLQKKIITYDLIKYDVEKDEPVRDENGVCVRVPKGEVGLLVCKITQLTPFNGYAGAKAQTEKKKL
RDVFKKGDLYFNSGDLLMVDHENFIYFHDRVGDTRWKGENVATTEVADTVGLVDFVQEVNVYGVHVPDHEGRIG
MASIKMKENHEFDGKKLFQHIADYLP SYARPRFLRIQDTIEITGTFKHKMTLVEEGFNPAVIKDALYFLDDTAK
MYVPMTEDIYNAISAKTLKL

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FIGURE 470

CTCTCTCTCTATCTCTCTCAGAAATGACAATTCTAGGTACAACCTTTTGGCATGGTTTTTTCTTTACTTCAAGTCGT
TTCTGGAGAAAGTGGCTATGCTCAAAATGGAGACTTGGAAGATGCAGAACTGGATGACTACTCATTCTCATGCTA
TAGCCAGTTGGAAGTGAATGGATCGCAGCATTCACTGACCTGTGCTTTTGAGGACCCAGATGTCAACACCACCAA
TCTGGAATTTGAAATATGTGGGGCCCTCGTGGAGGTAAAGTGCCTGAATTTTCAGGAACTACAAGAGATATATTT
CATCGAGACAAAGAAATTCTTACTGATTGGAAGAGCAATATATGTGTGAAGGTTGGAGAAAAGAGTCTAACCTG
CAAAAAATAGACCTAACCACTATAGTTAAACCTGAGGCTCCTTTTGACCTGAGTGTCACTATCGGGAAGGAGC
CAATGACTTTGTGGTGACATTTAATACATCACACTTGCAAAAGAAGTATGTAAAAGTTTTAATGCATGATGTAGC
TTACCGCCAGGAAAAGGATGAAAACAAATGGACGCATGTGAATTTATCCAGCACAAAGCTGACACTCCTGCAGAG
AAAGCTCCAACCGGCAGCAATGTATGAGATTAAAGTTTCGATCCATCCCTGATCACTATTTTAAAGGCTTCTGGAG
TGAATGGAGTCCAAGTTATTACTTCAGAACTCCAGAGATCAATAATAGCTCAGGGGAGATGGATCCTATCTTACT
AACCATCAGCATTTTGTAGTTTTTCTCTGTCTGCTCTGTTGGTCATCTTGGCCTGTGTGTTATGGAAAAAAGGAT
TAAGCCTATCGTATGGCCCAGTCTCCCCGATCATAAGAAGACTCTGGAACATCTTTGTAAGAAACCAAGAAAAA
TTTAAATGTGAGTTTCAATCCTGAAAGTTTCCTGGACTGCCAGATTATAGGGTGGATGACATTCAAGCTAGAGA
TGAAGTGAAGGTTTTCTGCAAGATACGTTTCCTCAGCAACTAGAAGAATCTGAGAAGCAGAGGCTTGGAGGGGA
TGTGCAGAGCCCCAACTGCCCATCTGAGGATGTAGTCGTCACCTCAGAAAGCTTTGGAAGAGATTATCCCTCAC
ATGCCTGGCTGGGAATGTCAGTGCATGTGACGCCCCATTCTCTCTCTTCCAGGTCCCTAGACTGCAGGGAGAG
TGGCAAGAATGGGCCTCATGTGTACCAGGACCTCCTGCTTAGCCTTGGGACTACAAACAGCACGCTGCCCCCTCC
ATTTTCTCTCCAATCTGGAATCCTGACATTGAACCCAGTTGCTCAGGGTCAGCCCATTCTTACTTCCCTGGGATC
AAATCAAGAAGAAGCATATGTACCATGTCCAGCTTCTACCAAACAGTGAAGTGTAAGAAACCCAGACTGAAC
TTACCGTGAGCGACAAAGATGATTTAAAAGGGAAGTCTAGAGTTCCCTAGTCTCCCTCACAGCACAGAGAAGACAA
AATTAGCAAAACCCCACTACACAGTCTGCAAGATTCTGAAACATTGCTTTGACCACTCTTCTGAGTTCAAGTGGC
ACTCAACATGAGTCAAGAGCATCCTGCTTCTACCATGTGGATTGGTGCACAAGGTTTAAAGGTGACCCAATGATT
AGCTATTT

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FIGURE 471

MTILGTTFGMVFSLLQVVSGESGYAQNGDLEDAELDDYSFSCYSQLEVNQSQHSLTCAFEDPDVNTTNLEFEICG
ALVEVKCLNFRKLQEIYFIETKKFLLIGKSNICVKVGEKSLTCKKIDLTITVKPEAPFDLSVIYREGANDFVVTF
NTSHLQKKYVKVLMHADVAYRQEKDENKWTHVNLSSSTKLTLQKRLQPAAMYKIKVRSIPDHYFKGFSEWSPSY
FRTPEINNSSGEMDPILLTISILSFFSVALLVILACVLWKKRIKPIVWPSLPDHKKTLEHLCKKPRKNLNVSFNP
ESFLDCQIHRVDDIQARDEVEGFLQDTFPQOLEESEKQRLGGDVQSPNCPSEDVVVTPESFGRDSSLTCLAGNVS
ACDAPILSSSRSLDCRESGKNGPHVYQDLLLSLGTNSTLPPFSLQSGILTLNPVAQGQFILTSLGSNQEEAYV
TMSSFYQNQ

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FIGURE 472

GCCCAGACCTATGGATTGAAAGCGTGTGCTTTACCCATCTGCTGTCTTGCTCCATCTGAGACCAGAGCCAAGATC
TGCCCAGGACTGGAATGCTTTCCCGAGTGGCTTGAGTTGGAGCCTGGGACTAGGAGCAGCCTTATTGAGGTACAA
TTCATGTGCTTGTGGGTTTGGATGGCACAATCTGTGTCTGGGCTAAGGAAAGCAGACTTGGCACCAACATTAACC
CTGACAGATCCAGGCATCTATTCCAGGAACTGGAAGCCAAGCGCAACAGGTGCTTGGAGGTCA**ATG**ATCAGCC
CAGACCCCAGGCCCTCCCCTGGCTTGGCCCGGTGGGCTGAGAGCTATGAGGCCAAGTGTGAGCGCAGGCAAGAGA
TCCGTGAAAGCCGCCGCTGCCGTCCCAATGTGACCACTTGCCGCCAGGTGGGGAAGACGCTGAGGATCCAACAGA
GAGAGCAGCTCCAGAGAGCTCGACTGCAGCAGTTCTTCAGGAGGAGGAACCTGGAGCTAGAGGAGAAGGGCAAAG
CGCAGCATCCCCAGGCCAGGGAGCAAGGGCCCTCCAGGCGGCCAGGACAGGTGACAGGCACCAGCTCTGAAGTCT
TTCCAGCCCAGCATCCTCCTCCCTCAGGCATCTGCAGGGATCTGTCTGACCACCTCTCCTCACAGGCTGGGGGCC
TTCTCCACAGGACACTCCCATCAAGAAGCCACCCAAACACCACCGTGGTACTCAGACAAAGGCAGAAGGACC
CAATTAAGAACGATGCCAGTCAGCAAAACCAATTACGGAGTTGCAGTTCTGGATAAGGAAATCATCCAGCTTTCTG
ATTACCTCAAAGAGGCCCTACAAAGGGAGCTGGTCCTAAACAGAAAATGGTGATTCTCCAAGACCTACTGTCCA
CTCTGATTTCAGGCCTCTGACAGCTCTTGGAAGGGACAGCTTAATGAAGACAAACTGAAGGGGAAACTGAGATCCT
TAGAAAACCAGCTATACACCTGTACCCAGAAATACTCCCCCTGGGGAATGAAAAAAGTACTACTGGAGATGGAAG
ACCAGAAAAACAGCTATGAGCAGAAGGCCAAGGAGTCACTGCAGAAAGTGCTGGAGGAGAAAATGAATGCAGAGC
AGCAACTACAGAGCACACAGCGATCCCTGGCCCTGGCAGAGCAGAAGTGTGAAGAGTGGAGGAGCCAGTATGAGG
CTCTGAAGGAGGACTGGAGGACCCCTGGGACCCAGCACAGGGAGCTGGAGAGCCAACCTCCACGTGCTTCAGTCCA
AACTGCAGGGAGCAGATAGCAGGGACTTACAGATGAACCAGGCCCTGCGATTTTTGGAAAATGAGCACCAGCAAC
TGCAGGCCAAGATTGAATGCCTGCAAGGGGACAGAGACCTGTGCAGCTTGGATACCCAGGACCTACAAGATCAAC
TAAAAAGGTCAGAGGCAGAGAACTCACCTGGTGACCAGAGTACAGCAGTTGCAGGGTTTGCTTCAAAATCAAT
CCTTACAGCTTCAAGAACAGGAGAACTCTTAACAAAGAAAGATCAGGCTTTGCCCGTGTGGAGTCCAAAGTCCT
TCCCTAACGAAGTGGAGCCTGAGGGTACAGGGAAGGAGAAAGACTGGGATCTCAGAGACCAGCTGCAAAAGAAGA
CTTTGCAGCTCCAGGCCAAGGAAAAGGAGTGCAGAGAACTGCATTAGAAATTAGACAACCTCAGTGACGAGTATC
TCTCCTGCCTGCGTAAGCTGCAGCACTGTGAGAGAGCTGAACCAGAGCCAGCAGCTGCCTCCCAGAAGGCAAT
GTGGGCGATGGCTCCCACTGCTGATGGTGGTGATTGCTGCAGCACTGGCAGTGTTCTGGCCAATAAAGACAACC
TGATGATC**TGA**ATAATTTGTGACAACTGCCTTGGGTGAAAATCAGAAGCAAGCAACTCAGCGAAAAACTCAGAAG
GTTTGGGTACATTACAGCTTGGGTTTTCCAACCTGACTTAGGATTTCTGACTTTTTATTAAATTTCTTAACCTACTG
TAAATAAACTTCACCTGACCAGATTGTTCTCTCA

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FIGURE 473

MISPDPRPSPGLARWAESYEAKCERRQEIRESRRCRPNVTTCRQVGKTLRIQQREQLQRARLQQFFRRRNLELEE
KGKAQHPQAREQGPSRRPGQVTGTSSEVFPAQHPPPSGICRDLSDDLSSQAGGLPPQDTPIKKPPKHHRGTQTKA
EGPTIKNDASQQTNYGVAVLDEIQLSDYLKEALQRELVLKQKMVILQDLLSTLIQASDSSWKGQLNEDKLKKGK
LRSLENQLYTCTQKYS PWGMKKVLEMEDQKNSYEQKAKESLQKVLEEKMNAEQQLQSTQQRSLALAEQKCEEWS
QYEALKEDWRTLGTQHRELESQ LHVLSKLGADSRDLQMNQALRFLENEHQQLQAKIECLQGDRDLCSLDTQDL
QDQLKRSEAEKLT LVTRVQQLQGLLQNSQLQEQEKLLTKKDQALPVWSPKSFPNEVEPEGTGKEKDWDLRDQL
QKKTLLQAKEKECRELHSELNLSDEYLSCLRKLQHCREELNQSQQLPPRRQCGRWLPVLMVIAAALAVFLAN
KDNLMI

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FIGURE 474A

GGCTCCAGCTCCAGCAGCCATGGCGCCTTGTGTCAGCCTCCTTTGTGGGTGGAGAAGAGCTCAGCCAACCTTGGAT
GGAGCGTCGGTGAAGCAAGAGCTCAGAGGGGAGAGGGGCTGGCCTGGCATGACCGTCGCCAGTCCCCCACCTGG
CTGGGTGATGTCCCCCGCCCCGGTTCTGGGGCCCCCTTGGCAGTACC**ATCG**AGCAACTGACAACCCTCCACGGC
CTGGGGACCCTGGAGCCATGGAGCCATGGGCACTGCCACCTGGCATAGCTGGACTCCAGGTCGAGGGGGTGAAC
CTAGCAGTGCAGCCCCAAGCATCGCTGATACTCCTCCGGCAGCTCTGCAGCTTCAAGAACTGAGGTCTGAGGAGA
GTTCCAAGCCCCAAGGAGACGGGAGCTCCAGGCCCGTGGGGGAACTGACCCTGAAGGAGCAGAGGCTTGTCTGC
CCAGCCTGGGGCAGCAAGCATCCAGCTCTGGACCCGCTGCCAGAGGCCAGAGGATGAGGAAGTGGAGGCTTTC
TGAAGGCCAAGCTGAATATGAGCTTTGGGGACAGGCCCAATCTGGAGCTGCTGAGGGCCCTGGGGGAGCTGCGGC
AGCGCTGTGCCATCCTTAAGGAGGAAAACCAGATGCTGAGGAAGAGCAGCTTCCCTGAGACAGAAGAGAAGGTGC
GGAGGCTGAAGCGGAAGAACGCCGAGCTGGCGGTCAATTGCCAAGCGCCTGGAGGAGAGGGCCCCGAAAGCTGCAGG
AAACGAACCTGAGGGTGGTGAGTGCCCCCTTGCCCCGGCCGGGACCAGCTTGGAGTTGTGTGCGAAGGCCCTAG
CCCCCAGCGAGCCCCGGGACCTCAGTGAGACAGCCAGTGCAGTCTGGCCAAGGACAAGCAGATTGCTGCCTTGC
AGCGGGAGTGCAGGGAGCTGCAGGCCAGGCTCACTCTGGTGGGCAAGGAGGGTCCCCAGTGGCTCCACGTGCGGG
ACTTCGATCGGCTGCTGCGCAGTCCAGCGGGAGGTGCTGCGGCTGCAGAGGCAGATCGCGCTGCGCAACCAGC
GGGAGACGCTCCCGCTCCCGCCGTCTGGCCCCCGGGCCCTGCTCTCCAGGCCAGAGCAGGGGCGCCTGCTCCCC
GGGCCCCGGGAGAGGCCACGCCCCAGGAGGATGCGGACAACCTACCCGTGATTCTAGGGGAGCCAGAGAAAAGAGC
AGAGGGTGCAGCAGCTGGAATCGGAGCTCAGCAAGAAGCGGAAGAAATGCGAGAGCCTGGAGCAGGAAGCCCGGA
AAAAGCAGAGGCGATGTGAGGAGCTGGAAGTGCAGCTGAGACAAGCGCAGAATGAGAATGCCCCGCTGGTGGAGG
AGAAGTCCCGGCTCAGTGGGAGAGCCACAGAGAAGGAGCAGGTGGAGTGGGAGAATGCGGAGCTGAGGGGCCAGC
TCCTGGGGGTGACACAGGAGAGGGACTCAGCCCTTCGCAAGAGCCAGGGCCTGCAGAGCAAGCTGGAGAGCCTGG
AGCAAGTGTGAAGCACATGCGGGAGGTGGCCAGCGGCGGCAGCAGCTGGAGGTGGAGCATGAACAGGCTCGGC
TCAGCCTACGGGAGAAGCAGGAGGAGTCCGGAGACTGCAGCAGGCCAGGCTGAAGCCAGAGGGAACATGAAG
GAGCCGTGCAGCTGCTGGAGTCTACCTTGGATTCCATGCAGGCCCGGGTTCGAGAGCTCGAAGAACAGTGCCGCA
GCCAAACCGAGCAGTTCAGCCTCCTGGCACAAGAACTCCAGGCTTTCCGCTGCACCCGGGGCCCTTGGATCTGC
TCACATCTGCCCTGGACTGTGGGAGCCTTGGAGACTGCCACCACCCCCCTGCTGCTGCTCCATTCCCCAGCCTT
GCCGGGGGTCTGGCCCCAAAGACCTTGACCTCCCGCCGGGCTCCCCCTGGGCGCTGCACCCCAAAGTCTTCCGAGC
CTGCCCCTGCCACTCTCACTGGGGTCCCTCGAAGGACAGCCAAGAAGGCAGAGTCTCTCTCCAAGTCTTCCACT
CCGAGTCCATCCACAACAGCCCCAAGTTCATGCCCTACACCTGAGGTGGACACAGCCAGTGGAGTAGAGGAGCTGG
AGGCAGACAGTGTCTCCCTGCTCCCAGCTGCGCCAGAGGGCAGCCGGGGAGGAGCCAGGATCCAGGTCTTCCCTAG
CACGTTATAGCTACAACCCCTTTGAGGGTCCCAATGAGAATCCAGAAGCAGAGCTTCCGCTGCAGCTGGCGAGT
ACATCTACATCTATGGCAACATGGATGAGGATGGCTTTTTTGAAGGAGAGCTCATGGATGGCCGAAGGGGCTGG
TCCCTTCCAATTTGTAGAGCGTGTGTGCGATGATGACCTCCTGACCTCCCTCCCTCCAGAGCTGGCCGATTTGT
CCCACAGCTCAGGCCCTGAACTCAGTTTCTGAGTGTAGGTGGGGGTGGCAGCAGTAGCGGGGGCCAAAGCAGTG
TGGGAAGGAGCCAGCCCAGACCTGAGGAGGAGGATGCAGGGGACGAGCTCAGTCTGAGCCCATCACCGGAGGGCC
TGGGCGAGCCTCCTGCCGTGCCTTACCCCGCCGTCTGGTGGTCTCAAGCAGCTGGCCCCACAGCGTGGTGCTGG
CCTGGGAGCCGCTCCTGAGCAAGTGGAGCTACACGGCTTCCATATCTGTGTGAATGGGGAGCTGCGACAGGCC
TGGGGCCTGGGGGCCACCCAAGGCCGTGCTGGAGAACCTGGACCTGTGGGCCGGGGCCCTTCACATTTCTGTCC
AGGCCCTGACTAGCCGGGGCAGCTCTGACCCACTGCGCTGTTGCTTGGCGGTGGGTGCCCCGGGCCGGAGTGGTGC
CCAGCCAGCTGCGGGTCCATCGGTTGACAGCCACATCTGCTGAGATCACCTGGGTGCCCGGCAATAGCAACTTGG
CCCATGCCATCTACCTCAATGGGGAAGAAATGCCACCTGCCAGCCCCAGTACCTACTGGGGCCACCTTCTGCCACT
TACGGCCTGGCACACCCTATCAGGCCCAAGTGGAGGCTCAGCTCCCACCCCAAGGGCCCTGGGAACAGGCTGGG
AGAGGCTGGAGCAGCGGGCTGCCACCCTGCAGTTCACCACACTCCCAGCAGGCCACCTGATGCCCTCTGGATG
TGCAGATCGAGCCTGGGGCCCTCCCTGGGATCTTGATCATCAGTTGGCTCCCAGTCACCATCGATGCTGCTGGCA
CATCCAACGGTGTCCGGGTACAGGCTATGCCATCTACGCTGATGGGCAGAAGATCATGGAGGTGGCCTCACCCA
CGGCAGGCAGTGTACTGGTGGAGTTGTCCAGCTGCAGCTGCTGCAGGTGTGTGCTGAGGTGGTCTGCGCACCA
TGTCGCCCCACGGGGAGTCGGCGGACTCCATCCCGGCTCCTTACTCCCGCCCTGGCTCCGGCCAGCCTGCCAG
CCCAGTCTCCTGCCCTCACCGCACCCAAGCCAGAGGCCAGAGCGCCCTTGCTTCAGCCTCCCCAGGGCCTG
GAGACCCAGCTCTCCTCTCCAGCACCTGCTCCCCCTTGGAACTCAAGAGCCTCCAGGAGCACCCCTGCAAGCC

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FIGURE 474B

CTTCCAGAGAGATGGCAAAGGGTCCACGAGGACCCTCCAGCACCTTGCTCCCAGGAGGAGGCTGGGGCAGCAG
TGCTGGGCACCTCAGAGGAGAGGACAGCCAGCACATCTACCCTGGGTGAGAAGGACCCTGGCCCCGAGCTCCCT
CACTGGCCAAGCAGGAGGCCGAGTGGACTGCAGGAGAGGCCTGTCCGGCCTCCAGCTCCACCCAGGGAGCACGGG
CCCAGCAGGCGCCAAATACCGAGATGTGCCAAGGAGGAGACCCAGGGTCTGGGCTGAGGCCAGGGCTGAGAAGG
AGGACACAGCAGAGCTTGGGGTTCATCTGGTGAACCTCCCTCGTGGACCACGGCCGCAACTCAGACCTGTGACACA
TCCAGGAGGAAGAGGAAGAGGAGGAGGAGGAGGAAGAGGAGCTGGGTTCAGGACTTGCTCCTTCCAGAAGC
AGGTTGCTGGCAACAGCATCAGGGAGAATGGGGCCAAGTCCCAGCCCCGACCCCTTTTGTGAGACTGACAGCGATG
AGGAGATCTTGGAGCAGATCCTGGAGCTGCCCCCTCCAGCAGTTCTGTAGCAAGAAGCTCTTTAGCATCCCGGAGG
AGGAGGAAGAGGAAGAGGAGGACGAGGAGGAGGAGAAGTCTGGGGCAGGCTGTTCTTCCGAGACCCTGGCCCCG
CTGAACCTGCATTGCTGGGGCTGGGCTGTGACAGTGGTCAGCCCCGAAGACCTGGCCAGTGTCCCTTGTCTCCTG
AGTCTCCAGGGCTGGAGACTGCCTGGAAGACATGCCTGGATTAGTTGGTGAAGCAGCCGGAGGAGAGGAGGGG
GCTCCCCTGAGAAGCCCCCAAGCCGACGGCGGCTCCAGATCCCCGAGAACACTGCAGCCGACTTCTCAGCAACA
ATGGGGCCCCAGGCCTCTGGACGACTGGGCCCCACACGGGAGAGGGGTGGCCTCCCCGTAATTGAGGGCCCCAGGA
CTGGACTAGAGGCTAGCGGGAGAGGCCGGCTGGGGCCTTCCCGGAGGTGCTCCCGTGGCCGGGCGCTGGAGCCTG
GCCTGGCCAGCTGCCTTTCCCCCAAGTGCTTGGAAATCAGCATTGAATATGATTCCGAGGATGAGCAGGAGGCGG
GCAGCGGGGGCATCAGCATCACCAGCTCCTGCTACCCTGGAGATAGGGAGGCCTGGGGCACAGCAACTGTAGGAA
GGCCCAGGGGGCCTCCGAAGGCCAATTCAGGCCCCAAGCCCTACCCACGCCTCCAGCCTGGGAGAAAGGGGAAC
CAGAGCGGAGAGGCCGAGTGCAGCGGGCAGAGCCAAGGAGCCACTCTCCGGGCAACAGAGACCGGAGAGGCCA
GAGGGCAGGACGGCTCTGGGCGGAGGGGCCCCAGAAGAGAGGTGTCCGAGTCTCAGGCCAAGCACTGCAGAGC
TAGTCCCTGCGAGGAGCCCTCAGAAACACTGGCTTACCAGCACCTACCCGTGAGGATCTTTGTGGCTCTGTTTG
ACTATGACCCCGTGTCAATGTGCGCCAATCCTGATGCTGGAGAAGAAGAGCTTCCCTTCCGAGAGGGTCAGATCC
TGAAGGTGTTTGGGGACAAGGATGCCGATGGCTTCTACCAGGGCGAAGGTGGGGGCCGGACAGGCTACATTCCCT
GCAACATGGTGGCTGAGGTGGCTGTGGACAGCCCTGCTGGGAGACAGCAACTGCTCCAGCGGGGTATTTGTCCC
CAGATATTCTCCTTGAGGGCTCAGGGAATGGTCCGTTTGTGTACTCCACAGCCACACAACCTGGGCCTCCTCCCA
AGCCCCGCCGCTCCAAGAAAGCTGAGTCGGAAGGCCCTGCCAGCCCTGTCCAGGCCCCCTAAGCTGGTCCCCT
CTGCTGACCTGAAAGCTCCCCACTCCATGGTGGCTGCATTTGACTACAACCCCCAGGAGAGTTCCCCCAATATGG
ACGTGGAGGCAGAGCTGCCCTTCCGGGCAGGGGATGTCACTTACTGTGTTTGGGGGCATGGACGATGACGGTTTCT
ACTATGGGGAATTAAATGGACAAAGGGGCCTGGTTCCATCCAACCTTCCCTGGAGGGCCCTGGGCCTGAGGCAGGCG
GCCTGGACAGGGAACCCAGGACACCCAGGCTGAGAGTCAGAGAACGAGGAGGAGAAGAGTCCAGTGCTAGATGG
AGATAGATATATGTAGAGAGAGCAACATGACTGGGGCTGCACCACACAAGGGTCCCCAGGGCCCCCAGGTGGGCC
TTGTACCCCCAGCTCTGGCAGCGCCCCCAGGATTGAACGTGGGGAGCCCCAGGGCAGAAGCGAGAAGGTGTGGGT
TTTTTTCCAAGGGGAAGCAGCTCCTCAGGAGGATGGGCTCTGGGAAGAAGGAGTGAAGCTGTGGCCCATCTGCA
GGCAGAAGAGGCCCTGAGAGGCCCCAGATCACTGTTTTTGTGAGCAGGGAAGGCTCAGAATGGGCCAGAGCC
CCCGTTCTTTTGCCTTAACACTGTGGCATTGAGAGGGAATCAAAGAGCCTTGGTGAAGGTGAGAGCTAAATGGCT
CCTTAAGGATGAACTTTTTAGAGAAGCACCTTCTCCTACAGGAGGGGAACTGAGCCACAGTGAGTATGTAAC
TTGACCAAGGTCAGTGGCCAGGACTGGACCCAGGACCCTCGCGTCCCTGGTCCACCCACCTCGTCTACTAGTGTC
CCACAGTGCTGCGCTAGTCCCTTTTGCCACCCTTCCAGTCCCAGGACGGGCCCTGGAGGGAGAAAGGAGCCTGT
GCCCCCTGATGGCTCTGGCTGTCTGATCCTGTCTTCCCTCCCCTGAAGGAAAGTTTGACTGGATTTTATTGGA
GCCCCATCTCCCCAGCGGGCAGGCGGGCGGAGCCTGTATATATGTATATACTCAGTGCCTCAGTTCAGCTTCCTC
CACCTCGCTTCCACTGCACAGGCCCAGGAAGGAGAAAGGCCAAGCCAAAGTGGGGCCCCACCTGCCCCCGTCGTG
CTCCATCCTTCCCTGCCGGGGCTGCTGGCCCCCTGTAAGGTCCCGCCCCCAAAGACCTGGGGCCAGCGGGGCCG
AAAGCGGAGTTGGGTTTGTCTATTTTGTCTATTGGATTCAAGTCTTTTGCATAGTTTTTTTCTAACCCCTGTTG
GAGTCCAGGGGCTGGAGAAAAGGACAGATTTATGCAGCTATTTTCATACATTCCCTGTTTCAGAGTGGGGTAGGGG
TTTTCCGCCGTTACCCGATCCAATCCATCCCCACCCTTTGAGGGGTGAGTGTGTCTTTGCATGTTTCTTTTGCT
GTGGTGGGAGATAGTTTGAAGTGAACCCCCACCTTGACCTTGGTCTCCAGGGGTGTGGAATGGTGGGGGAATTTGT
TAAAAAGACATTTTATTATAATAAAGTCTATTTTACAAAAA

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FIGURE 475

MEQLTTLP RP GD P GAME P WAL P T W H S W T P G R G G E P S S A A P S I A D T P P A A L Q L Q E L R S E E S S K P K G D G S S R P V G G T
D P E G A E A C L P S L G Q Q A S S S G P A C Q R P E D E E V E A F L K A K L N M S F G D R P N L E L L R A L G E L R Q R C A I L K E E N Q M L R K S
S F P E T E E K V R R L K R K N A E L A V I A K R L E E R A R K L Q E T N L R V S A P L P R P G T S L E L C R K A L A R Q R A R D L S E T A S A L L
A K D K Q I A A L Q R E C R E L Q A R L T L V G K E G P Q W L H V R D F D R L L R E S Q R E V L R L Q R Q I A L R N Q R E T L P L P P S W P P G P A L
Q A R A G A P A P G A P G E A T P Q E D A D N L P V I L G E P E K E Q R V Q Q L E S E L S K K R K K C E S L E Q E A R K K Q R R C E E L E L Q L R Q A
Q N E N A R L V E E N S R L S G R A T E K E Q V E W E N A E L R G Q L L G V T Q E R D S A L R K S Q G L Q S K L E S L E Q V L K H M R E V A Q R R Q Q
L E V E H E Q A R L S L R E K Q E E V R R L Q Q A Q A E A Q R E H E G A V Q L L E S T L D S M Q A R V R E L E E Q C R S Q T E Q F S L L A Q E L Q A F
R L H P G P L D L L T S A L D C G S L G D C P P P P C C C S I P Q P C R G S G P K D L D L P P G S P G R C T P K S S E P A P A T L T G V P R R T A K K
A E S L S N S S H S E S I H N S P K S C P T P E V D T A S E V E E L E A D S V S L L P A A P E G S R G G A R I Q V F L A R Y S Y N P F E G P N E N P E
A E L P L T A G E Y I Y I Y G N M D E D G F F E G E L M D G R R G L V P S N F V E R V S D D D L L T S L P P E L A D L S H S S G P E L S F L S V G G G
G S S S G G Q S S V G R S Q P R P E E D A G D E L S L S P S P E G L G E P P A V P Y P R R L V V L K Q L A H S V V L A W E P P P E Q V E L H G F H I
C V N G E L R Q A L G P G A P P K A V L E N L D L W A G P L H I S V Q A L T S R G S S D P L R C C L A V G A R A G V V P S Q L R V H R L T A T S A E I
T W V P G N S N L A H A I Y L N G E E C P P A S P S T Y W A T F C H L R P G T P Y Q A Q V E A Q L P P Q G P W E P G W E R L E Q R A A T L Q F T T L P
A G P P D A P L D V Q I E P G P S P G I L I I S W L P V T I D A A G T S N G V R V T G Y A I Y A D G Q K I M E V A S P T A G S V L V E L S Q L Q L L Q
V C R E V V R T M S P H G E S A D S I P A P I T P A L A P A S L P A R V S C P S P H P S P E A R A P L A S A S P G P G D P S S P L Q H P A P L G T Q
E P P G A P P A S P S R E M A K G S H E D P P A P C S Q E E A G A A V L G T S E E R T A S T S T L G E K D P G P A A P S I A K Q E A E W T A G E A C P
A S S T Q G A R A Q Q A P N T E M C Q G G D P G S G L R P R A E K E D T A E L G V H L V N S L V D H G R N S D L S D I Q E E E E E E E E E E E E E E L
G S R T C S F Q K Q V A G N S I R E N G A K S Q P D P F C E T D S D E E I L E Q I L E L P L Q Q F C S K K L F S I P E E E E E E E E E E E E E E K S G A
G C S S R D P G P P E P A L L G L G C D S G Q P R R P G Q C P L S P E S S R A G D C L E D M P G L V G G S S R R R G G G S P E K P P S R R R P P D P R
E H C S R L L S N N G P Q A S G R L G P T R E R G G L P V I E G P R T G L E A S G R G R L G P S R R C S R G R A L E P G L A S C L S P K C L E I S I E
Y D S E D E Q E A G S G G I S I T S S C Y P G D R E A W G T A T V G R P R G P P K A N S G P K P Y P R L P A W E K G E P E R R G R S A T G R A K E P L
S R A T E T G E A R G Q D G S G R R G P Q K R G V R V L R P S T A E L V P A R S P S E T L A Y Q H L P V R I F V A L F D Y D P V S M S P N P D A G E E
E L P F R E G Q I L K V F G D K D A D G F Y Q G E G G G R T G Y I P C N M V A E V A V D S P A G R Q Q L L Q R G Y L S P D I L L E G S G N G P F V Y S
T A H T T G P P P K P R R S K K A E S E G P A Q P C P G P P K L V P S A D L K A P H S M V A A F D Y N P Q E S S P N M D V E A E L P F R A G D V I T V
F G G M D D D G F Y Y G E L N G R G L V P S N F L E G P G P E A G G L D R E P R T P Q A E S Q R T R R R R V Q C

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FIGURE 476

ACCACTGCTGGCTTTTTGCTGTAGCTCCACATTCCTGTGCATTGAGGGGTTAACATTAGGCTGGGAAGATGACAA
AACTTGAAGAGCATCTGGAGGGAATTGTCAATATCTTCCACCAATACTCAGTTCGGAAGGGGCATTTGACACCC
TCTCTAAGGGTGAGCTGAAGCAGCTGCTTACAAAGGAGCTTGCAAACACCATCAAGAATATCAAAGATAAAGCTG
TCATTGATGAAATATTCCAAGGCCTGGATGCTAATCAAGATGAACAGGTCGACTTTCAAGAATTCATATCCCTGG
TAGCCATTGCGCTGAAGGCTGCCCATTACCACACCCACAAAGAGTAGGTAGCTCTCTGAAGGCTTTTTACCCAGC
AATGTCCTCAATGAGGGTCTTTTCTTCCCTCACCAAAACCCAGCCTTGCCCGTGGGGAGTAAGAGTTAATAAAC
ACACTCACGAAAAGTT

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FIGURE 477

MTKLEEHLEGIVNIFHQYSVRKGFDTLSKGELKQLLTKE
LANTIKNIKDKAVIDEIFQGLDANQDEQVDFQEFI
SLVAIALKAAHYHKE

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FIGURE 478

TGAATTCGGGAAGCGCCGAGCGGCGGATCCGGCGGGCTGCTGCAGCCCGGGCGGGCTGCCGAGAAGGAGGGAGGGG
AAACACAAAGCCGGCTACGCGCTGCGAGATAACAAGAGTAATCCACAGACTTAAAACATGAGCTCAGATGCCAGC
CAAGGCGTGATTACCACTCCTCCTCCTCCAGCATGCCTCACAAAGAGAGATATTTTGACCGCATCAATGAAAT
GACCCAGAATACATTAGGGAGAGGAACATGTCTCCTGATCTACGACAAGACTTCAACATGATGGAGCAGAGGAAA
CGAGTTACTCAGATCCTGCAAAGTCCTGCCTTTTCGGGAAGACTTGGAATGCCTTATTCAAGAACAGATGAAGAAA
GGCCACAACCCAACTGGATTACTAGCATTACAGCAGATTGCAGATTACATCATGGCCAATTCTTTCTCGGGTTTT
TCTTCACCTCCTCTCAGTCTTGCGCATGGTCACACCTATCAATGACCTTCCTGGTGCAGATACATCCTCATATGTG
AAGGGAGAAAACTTACTCGCTGTAACTTGCCAGCCTGTACAGACTTGTAGACTTGTTTGGATGGGCACACCTG
GCAAATACCTATATCTCAGTAAGAATAAGTAAGGAGCAAGACCACATTATAATAATTCCCAGAGGCCTATCTTTT
TCTGAAGCTACAGCCTCCAATTTGGTGAAAGTCAATATAATAGGAGAAGTGGTTGACCAGGGAAGTACCAATTTG
AAAATTGACCATACAGGATTCACTCCCCATGCTGCAATCTATTCAACACGTCCTGATGTAAAGTGTGTGATACAC
ATCCATACCTTTGCAACAGCAGCTGTATCCTCCATGAAATGTGGGATCCTTCCAATTTCTCAAGAGTCTCTTCTT
CTGGGAGATGTTGCCTATTATGACTACCAAGGGTCACTTGAAGAACAGGAGGAGAGAATTCAACTGCAGAAGGTT
CTGGGACCAAGTTGTAAGGTGCTGGTACTCAGGAATCATGGTGTGGTTGCACTTGGAGAAACATTAGAGGAGGCT
TTTCATTATATTTTTAATGTGCAACTAGCCTGTGAGATTCAAGTGCAGGCCCTAGCAGGTGCAGGTGGAGTAGAC
AATCTCCATGTACTGGACTTTTCAAGAAGTATAAAGCTTTCACTTACACTGTAGCAGCGTCTGGTGGAGGAGGTGTG
AATATGGGTTCCCATCCAAAATGGAAGGTTGGCGAAATTGAGTTTGAAGGGCTTATGAGGACTCTGGACAACCTG
GGGTATAGAACAGGCTATGCTTACAGGCATCCTCTCATTTCAGAGAGAAGCCTAGGCACAAGAGTGATGTGGAATC
CCAGCAACTGTGACTGCTTTTTCTTTTGAAGACGATACAATGCCACTCTCTCCTCTCCAAATACATGGCACAAGA
GGCAACAAGCGTGAAAAAACAAGATGGCTGAACTACCAAATACTTACATGAAAGTGAATGTGCCTGAGGAGTCT
CGGAACGGAGAAACCAGTCCCCGAACCAAATCACGTGGATGAAAGCAGAAGACTCATCTAAAGTTAGTGGTGGA
ACACCTATCCAAATTGAAGATCCAAATCAGTTTGTTCCTTTAAACACAAACCCGAATGAGGTACTAGAAAAGAGA
AATAAGATTCCGGGAACAAAATCGATATGACTTGAAAACAGCAGGACCACAATCTCAGTTGCTTGCTGGAATTGTT
GTGGATAAGCCACCTTCTACTATGCAATTTGAAGATGATGATCATGGCCCACCAGCTCCTCCTAACCCATTTAGT
CATCTCACAGAAGGAGAACTTGAAGAGTATAAGAGGACAATCGAACGTAAACAACAAGGCCTAGAAGAAAACCAT
GAGCTGTTTTCCAAGAGCTTCATCTCCATGGAAGTGCCTGTTCATGGTAGTAAATGGCAAGGATGATATGCATGAT
GTTGAAGATGAGCTTGCTAAGCGAGTGAGTAGGTTAAGCACAAAGTACAACCATAGAAAACATCGAGATTACTATT
AAGTCTCCAGAGAAAATCGAAGAAGTCCTGTACCTGAAGGCTCCCCTTCAAAATCGCCATCCAAGAAAAAGAAG
AAATTCGCACTCCTTCTTTTCTGAAAAAGAACAAAAAAAGGAGAAAGTTGAGGCCTAAATAAAGTCTTTTTAT
AATTATTATTATAACAATGTGACATTGCACATCTAAATACCACATTTAAGTTGATCATTAAATATGCAATGGTAGA
TCAGATTGGGGGATGTAGCAAACCTGGACTTTAAGAACTGGAAAGAGGTTTTACAAAAGAAAACTTCAAGATTCA
TCTCTCATTTTATATGTCCAGAAATGGCTTTGGAATTTAAGCAATTACTAGTTTTAATTAGCTCTGCCCTCATG
AAGTTTATTATT

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FIGURE 479

MSSDASQGVITTPPPPSMPHKERYFDRINENDPEYIRERNMSPDLRQDFNMMEQRKRVTQILQSPAFREDLECLI
QEQMKKGHNPTGLLALQQIADYIMANSFSGFSSPPLSLGMVTPINDLPGADTSSYVKGEKLTRCKLASLYRLVDL
FGWAHLANTYISVRISKEQDHIIIPRGLSFSEATASNLVKVNIIGEVVDQGSTNLKIDHTGFSPHAAIYSTRPD
VKCVIHIHTLATAAVSSMKCGILPISQESLLLGDVAYYDYQGSLEEQEERIQLQKVLGSPCKVLVLRNHGVVALG
ETLEEFHYIFNVQLACEIQVQALAGAGGVDNLHVLDFOKYKAFTYTVAAAGGGGVNMGSHPKWKVGEIEFEGLM
RTLDNLGYRTGYAYRHPLIREKPRHKSDEIPATVTAFSFEDDTMPLSPLQIHGTRGNKREKTRWLNSPNTYMKV
NVPEESRNGETSPRKITWMKAEDSSKVSGGTPIQIEDPNQFVPLNTNPNEVLEKRNKIREQNRYDLKTAGPQSQ
LLAGIVVDKPPSTMQFEDDDHGPPAPPNPFSLTEGELEEYKRTIERKQQGLEENHELFSKSFISMEVPVMVNG
KDDMHDVEDELAKRVSRLSTSTTIENIEITIKSPEKIEEVLSPGSPSKSPSKKKKKFRTPSFLKKNKKKEKVEA

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FIGURE 480

CTTTCGGTCCCCTTGCTTCGTCTTCGCTTTTCTTTCTACTTATTCTTATCTGTGTCTTTTCGCTTTGTTTGCCTCT
CCGTCTGTTTTCCCTCAGGGCCCCCTTCTTTCCTCGACCTTTTCAAATCGCAAATATGGCGCCGGAGCGGCTGCG
GAGCCGGGCGCCCTCCGCCTTCAAGTTGCGGGGCTTGCTGCTCCGTGGTGAAGCTATTAAGTACCTCACAGAAGC
TCTTCAGTCTATCAGTGAATTAGAGCTTGAAGATAAACTGGAAAAGATAATTAATGCAGTTGAGAAAGCAACCCTT
GTCATCAAACATGATTGAACGATCTGTGGTGGAAAGCAGCAGTCCAGGAATGCAGTCAGTCTGTTGATGAAACTAT
AGAGCACGTTTTCAATATCATAGGAGCATTGATATTCCACGCTTTGTGTACAATTCAGAAAGAAAAAATTTCT
TCCTCTGTTAATGACCAACCACCCTGCACCAAATTTATTTGGAACACCAAGAGATAAAGCAGAGATGTTTCGTGA
GCGATATAACATTTTGCACCAGAGGACCCACAGGCATGAATTATTTACTCCTCCGGTGATAGGTTCTCACCTGA
TGAAAGCGGAAGCAAATTCAGCTTAAACAATAGAAACCTTATTGGGTAGTACAACCAAAATCGGAGATGCGAT
TGTTCTTGGAATGATAACGCAGTTAAAAGAGGGGAAAATTTTTCTGGAAGATCCTACTGGAACAGTCCAAC TAGA
CCTTAGTAAAGCTCAGTTCCATAGTGGTTTATACACAGAGGCATGCTTTGTCTTAGCAGAAGGTTGGTTTGAAGA
TCAAGTGTTTCATGTCAATGCCTTTGGATTTCACCCACTGAGCCCTCTAGTACTACTAGGGCATACTATGGAAA
TATTAATTTTTTTGGAGGTCTTCTAATACATCTGTGAAGACTTCTGCAAACTAAAACAGCTAGAAGAGGAGAA
TAAAGATGCTATGTTTGTGTTTTATCTGATGTTTGGTTGGACCAGGTGGAAGTATTGGAAAACTTCGCATAAT
GTTTGCTGGTTATTACACGACCTCCAACCTGCTTTATCTGTGTGGTAATTTTTCATCTGCACCATATGGAAA
AAATCAAGTTCAAGCTTTGAAAGATTCCCTAAAACTTTGGCAGATATAATATGTGAATACCCAGATATTCACCA
AAGTCGTTTTGTGTTTGTACCTGGTCCAGAGGATCCTGGATTGGTTCCATCTTACCAAGGCCACCACTTGCTGA
AAGCATCACTAATGAATTCAGACAAAGGTACCATTTTTCAGTTTTTACTACTAATCCTTGCAGAAATTCAGTACTG
TACACAGGAAATTACTGTCTTCCGTGAAGACTTAGTAAATAAAATGTGCAGAACTGCGTCCGTTTTCTTAGCAG
CAATTTGGCTATTCTTAATCACTTTGTAAAGACTATCTTATCCCAAGGACATCTGACTCCCCTACCTCTTTATGT
CTGCCCAGTGTATTGGGCATATGACTATGCTTTGAGAGTGTATCCTGTGCCCGATCTACTTGTCAATGCAGACAA
ATATGATCCTTTCACTACGACAAATACCGAATGCCTCTGCATAAACCCCTGGCTCTTTTCCAAGAAGTGGAATTTTC
ATTCAAAGTTTTTTATCCTTCTAATAAGACAGTAGAAGATAGCAAACCTTCAAGGCTTTTTGAGATTCTTAAAGATC
ATCTGAAGAAAATTCATCAGTTTTCTGCTTAACTCTATATCTTATGTGATTCTGATATTACAATAAAATTATGGT
AAACTTT

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FIGURE 481

MAPERLRSRAPSAFKLRGLLLRGEAIKYLTEALQSISELELEDKLEKIINAVEKQPLSSNMIERSVVEAAVQECS
QSVDETIEHVFNIIGAFDIPRFVYNSEKFKFLPILMTNHPAPNLFGTPRDKAEMFRERYTILHQRTHRHELFTPP
VIGSHPDESGSKFQLKTITETLLGSTTKIGDAIVLGMITQLKEGKFFLEDPTGTVQLDLSKAQFHSGLYTEACFVL
AEGWFEDQVFHVNAFGFPPTPESSSTRAYYGNINFFGGPSNTSVKTSAKLKQLEENKDAMFVFLSDVWLDQVEV
LEKLRFIMFAGYSPAPPTCFILCGNFSSAPYGKNQVQALKDSLKTLADIICEYPDIIHQSRFVFPVGPEDPGFGSIL
PRPPLAESITNEFRQRVFVSFTTNPCRIQYCTQEITVFREDLVNKMCRNCVRFPSNLAIPNHFVKTIILSQGHL
TPLPLYVCPVYWAYDYALRVYPVPDLLVIADKYDPFTTTNTECLCINPGSFPRSGFSFKVFYPSNKTVEDSKLQG
F

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FIGURE 482

GGCGCGGGGACGCGGGTTTTCTGCTCAGGCCCTGCCCTGCTCTACTCTGCGCTCTCTGCCCCGCGCCGCCGCCGCC
TCAGCCTCGGCCCTGCGCTGCGCGCCCCGGCCCGTGCTGCCATGCCCTGCCGCCCGCGAAGCCCGCCGAGGCATCA
GAGCCGCTGCGACGGTGACGCCAGCCCGCCGTCCCCCGCGCGATGGAGCCTGGGACGGAAGCGCAGAGCCGACGG
CAGGCGCTGGAGGCCCGAAGACGCCGAGGAGGCAGAGCACCGCGCGCCGAGCGCAGACCCGAGAGCTTTACCAC
TCCTGAAGGCCCTAAACCCCGTTCCAGATGCTCTGACTGGGCAAGTGCAGTTGAAGAAGATGAAATGAGGACCAG
AGTTAACAAAGAAATGGCAAGATATAAAAGGAACTCCTCATCAATGACTTTGGAAGAGAGAGAAAATCATCATC
AGGAAGTTCTGATTCAAAGGAGTCTATGTCTACTGTGCCGGCTGACTTTGAGACAGATGAAAGTGTCTAATGAG
GAGACAGAAGCAGATCAACTATGGGAAGAACAATTGCCTACGATCGTTATATTAAAGAAGTCCCAAGACACCT
TCGACAACCTGGCATTTCATCCCAAGACCCCTAATAAATTTAAGAAGTATAGTCGACGTTTCATGGGACCAGCAAAT
CAAACCTCTGGAAGGTGGCTCTGCATTTTTTGGGATCCTCCAGCGGAAGAAGGATGTGATTTGCAAGAAATACACCC
TGTAGACCTTGAATCTGCAGAAAGCAGCTCCGAGCCCCAGACCAGCTCTCAGGATGACTTTGATGTGTACTCTGG
CACACCCACCAAGGTGAGACACATGGACAGTCAAGTGGAGGATGAGTTTGATTTGGAAGCTTGTTTAACTGAACC
CTTGAGAGACTTCTCAGCCATGAGCTTAACTGCCCCCTGGCGGCCAGGAAGAGAAACAGCTCCTCCCCGACTAGGT
GGAAGGCTGGCCAGGCACCAAGCATGTGTGTGACCTGGTGGTTTTCTCTGTTAGCAGTCCATTAGCTCA
TGCTGAATTATTTTTGCCTTACTTTCTTAAGAAACATTAATTTTTATGTATAGTGAGTATATTTTGCATGTTTTAA
ATTGTAAATGGAGCTAAGTCCAAGAAAGTACTTGAAGCTCTCTTCCAGCGAGCTTAATTGCGTAATCCCTGTTGT
CCTCCAGGGTAAGCTGACACGTCTACATAACTGGTTTTTCCACAGGCATCTTCAGTTATTGCTTGTGAGGTGGACT
GTTTTGGATTTAACCATGTAATCCATGGGACCAATTGAGAGTCAGCTACTTTTATAGGCATCAAAGTATTCTCAG
ACACCTTTAATATCTTTATGGAACTTAATTTTTTGGCCTTTTATCAATATGTCATAACAGCATTCCTGAAGTCAGA
CATTGTAAATTGAGCTATTAACTAATGAGTTTTATGTAAGTTATATGGTCTTAATTTGGTACTTGTAATAGC
ACTAGTTAGACTCTTTAGAATACTCCAAGAGTTAGGGCAGCAGAGTGGAGCGATTTAGAAAGAACATTTTAAAC
AATCAGTTAATTTACCATGTAAATTTGCTGTAAATGATAATGTGTACAGATTTTCTGTTCAAATATTCAATTGTA
AACTTCTTGTTAAGACTGTTACGTTTCTATTGCTTTTGTATGGGATATTGCAAAAATAAAAAGGAAAGAACCCTC
AAAAAAAAAAAAAAAAAAAA

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FIGURE 483

MACRPRSPPRHQSRCDGDASPPSPARWSLGRKRRADGRRWRPEDAEAEHRGAERRPESFTTPEGPKPRSRCSDW
ASAVEEDEMRTVRVNKEMARYKRKLLINDFGREKSSSGSSDSKESMSTVPADFETDESVLMMRQKQINYGKNTIA
YDRYIKEVPRHLRQPGIHPKTPNKFKKYSRRSWDQQIKLWKVALHFWDPPAEEGCDLQEIHVPDLESAESSSEPQ
TSSQDDFDVYSGTPTKVRHMDSQVEDEFDLEACLTEPLRDFSAMS

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FIGURE 484

ATTTAAATTCTGCAGCTCAGAGATTACACACAGAAGTCTGGACACAATTCAGAAGAGCCACCCAGAAGGAGACAAC
AATGTCCCTGCTACCCGTGCCATACACAGAGGCTGCCTCTTTGTCTACTGGTTCTACTGTGACAATCAAAGGGCG
ACCACTTGCCTGTTTCTTGAATGAACCATATCTGCAGGTGGATTTCCACACTGAGATGAAGGAGGAATCAGACAT
TGTCTTCCATTTCCAAGTGTGCTTTGGTCGTCGTGTGGTCATGAACAGCCGTGAGTATGGGGCCTGGAAGCAGCA
GGTGAATCCAAGAATATGCCCTTTCAGGATGGCCAAGAATTTGAACTGAGCATCTCAGTGCTGCCAGATAAGTA
CCAGGTAATGGTCAATGGCCAATCCTCTTACACCTTTGACCATAGAATCAAGCCTGAGGCTGTGAAGATGGTGCA
AGTGTGGAGAGATATCTCCCTGACCAAATTTAATGTCAGCTATTTAAAGAGATTAACCAGACTTCATGTTGCCAAG
GAATCCCTGTCTCTACGTGAACTTGGGATTCCAAAGCCAGCTAACAGCATGATCTTTTCTCACTTCAATCCTTAC
TCCTGCTCATTAAAACTTAATCAAACCTTCAAAAAAAAAA

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FIGURE 485

MSLLPVPYTEAASLSTGSTVTIKGRPLACFLNEPYLQVDFHTEMKEESDIVFHFQVCFGRRVVMNSREYGAWKQQ
VESKNMPFQDGQEFELSISVLPDKYQVMVNGQSSYTFDHRIKPEAVKMVQVWRDISLTKFNVSYLKR

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FIGURE 486

CTCGGCGCGCGCTTGGGGCGAGGCTCGGCGGGCGCGGACGCGCAGC**ATGG**CGGTGGAGGACGAGGGGCTCCGGGT
CTTCCAGAGCGTGAAGATCAAGATCGGTGAAGCCAAAACCTTCCCTCTTACCCGGGGCCGAGCAAGATGAGGGA
TTGCTACTGCACGGTGAACCTGGACCAGGAGGAGGTTTTTCAGGACCAAATTTGTGGAAAAGTCACTCTGCCCGTT
TTACGGAGAAGACTTTTACTGTGAAATTCCTCGGAGCTTTTCGTACCTGTCTTCTACATTTTCGATAGAGACGT
TTTCCGGAGGGATTCCATCATAGGGAAGGTGGCCATCCAGAAGGAGGACTTGCAGAAGTACCACAACAGGGACAC
CTGGTTCCAGCTGCAGCACGTGGACGCTGACTCGGAAGTGCAGGGCAAAGTGCACCTGGAGCTGCGGCTGAGCGA
GGTCATCACAGACACTGGGGTCTGTCTGCCACAAGCTCGCCACACGCATCGTCGAGTGCCAGGGCCTCCCCATCGT
GAATGGGCAATGTGACCCCTACGCCACCGTGACGCTGGCAGGACCCTTCAGATCAGAAGCAAAGAAGACGAAAGT
GAAGAGGAAGACCAACAATCCCCAGTTTCGATGAAGTGTTCCTTTATTTGAGGTGACCCGGCCCTGTAGCTACAGCAA
GAAGTCCCACCTTTGACTTTGAGGAGGAAGACGTGGACAAGCTCGAAATCAGAGTTGACCTCTGGAATGCCAGTAA
CCTGAAGTTTGGAGATGAATTCCTGGGAGAACTAAGGATCCCGTTGAAAGTCTGCGGCAGTCCAGCTCCTACGA
GGCGTGGTACTTCTCCAGCCCCGGGACAATGGTAGCAAGAGCCTAAAGCCAGACGACCTGGGCTCCCTGCGGCT
GAACGTGGTATACACGGAAGACCACGTGTTTTCTTCTGACTATTACAGCCCTCTGCGGGACCTGCTGTTGAAGTC
TGGCGATGTGGAGCCCGTGTTCAGCGTCTGCGGGCCACATCCTGGGCGAGGTTTGCGGGGAGAAGCAGGAGGCGGC
CGTCCCGCTGGTGGGCTCTTCTTACACTATGGCAGGGTGGTGCCATTTCATCAGTGCCATCGCCAGCGCGGAGGT
GAAGCGGACCCAGGACCCCAACACCATCTTCCGAGGAACTCACTGGCGTCCAAGTGCATTGACGAGACCATGAA
GCTGGCGGGGATGCATTACCTGCATGTACCCCTGAAGCCCGCCATCGAGGAGATATGCCAGAGCCACAAACCTG
TGAAATCGACCCTGTGAAGTTGAAAGACGGAGAAAACCTTGAAAACAACATGGAGAACCTACGGCAGTATGTGGA
CCGCGTCTTCCACGCCATCACCGAGTCTGGGGTGAGCTGCCCCGACCGTTCATGTGTGACATCTTCTTCTCCCTCCG
GGAGGCGGCGGCCAAGCGCTTCCAGGATGACCCGGACGTCAGGTACACTGCAGTGAGCAGCTTCATCTTCTGAG
GTTCTTTGCGCCCGCCATTCTCTCCCCAACCTCTTCCAGCTCACGCCGCACCACACGGACCCCCAGACGTCCAG
GACGCTGACATTGATCTCCAAGACCGTTTCAGACCCTCGGCAGCCTGTCCAAGTCCAAATCTGCGAGTTTTAAGGA
GTCTTACATGGCTACATTTTATGAATTCTTCAATGAGCAGAAATATGCTGATGCGGTGAAGAACTTCTTGATCT
GATTTCTGCTCCTCGGGGAGAAGAGACCCCAAGAGTGTGAGCAGCCCATCGTGCTTAAAGAAGGGTTTCATGATCAA
GAGGGCCCAAGGACGGAAGCGCTTTGGGATGAAGAATTTAAGAAGAGATGGTTTCGTTTGACCAACCATGAATT
TACCTACCACAAAAGCAAAGGGGACCAGCCTCTCTACAGCATTCCTATCGAGAACATCCTGGCAGTGGAGAAGCT
GGAGGAGGAGTCTTTCAAATGAAAAACATGTTCCAGGTTCATCCAGCCAGAGCGTGCGCTGTACATCCAGGCCAA
CAACTGCGTGAGGAGGCAAGGACTGGATCGACATTCTACCAAAGTGAGCCAGTGCAACCAGAAGCGCCTCACCGT
CTACCACCCGTCGCGCTACCTGAGCGGCCACTGGCTGTGCTGTAGGGCGCCATCCGACTCGGCTCCGGGCTGCTC
GCCCTGCACTGGCGGCCTCCAGCCAACATCCAGCTGGACATTGATGGGGACCGTGAGACGGAGCGTATCTACTC
CCTCTTCAACTTGTACATGAGCAAGCTGGAGAAGATGCAGGAGGCCTGTGGGAGCAAATCTGTGTATGACGGCCC
GGAGCAGGAGGAGTATTCGACGTTTCGTCATTGACGACCCCCAGGAGACCTACAAGACGCTAAAGCAAGTCATCCG
CTGGGTTGGGGCTTTGGAGCAGGAGCACGCCAGTATAAGAGGGACAAGTTCAAGAAGACGAAATATGGAAGCCA
GGAGCACCCCATCGGAGACAAGAGCTTCCAGAACTACATCCGGCAGCAGTCCGAGACCTCCACTCATTCCATT**TA**
AAGTCTGCGGGACGCGCC

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FIGURE 487

MAVEDEGLRVFQSVKIKIGEAKNLPSYPGPSKMRDCYCTVNLDQEEVFRTKIVEKSLCPFYGEDFYCEIPRSFRH
LSFYIFDRDVFRRDSIIGKVAIQKEDLQKYHNRDTWFQLQHVDADSEVQGKVHLELRLSEVITDTGVVCHKLATR
IVECQGLPIVNGQCDPYATVTLAGPFRSEAKKTKVKRKTNNPQFDEVFYFEVTRPCSYSKKSHDFEEDVDKLE
IRVDLWNASNLFKGDEFGLGELRIPLKVLQRSSSYEAWYFLQPRDNGSKSLKPDDLGSRLNVVYTEDHVFSSDYY
SPLRDLKLSADVEPVSAHAHILGEVCREKQEAAPLVRLFLHYGRVVPFISAIASAEVKRTQDPNTIFRGNSL
ASKCIDETMKLAGMHYLVTLKPAIEEICQSHKPCIDPVKLDGENLENNMENLRQYVDRVFHAITESGVSCPT
VMCDIFFSLREAAAKRFQDDPDVRYTAVSSFIFLRFFAPAILSPNLFQLTPHHTDPQTSRTLTLISKTVQTLGSL
SKSKSASFKESEYMATFYEFFNEQKYADAVKNFLDLISSSGRRDPKSVEQPIVLKEGFMIKRAQGRKRFGMKNFKK
RWFRLTNHEFTYHKSKGDQPLYSIPIENILAVEKLEESFKMKNMFQVIQPERALYIQANNCVEAKDWIDILTKV
SQCNQKRLTVYHP SAYLSGHWLCCRAPSDSAPGCSPTGGLPANIQLDIDGDRETERIYSLFNLYMSKLEKMQEA
CGSKSVYDGPEQEEYSTFVIDDPQETYKTLKQVIRWVGALQEQEHAQYKRDKFKKTKYGSQEHPIGDKSFQNYIRQ
QSETSTHSI

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FIGURE 488

GCAGTGTCTCCCGGTGCGCGTGGAGGTGCGTCTCAGAGCTGCTGGGCGCAGTTTCTCCGCCTGCTGCTTCGG
CGCGGCTGTATCGGCGAGCGAGCGAGTTCGCGGAGTTCTCGGTGGCGCTCCCCCTTCCTTTCAGTCTCCACGGA
CTGGCCCCCTCGTCTTCTACTTGACCGCTCCCGTCTTCCGCCGCTTCTGGCGCTTTCGGTTGGGCCGATTCCCCG
CCCGCTTCCTCTGCTTCCCATCGAAGCTCTAGAAATGAATGTTTCCATCTCTTCAGAGATGAACCAGATTATGA
TGCATCATTATCACAGAAGAAATTCGTGTCTATAGCTTTTAAGGACTTGATTACATCATTTTCAAGCCTGATAGT
TTTGGAATCACCATTAGAGCTTAAGACACACCTGCCTTCATTTCAACCACCTGTCTTCATACCCTGACGAAGTGC
ACCTTTTAACACTCCTTTGTCTTGGATTACTTAAGAGTTCCAGAAATACATTTGCCACCAACAGAGTAGCCAA
ATTTATAAGGAAAAATGATTCCCAATGGATATTTGATGTTTGAGGATGAAAATTTTATTGAGTCTTCTGTTGCCA
AATTAAATGCCCTGAGGAAAAGTGCCAGTTCGTGTGATGTTGACTTCAGGTCTGTGGCCATGAAATGTTAGCAC
ACAGAGCAGTGCTAGCTTGCTGCAGTCCCTATTTATTTGAAATCTTTAATAGTGATAGTGATCCTCATGGAATTT
CTCACGTAAATTTGATGATCTCAATCCAGAAGCTGTTGAAGTCTTGTGTAATTATGCCTACACTGCTCAGTTGA
AAGCAGATAAGAATTGTAAAGATGTTTATTCTGCAGCAAAAAGCTGAAGATGGATCGAGTAAAGCAGGTTTGTG
GTGATTATTTACTGTCTAGAATGGATGTTACCAGCTGCATCTCTTACCGAAATTTTGCAAGTTGTATGGGAGACT
CCCGTTTGTGTAATAAGGTTGATGCTTATATTAGGAGCATTGTTTACAAATTTCTGAAGAGGAGGAGTTTCTTA
AGCTTCCAAGGCTAAAGTTGGAGGTAATGCTTGAAGATAATGTTTGTCTGCCAGCAATGGCAAATTATATACAA
AGGTAATCAACTGGGTGCAGCGTAGCATCTGGGAGAATGGAGACAGTCTGGAAGAGCTGATGGAAGAGGTTCAAA
CCTTGTACTACTCAGCTGATCACAAAGCTGCTTGATGGGAACCTACTAGATGGACAGGCTGAGGTGTTTGGCAGTG
ATGATGACCACATTCAGTTTGTGCAGAAAAAGCCACCACGTGAGAATGGCCATAAGCAGATAAGTAGCAGTTCAA
CTGGATGCTCTCTTCTCCAAATGCTACAGTACAAAGCCCTAAGCATGAGTGGAAAAATCGTTGCTTCAGAAAAAGA
CTTCAAATAACACTTACTTGTGCTGGCTGTGCTGGATGGTATATTCTGTGTCATTTTCTTCATGGGAGAAACA
GCCCCACAGAGCTCACCAACAAGTACTCCAAAACCTAAGTAAGAGTTTAAGCTTTGAGATGCAACAAGATGAGCTAA
TCGAAAAGCCCATGTCTCTATGCAGTACGCACGATCTGGTCTGGGAACAGCAGAGATGAATGGCAAACCTCATAG
CTGCAGGTGGCTATAACAGAGAGGAATGTCTTCGAACAGTCGAATGCTATAATCCACATACAGATCACTGGTCCT
TTCTTGCTCCCATGAGAACACCAAGAGCCGATTTCAAATGGCTGTACTCATGGGCCAGCTCTATGTGGTAGGTG
GATCAAATGGCCACTCAGATGACCTGAGTTGTGGAGAGATGTATGATTCAAACATAGATGACTGGATTCTCTGTT
CAGAATTGAGAACTAACCGTTGTAATGCAGGAGTGTGTGCTCTGAATGGAAAGTTATACATCGTTGGTGGCTCTG
ATCCATATGGTCAAAAAGGACTGAAAAATTGTGATGTATTTGATCCTGTAACAAAGTTGTGGACAAGCTGTGCCC
CTCTTAACATTTCGGAGACACCAGTCTGCAGTCTGTGAGCTTGGTGGTTATTTGTACATAATCGGAGGTGCAGAAT
CTTGGAATTGTCTGAACACAGTAGAACGATACAATCCTGAAAATAATACCTGGACTTTAATTGCACCCATGAATG
TGGCTAGGCGAGGAGCTGGAGTGGCTGTTCTTAATGGAAAACCTGTTTGTATGTGGTGGCTTTGATGGTTCTCATG
CCATCAGTTGTGTGGAATGTATGATCCAAC TAGAAATGAATGGAAGATGATGGGAAATATGACTTCACCAAGGA
GCAATGCTGGGATTGCAACTGTAGGGAACACCATTTATGCAGTGGGAGGATTCGATGGCAATGAATTTCTGAATA
CGGTGGAAGTCTATAACCTTGAGTCAAATGAATGGAGCCCTATACAAAGATTTTCCAGTTTTAACAAATTTAAG
ACCTCTCAAACCTAACAGGCTTAGTGATGTAATTATGGTTAGTAGAGGTACACTTGTGAATAAAGAGGGTGGGTG
GGTATAGATGTTGCTAACAGCAACACAAAGCTTTTGCATATTGCATACTATTAAACATGCTGTACATACTTTTGTG
GGTTTATTTGGAAAGGAATGCAAAGATGAAGGTCTGTTTTGTGTACTTTTAAGACTTTGGTTATTTTACTTTTGTG
GAAAAGAATAAACCAAGAATTGATTGGGCACATCATTTCAAGAAGTCCCTCTCCTCCACATTTGTTTTGCCAATT
TGCACATTAATGACTCTTCCCCTCGT

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FIGURE 489

MIPNGYLMFEDENFIESSVAKLNALRKSGQFCDVRLQVCGHEMLAHRAVLACCSPYLFEIFNSDSDPHGISHVKE
DDLNP EAVEVLLNYAYTAQLKADKNCKDVYSAAKKLKMDRVKQVCGDYLLSRMDVTSCISYRNFASCMGDSRLLN
KVDAYIQEHL LQISEEEEF LKL PRLKLEVMLEDNVCLPSNGKLYTKVINWVQRSIWENGDSLEELMEEVQTLYYS
ADHKLLDGNLLDGQAEVFGSDDDH IQFVQKKPPRENGHKQISSSSTGCLSSPNATVQSPKHEWKIVASEKTSNNT
YLCLAVLDGIFCVIFLHGRNSPQSSPTSTPKLSKSLSFEMQQDELIKPMSPMQYARSGLGTAEMNGKLIAAGGY
NREECLRTVECYNPHTDHSFLAPMRTPRARFQMAVLMGQLYVVGGSNGHSDDLSCGEMYDSNIDDWIPVPELRT
NRCNAGVCALNGKLYIVGGSDPYGQKGLKNCDVFDPVTKLWTSCAPLNIRRHQS AVCELGGYLYIIGGAESWNCL
NTVERYNPENNTWTLIAPMNVARRGAGVAVLNGKLFVCGGFDGSHAISCVEMYDPTRNEWKMMGNMTSPRSNAGI
ATVGNTIYAVGGFDGNEFLNTVEVYNLESNEWSPYTKIFQF

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FIGURE 490A

GGCATGGAACCTAAAGACTAGAGGCGGTTGTGTGAGTCAGGAAGAGGGGCCAGATATCTGAGTGTTCTCTTTAG
TTTCTTCAATTGCAGATAATATGGTGTCTAATTTTATGTTGTTTCAGGAAAGACAGTGGTTCTGACTCAGGAAGA
CAGTCTCAGAAACATGTGGAATGATATTGAGCTGCTAACAAATGATGATACCGGAAGTGGGTACCTGAGTGTGCG
TTCAAGAAAAGAACATGGAAGTCTTTATATCAAGTAGATTTGCTAGTGAAGATCTCTTCTGAAAAGGCCTCATT
AAATCCAAAGATACAGGCATGCAGCTTAAGTGATGGGTTTATTATTGTAGCCGACCAATCAGTGATATTGCTTGA
CAGTATTTGTAGATCACTTCAATTGCATCTTGTCTTTGATACTGAAGTGGATGTAGTTGGCCTTTGTCAAGAAGG
AAAGTTTCTTTTGGTTGGCGAGAGAAGTGGCAACCTACATCTTATTCATGTAACATCAAAACAAACACTACTCAC
TAATGCATTTGTTTCAGAAAGCTAACGATGAAAATCGGCGGACTTACCAGAACTTGTTCATTGAGAAGGATGGTTC
AAATGAAGGTACCTATTATATGCTACTTCTTACATACAGTGGATTTTTTTGTATTACAAACCTTCAGCTTTTAAA
AATTCAACAAGCAATTGAGAATGTAGACTTCAGTACAGCAAAAAAGTTACAAGGACAAATCAAGTCCAGTTTTAT
TTCTACTGAAAAATTATCATACTCTTGGTTGTCTCAGTCTTGTGGCTGGAGATTTAGCAAGTGAAGTTCCTGTGAT
AATTGGGGGAACCGGTAATTGTGCATTCTCAAAATGGGAACAGATTCTTCCAAGAAAGGAATGACAGTTAAGAA
CCTTATTGATGCAGAGATTATTAAAGGTGCAAGAAGTTCCAGCTGATAGACAATCTACTTTTTGTCTTGATAC
TGATAACGTGCTGAGTTTATGGGATATTTACACTCTAAGTCTGTATGGAAGTGGCCTCTCTTCACGTAGAAGA
GTTTCTTCTTACTACAGAAGCAGACTCTCCTTCATCAGTCACGTGGCAAGGAATTACAAATCTCAAATTAATAGC
TCTGACAGCTTCAGCTAATAAGAAGATGAAAAACCTCATGGTTTATTTCATTACCTACAATGGAAATACTATATTC
TTTGAAGTATCTAGTGTCTTCTCTGCTGCTCAAACAGGAATTAGCACAGATACCATATACCTTTTAGAAGGAGT
TTGCAAAAATGATCCAAAATTGTCTGAAGACTCAGTCTCTGTGTTAGTACTCAGATGTCTTACGGAAGCTTTACC
AGAAAACAGATTGAGTCGGTTACTTCACAAACACAGATTTGCTGAAGCTGAGAGTTTTGCCATTTCAGTTTGGACT
AGATGTTGAGCTTGTTTACAAGGTCAAGTCAAATCATATATTGGAGAACTGGCATTGAGTTCTGTGGATGCCAG
TGAACAGACCGAATGGCAACAACCTTGTAGACGACGCTAAGGAAAATCTACATAAGATCCAGGATGATGAATTTGT
GGTGAATTACTGCCTGAAAGCTCAGTGGATAACCTATGAAACCACTCAAGAGATGCTGAATTATGCCAAAACCAG
GCTTTTGAAGAAAGAAGATAAACTGCTCTCATTATTTCTGATGGCTTGAAAGAGGTGCTAAGAGCTCATGCAAA
ATTGACTACTTTTTATGGAGCATTGGACCAGAAAAATTCAGTGGCAGTTCTTGGATTGAATTTCTAAATAATGA
AGATGATCTTAAAGATATTTTTTTACAGCTAAAAGAAGGAAACCTTGTTTGTGCACAGTATCTTTGGCTTCGACA
TCGGGCAAACTTTGAAAGCAGATTGATGTGAAAATGCTGGAGAGCTTGCTCAACTCAATGTCTGCATCAGTCTC
TTTGCAAAAGCTGTGTCCATGGTTTAAAAATGATGTGATTCCATTTGTAAGAAGGACTGTGCCTGAAGGACAGAT
AATCTTGCAAAATGGTTGGAACAAGCAGCCAGGAACCTTGAATTAAGTATAAGGCAAATTGGCCAGAAAATGG
ACTTCAATTGGCAGAGATATTTTTTTACAGCAGAAAAAACAGACGAGTTGGGATTGGCATCTTCTCGGCATTGGAT
TTCCTTGAAAAGATTATCAGAACACAGAGGAAGTATGTCAGCTAAGGACTTTGGTAAATAACTTGCGAGAGTTGAT
CACGTTGCATAGGAAGTACAACCTGCAAATTAGCCCTCTCTGATTTTGAGAAGGAAAATACAACCACCATAGTGT
CCGAATGTTTGATAAAGTGTCTGGCCCCAGAGCTTATTCCTCCATCTTAGAGAAGTTTATAAGAGTTTACATGAG
AGAACATGACTTGCAAGAGGAGGAACCTTCTTGTCTGTACATAGAGGATTTACTGAATAGATGCAGCTCAAAGTC
CACATCACTCTTTGAAACAGCATGGGAAGCAAAGGCCATGGCAGTAATAGCGTGTATCTGACACGGACCTCAT
ATTTGATGCCGTGCTCAAGATCATGTATGCGGCAGTGGTTTCTTGGAGTGCAGCTGTGGAGCAACTGGTGAAACA
GCACCTGGAATGGACCATCCCAAAGTCAAGTTATTACAGGAAAGTTACAACTAATGGAGATGAAAAAATTTTT
ACGAGGCTATGGAATAAGAGAGGTAAATCTCTTAAACAAGGAAATAATGAGAGTGGTTAGATACATTCTCAAACA
AGATGTCCCATCTTCTTTAGAAGATGCTTTAAAGGTAGCCCCAAGCGTTTATGTTATCTGATGATGAGATCTACAG
TCTAAGAATTATTGACCTGATTGATAGAGAACAGGGTGAAGACTGTCTCCTTCTGTTGAAGTCTTTGCCTCCTGC
TGAAGCTGAGAAAAGTGCAGAAAGAGTCATCATATGGGCACGACTGGCATTACAAGAAGAGCCAGATCATTCTAA
AGAGGGCAAGGCCTGGAGAATGTCTGTAGCGAAGACATCCGTGGACATTCTTAAGATACTATGTGACATTCAGAA
AGACAATCTGCAGAAGAAGGACGAATGTGAAGAAATGTTGAAACTATTTAAAGAGGTTGCTAGCTTACAGGAGAA
CTTTGAGGTCTTTCTTTCATTTGAAGATTATAGCAATAGTTCCCTGGTAGCAGATCTCCGTGAGCAGCACATTAA
AGCTCACGAAGTTGCACAGGCGAAACACAAACCTGGGAGCACCCAGAGCCCATAGCTGCTGAGGTGAGGAGCCC
AAGCATGGAATCAAAGCTGCACAGACAGGCACTGGCCCTGCAGATGTCCAAACAAGAGCTGGAGGCAGAGCTGAC
CTTGAGAGCCTTAAAGATGGGAACATCAAAACAGCACTGAAAAAATGCAGCGACTTGTTTAAAGTATCACTGCAA
TGCTGACACTGGGAAATTGCTATTTCTGACATGTGAGAAGCTTTGTGAGATGTTGGCTGATAATGTCCAGTGAC
AGTGCTGTGGGACTGAATCTTCTTCCATGATACATGATCTAGCAAGCCAAGCTGCCACCATTTCAGTCCAGA

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FIGURE 490B

TTTTTACTAGATGCTTTAGAACTATGTAAACATACTTTAATGGCTGTAGAGCTTTCAGACAATGCCAAATGGA
TGACTGTGGAATCCTCATGAAAGCTTCTTTTGGGACACATAAAGATCCATATGAAGAGTGGTCTTACAGTGACTT
CTTCAGTGAAGATGGAATTGTTCTTGAGTCACAGATGGTGCTTCCAGTGATTTATGAACTGATTTTCATCTCTTGT
GCCTCTAGCTGAAAGCAAGAGATATCCCTTGGAGTCTACCAGTTTGCCATACTGCTCCCTTAATGAAGGAGATGG
CCTTGTTTTACCTGTTATAAAATTCCATCTCTGCCCTGCTTCAGAATCTTCAGGAATCTAGCCAGTGGGAGCTAGC
CCTAAGATTTGTGGTTGGTTTCATTTGGTACCTGTCTTCAGCACTCTGTGTCAAACCTTCATGAATGCCACTTTGAG
TGAAAAGTTATTTGGAGAGACTACATTAGTTAAATCAAGGCATGTTGTTATGGAATTGAAAGAAAAAGCTGTTAT
ATTTATCAGGGAAAAATGCTACAACACTACTGCACAAAGTATTTAATTGTCGCTTGGTAGATCTTGACCTGGCGTT
GGGTTACTGCACCTCTTACCTCAAAAAGATGTGTTTGAAAATCTCTGGAAGCTCATAGATAAAGCATGGCAGAA
TTACGACAAAATCTTGGCAATATCTCTGGTGGGCTCTGAGCTGGCAAGTCTCTATCAGGAAATAGAAATGGGGCT
TAAGTTCCGTGAACTCAGTACTGATGCCCAGTGGGGCATTTCGTCTTGGTAAACTTGGTATTTCTTTCAACCAGT
TTTCAGGCAACATTTTCTCACCAAGAAAGACCTCATTAAAGCTCTTGTGGAGAATATAGATATGGACACAAGCCT
CATTTTGGAAATATTGCAGCACATTTTCAGTTGGACTGCGATGCAGTTCTTCAGCTCTTCATTGAAACGCTGCTCCA
CAACACAAATGCCGGCCAAGGCCAGGGAGATGCAAGCATGGACTCTGCAAAGCGGGCGCATCCCAAACTCCTGGC
CAAAGCCCTTGAGATGGTTCTTTACTGACGAGCACAAAAGATTTGGTCATCAGTCTTAGTGGAATACTACATAA
GTTGGATCCTTATGACTATGAAATGATTGAAGTTGTCTTGAAAGTTATAGAACGAGCTGATGAAAAGATAACCAA
TATTAATATTAATCAGGCATTGAGTATTCTGAAACATTTGAAGTCATACAGAAGAATTTCTCCTCCCGTGGATCT
AGAATATCAGTATATGTTGGAACATGTCATAACTTTGCCATCAGCTGCCCCAACTAGACTGCCTTTTCACCTGAT
ATTCTTTGGCACAGCACAGAACTTCTGGAATACTCTCTACAGAACTCAGTGAAGAATCTTTCCCAACATTGCT
CTTAATTTGAAAATTAATGAAGTTCTCTCTGGACACTCTGTACGTGTCTACAGCAAAAACACGTTTTCGAAAAAA
ACTGAAGCCAAAGCTCCTGAAGTTAACACAAGCTAAATCCTCAACACTGATTAACAAGGAAATAACTAAGATCAC
GCAGACCATCGAATCCTGCTTACTCTCTATAGTCAACCCAGAGTGGGCTGTAGCTATTGCCATCAGCCTTGCCCA
GGATATCCCTGAAGGTTCTTCAAGATATCTGCTTTGAAATTTCTGCCTTTATTTAGCTGAGAGATGGCTACAGAA
TATCCCATCGCAGGACGAAAAACGTGAAAAAGCCGAGGCTTTGTTGAAGAAGCTTCATATCCAGTACCGGCGATC
GGGCACAGAAGCTGTGCTCATAGCCCACAAGCTGAACACTGAGGAATATTTAAGAGTGATCGGAAAGCCAGCACA
TCTTATTGTCAGTCTCTACGAACATCCTAGCATCAATCAAAGAATTCAGAATTCATCTGGCACAGATTATCCTGA
TATTCATGCAGCAGCTAAAGAAATAGCCGAAGTCAATGAAATTAATTTGGAAGAAAGCTGGGACATGTTGTTGGA
AAAATGGCTATGCCCTTCAACAAAACCTGGTGAAAACCATCAGAATTATTTGAACTTCAAGAAGATGAAGCCCT
ACGAAGAGTGCAGTATCTCCTCCTGTCTCGTCCAATTGATTATAGTTCAAGAATGCTGTTTGTATTGCAACATC
AACTACAACCACATTAGGTATGCATCAGTTAACTTTTGCCATAGAAGCTCGAGCTCTTCAGTGTCTCTTCTATTT
GGCTGACAAGGAACTATAGAATCTCTCTTTAAAAAACCCATTGAAGAAGTGAAATCTTATTTGAGATGTATAAC
TTTTCTGGCATCATTGAGACTTTGAATATCCCATCACATATGAATTATTTGCAGCAGTCTTAAAGAAGGAAT
GATTAAGGGTCTGTGGAAGAACACAGCCACGAGTCCATGGCAGTAAGATTGGTGACTGAGCTGTGTTTAGAATA
CAAAATCTATGACCTGCAGCTTTGGAATGGACTCTTGCAAAAGCTTCTGGGCTTCAATATGATTCCTTATCTAAG
GAAAGTTTTAAAGCCATCTCCAGTATCCATTCTTTATGGCAGGTTCCCTACTTCAGCAAAGCGTGGCAGCGTGT
GATACAGATACCACTGCTTTTCAGCCTCTTGTCCTTTAAGTCTGATCAGCTGTCAGATTGTTCTGAGAGTCTCAT
CGCTGTCTCGAATGTCCAGTCTCAGGTGATCTTGACCTGATCGGAGTCGCCAGGCAGTATATCCAGTTAGAACT
TCCGGCTTTTGCAATTAGCTTGTCTGATGCTCATGCCCCACTCAGAGAAAAGACACCAGCAAATTAAGAATTTTCT
GGGTTCTGTGACCTCAGGTTATTTTAAAGCAATTGGAAGAGCATATGAACACGGGGCCAGCTAGCAGGATTTTC
ACATCAAATTAGAAGTCTGATTTTGAATAATATCATCAATAAGAAGGAGTTTGGGATTTTGGCAAAGACCAAATA
CTTTCAAATGTTGAAGATGCATGCGATGAATACCAACAATATCACTGAGCTAGTGAACATTTTGGCAAATGACTT
AAGTTTAGATGAAGCTTCAGTCTTGATAACTGAATATTCAAAGCACTGCGGGAAACCTGTGCCTCCAGACACTGC
TCCCTGTGAAATCTGAAGATGTTTCTTAGTGGATTATCGTAAATCACTGAACCTTTTTTTTCAAGAAGGACAAGA
ATTTTGGAGTCTGCTATTAATGGACCATATTTATTACAGTTTTTAAATGTACAATCTCTGTATTATAGCTATTT
GTCTAACATTACCCACATGTAATAAATAAAACAATATGAGC

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FIGURE 491

MWNDIELLTNDTGSGLSVGSRKEHGTALYQVDLLVKISSEKASLNPKIQACSLSDGFIIVADQSVILLDSICR
SLQLHLVFDTEVDVVGLCQEGKFLLVGERSGNLHLIHVTSKQTLLTNAFVQKANDENRRRTYQNLVIEKDGSNEGT
YYMLLLTYSGFFCITNLQLLKIQQAIEENVDFSTAKKLQGQIKSSFISTENYHTLGCLSLVAGDLASEVPVIIGGT
GNCAFSKWEPDSSKKGMTVKNLIDAEI IKGAKKFQLIDNLLFVLDTDNVLSLWDIYTLTPVWNWPSLHVEEFLLT
TEADSPSSVTWQGITNLKLIALTASANKKMKNLMVYSLPTMEILYSLEVSSVSSIVQTGISTDTIYLLEGVCKND
PKLSEDSVSVLVLRLCTEALPENRLSRLHKKHRAFAESFAIQFGLDVELVYKVSNNHILEKLALSSVDASEQTE
WQQLVDDAKENLHKIQDDEFVNYCLKAQWITYETTOEMLNYAKTRLKKEDKTALIYSDGLKEVLRHAHAKLTTF
YGAFGPEKFSGSSWIEFLNNEDDLKIDIFLQKEGNLVCAYLWLRHRANFESRFDVKMLESLLNSMSASVSLQKL
CPWFKNDVIPFVRRTVPEGQIILAKWLEQAARNLELTDKANWPENGLQLAEIFFTAECTDELGLASSWHWISLKD
YQNTTEVCQLRTLNNLRELI TLHRKYNCKLALSDFEKENTTTIVFRMFDKVLAPELIPSILEKFIRVYMREHDL
QEEELLLLYIEDLLNRCSSKSTSLFETAWEAKAMAVIACLSDTDLIFDAVLKIMYAAVVPWSAAVEQLVKQHLEM
DHPKVLLQESYKLMEMKKLLRGYGIREVNLLNKEIMRVVRYILKQDVPSSLEDALKVAQAFMLSDDEIYSLRII
DLIDREQGEDCLLLLKSLPPAEAEKTAERVIIWARLALQEEPDSKEGKAWRMSVAKTSVDILKILCDIQKDNLQ
KKDECEEMKLKFKEVASIQENFEVFLSFEDYSNSSLVADLREQHIKAHEVAQAKHKPGSTPEPIAAEVRSPSMES
KLHRQALALQMSKQEELEAELTLRALKDGNIKTALKKCSDLFKYHCNADTGKLLFLTQKLCQMLADNPVTPVPG
LNLPSMIHDLASQAATICSPDFLLDALELCKHTLMAVELSRQCQMDDCGILMKASFETHKDPYEEWSYSDFFSED
GIVLESQMVLPVIYELISSLVPLAESKRYPLESTSLPYCSLNEGDLVLPVINSISALLQNLQESSQWELALRFV
VGSFGTCLQHSVSNFMNATLSEKLFGETTLVKSRHVVMELKEKAVIFIRENATTLHKVFNCRVLDDLALGYCT
LLPQKDVFNELWKLIDKAWQNYDKILAIISLVGSELASLYQEIEMGLKFRELSTDAQWGIRLGKLGISFQPVFRQH
FLTCKDLIKALVENIDMTSLILEYCSTFQLDCDAVLQLFIETLLHNTNAGQGQGDASMDSAKRRHPKLLAKALE
MVPLLTSTKDLVISLSGILHKLPDYDYEMIEVVLKVIERADEKITNININQALSILKHLKSYRRISPPVDLEYQY
MLEHVITLPSAAQTRLPPHLLIFFGTAQNFWKILSTELSEESFPTLLLSKLMKFSLDTLVYSTAKHVFEKKLKP
LLKLTQAKSSSTLINKEITKITQTIESCILLSIVNPEWAVAIASLAQDIPEGFSFKISALKFCLYLAERWLQNIPSQ
DEKREKAEALLKKLHIQYRRSGTEAVLIAHKLNTEEYLRVIGKPAHLIVSLYEHP SINQRIQNSSGTDYPDIAHA
AKEIAEVNEINLEKVWDMLEKWLCPSTKPGKEKPSSELFQEQEALRRVQYLLLSRPIDYSSRMLFVFATSTTTT
LGMHQLTFAHRTRALQCLFYLADEKTIESLFFKKPIEEVKSYLRCITFLASFETLNIPITYELFCSSPKEGMKGL
WKNHSHESMAVRLVTELCLEYKIYDLQLWNGLLQKLLGFNMIPYLRKVLK

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FIGURE 492

GAGAGACTGGATGGACCCACAAGGGTGACAGCCCAGGCGGACCGATCTTCCCATCCCACATCCTCCGGCGCGATG
CCAAAAAGAGGCTGACGGCAACTGGGCCTTCTGCAGAGAAAGACCTCCGCTTCACTGCCCCGGCTGGTCCCAAGG
GTCAGGAAGATGGATTTCATACCTGCTGATGTGGGGACTGCTCACGTTCATCATGGTGCCTGGCTGCCAGGCAGAG
CTCTGTGACGATGACCCGCCAGAGATCCCACACGCCACATTCAAAGCCATGGCCTACAAGGAAGGAACCATGTTG
AACTGTGAATGCAAGAGAGGTTTCCGCAGAATAAAAAGCGGGTCACTCTATATGCTCTGTACAGGAACTCTAGC
CACTCGTCTGGGACAACCAATGTCAATGCACAAGCTCTGCCACTCGGAACACAACGAAACAAGTGACACCTCAA
CCTGAAGAACAGAAAGAAAGGAAAACACAGAAATGCAAAGTCCAATGCAGCCAGTGGACCAAGCGAGCCTTCCA
GGTCACTGCAGGGAACCTCCACCATGGGAAAATGAAGCCACAGAGAGAATTTATCATTTCGTGGTGGGGCAGATG
GTTTATTATCAGTGCCTCCAGGGATACAGGGCTCTACACAGAGGTCTGCTGAGAGCGTCTGCAAATGACCCAC
GGGAAGACAAGGTGGACCCAGCCCCAGCTCATATGCACAGGTGAAATGGAGACCAGTCAGTTTCCAGGTGAAGAG
AAGCCTCAGGCAAGCCCCGAAGGCCGTCTGAGAGTGAGACTTCCTGCCTCGTCACAACAACAGATTTTCAAATA
CAGACAGAAATGGCTGCAACCATGGAGACGTCCATATTTACAACAGAGTACCAGGTAGCAGTGGCCGGCTGTGTT
TTCCTGCTGATCAGCGTCTCTCTCTGAGTGGGCTCACCTGGCAGCGGAGACAGAGGAAGAGTAGAAGAACAATC
TAGAAAACCAAAAGAACAAGAATTTCTTGTAAGAAGCCGGGAACAGACAACAGAAGTCATGAAGCCCAAGTGAA
ATCAAAGGTGCTAAATGGTCGCCCAGGAGACATCCGTTGTGCTTGCCTGCGTTTTGGAAGCTCTGAAGTCACATC
ACAGGACACGGGGCAGTGGCAACCTTGTCTCTATGCCAGCTCAGTCCCATCAGAGAGCGAGCGCTACCCACTTCT
AAATAGCAATTTGCGCGTTGAAGAGGAAGGGCAAAACCACTAGAACTCTCCATCTTATTTTCATGTATATGTGTT
CATTAAAGCATGAATGGTATGGAACCTCTCTCCACCCTATATGTAGTATAAAGAAAAGTAGGTTTACATTCTC
ATTCCAACCTTCCCAGTTCAGGAGTCCCAAGGAAAGCCCCAGCACTAACGTAAATACACAACACACACTCTACC
CTATACAACCTGGACATTGTCTGCGTGGTTTCTTCTCAGCCGCTTCTGACTGCTGATTCTCCCGTTCACGTTGCC
TAATAAACATCCTTCAAGAACTCTGGGCTGCTACCCAGAAATCATTTTACCCTTGGCTCAATCCTCTAAGCTAAC
CCCCTTCTACTGAGCCTTCAGTCTTGAATTTCTAAAAAACAGAGGCCATGGCAGAATAATCTTTGGGTAACCTCA
AAACGGGGCAGCCAAACCCATGAGGCAATGTGAGGAACAGAAGGATGAATGAGGTCCCAGGCAGAGAATCATACT
TAGCAAAGTTTTACCTGTGCGTTACTAATTGGCCTCTTTAAGAGTTAGTTTCTTTGGGATTGCTATGAATGATAC
CCTGAATTTGGCCTGCACTAATTTGATGTTTACAGGTGGACACACAAGGTGCAAATCAATGCGTACGTTTCTCTGA
GAAGTGTCTAAAAACACCAAAAAGGGATCCGTACATTCAATGTTTATGCAAGGAAGGAAAGAAAGGAAGTGA
AGAGGGAGAAGGGATGGAGGTCACACTGGTAGAACGTAACCACGGAAAAGAGCGCATCAGGCCTGGCACGGTGGC
TCAGGCCTATAACCCAGCTCCCTAGGAGACCAAGGCGGGAGCATCTCTTGAGGCCAGGAGTTTGAGACCAGCCT
GGGCAGCATAGCAAGACACATCCCTACAAAAAATTAGAAATTGGCTGGATGTGGTGGCATACGCCTGTAGTCCTA
GCCACTCAGGAGGCTGAGGCAGGAGGATTGCTTGAGCCCAGGAGTTCGAGGCTGCAGTCAGTCATGATGGCACCA
CTGCACTCCAGCCTGGGCAACAGAGCAAGATCCTGTCTTTAAGGAAAAAAGACAAGG

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FIGURE 493

MDSYLLMWGLLTFIMVPGCQAE LCDDDPPEIPHATFKAMAYKEGTMLNCECKRGFRRIKSGSLYMLCTGNSSHSS
WDNQCQCTSSATRNTTKQVTPQPEEQKERKTTEMQSPMQPVDQASLPGHCREPPPWENEATERIYHFVVGQMVYY
QCVQGYRALHRGPAESVCKMTHGKTRWTQPQLICTGEMETSQFPGEEKPQASPEGRPESETSCLVTTTDFQIQTE
MAATMETSIFTTEYQVAVAGCVFLLISVLLLSGLTWQRRQRKSRRTI

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FIGURE 494

AGCTCAGCAGGACCTCAGCCATGAGACTTCTCATCCTGGCCCTCCTTGGCATCTGCTCTCTCACTGCATACATTG
TGGAAGGTGTAGGGAGTGAAGTCTCAGATAAGAGGACCTGTGTGAGCCTCACTACCCAGCGACTGCCGGTTAGCA
GAATCAAGACCTACACCATCACGGAAGGCTCCTTGAGAGCAGTAATTTTTATTACCAAACGTGGCCTAAAAGTCT
GTGCTGATCCACAAGCCACATGGGTGAGAGACGTGGTCAGGAGCATGGACAGGAAATCCAACACCAGAAATAACA
TGATCCAGACCAAGCCAACAGGAACCCAGCAATCGACCAATACAGCTGTGACTCTGACTGGCTTAGTAGTCTCTGG
CACCTGTCCGTCTCCAGCCAGCCAGCTCATTTCACTTTACACGCTCATGGACTGAGTTTATACTCACCTTTTAT
GAAAGCACTGCATGAATAAAATTATTCCTTTGTATTTTTACTTTTAAATGCTTCTGTATTCACTTATATGTTCT
AATTAATAAATTATTTATTATTAAGAATAGTTCCTTAGTCTATTCAATTATTTAGGGAAAGGTAGTGTATCATT
GTTGTTTGATTTCTGACCTTGACCTCTCTTTGATGGTAACCATAATGGAAGAGATTCTGGCTAGTGTCTATCAG
AGGTGAAAGCTATATCAATCTCTCTTAGAGTCCAGCTTGTAATGGTTCTTTACACATCAGTCACAAGTTACAGCT
GTGACAATGGCAACAATTTGAGATGTATTTCAACTTGCTCTATAATAGAATTCTGTTTATAGAATAAGGGAGAA
AATAATCCAGTCTTCACTGGGTTCCTATTCTGAGGGTCCACTACTCAAAAATTTGCTTCACTCAATTTTTTTCAC
CTCTTTGTGTTTTATTTTGGTGCTCTATTAAAGGAATAAAATGACACAACCTTGTCCTTTTTTGTCCCATTAGCA
AAAATTAGAATTTTGGTATAAAGAACTTTATTCAAGTAAAAATCAATACCCTTTGAATTGGACAATAATCTCAC
TACCTTATTAGGATTTCTGTATTTGCCATTACGCTAGTTATCATGCATGTTATGCTTTACTGCGAATAAGCTTTT
AATGCTCCAAATGCTGACCCATGCAATATTTCTCATGTGATCACAATTTGCAGTAAACTTTTAATTAAATGCTC
ATCTGGTAACTCAACACCCAG

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FIGURE 495

MRLILALLGICSLTAYIVEGVGSEVSDKRTCVSLLTQRLPVSRIKTYTITEGSLRAVIFITKRGLKVCADPQAT
WVRDVVRSMRKSNTNRNNMIQTKPTGTQQSTNTAVTLTG

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FIGURE 496A

ATTGCTAAGCCATCCTTCAGACAGAGAGGGAGCGGCTGCAAGAGGTAATGAGAGATGGCAAGAAAGAAGCTGAAA
AAATTTACTACTTTGGAGATTGTGCTCAGTGTTCTTCTGCTTGTGTTGTTTATCATCAGTATTGTTCTAATTGTG
CTTTTAGCCAAAGAGTCACTGAAATCAACAGCCCCAGATCCTGGGACAACCTGGTACCCCGGATCCTGGGACAAC
GGTACCCAGATCCTGGAACAACCTGGTACCACACATGCTAGGACAACGGGTCCCCAGATCCTGGAACAACCTGGT
ACCACTCCTGTTTCTGCTGAATGTCCAGTGGTAAATGAATTGGAACGAATTAATTGCATCCCTGACCAGCCGCCA
ACAAAGGCCACATGTGACCAACGTGGCTGTTGCTGGAATCCCCAGGGAGCTGTAAGTGTTCCCTGGTGCTACTAT
TCCAAGAATCATAGCTACCATGTAGAGGGCAACCTTGTCAACACAAATGCAGGATTCACAGCCCGGTTGAAAAAT
CTGCCCTTCTCACCAGTGTGTTGGAAGCAATGTTGACAATGTTCTTCTCACAGCAGAATATCAGACATCTAATCGT
TTCCACTTTAAGTTGACTGACCAAAACCAATAACAGGTTTGAAGTGCCCCACGAACACGTGCAGTCTTTCAGTGGA
AATGCTGCTGCTTCTTTGACCTACCAAGTTGAAATCTCCAGACAGCCATTTAGCATCAAAGTGACCAGAAGAAGC
AACAAATCGTGTTTTGTTTGACTCGAGCATTGGGCCCTACTGTTTGCTGACCAGTTCCTTGACGCTCTCCACTCGA
CTGCCCTAGCACTAACGTGTATGGCCTGGGAGAGCATGTGCACCAGCAGTATCGGCATGATATGAATTGGAAGACC
TGGCCCATATTTAACAGAGACACAACCTCCCAATGGAAACGGAACCTAATTTGTATGGTGCGCAGACATTCTTCTTG
TGCTTTGAAGATGCTAGTGGATTGTCCTTTGGGGTGTTTCTGATGAACAGCAATGCCATGGAGGTTGTCCTTCAG
CCTGCGCCAGCCATCAGTTACCGCACCATTTGGGGCATTCTCGACTTCTATGTGTTCTTGGGAAACACTCCAGAG
CAAGTTGTTCAAGAATATCTAGAGCTCATTGGGCGGCCAGCCCTTCCCTCCTACTGGGCGCTTGGATTTACCTC
AGTCGTTACGAATATGGAACCTTAGACAACATGAGGGAAGTCGTGGAGAGAAATCGCGCAGCACAGCTCCCTTAT
GATGTTACAGCATGCTGATATTGATTATATGGATGAGAGAAGGGACTTCACTTATGATTAGTGGATTTTAAAGGC
TTCCCTGAATTTGTCAACGAGTTACACAATAATGGACAGAAGCTTGTCAATCATTTGTGGATCCAGCCATCTCCAAC
AACTCTTCTCAAGTAAACCTATGGCCCATATGACAGGGGTTCCGATATGAAGATATGGGTGAATAGTTTCAGAT
GGAGTGACTCCACTCATTGGGGAGGCTTGGCCTGGACAAACTGTGTTTCTGATTATACCAATCCCAACTGTGCT
GTTTGGTGACAAAGGAATTTGAGCTTTTTCACAATCAAGTAGAGTTTGATGGAATCTGGATTGATATGAATGAA
GTCTCCAACCTTTGTTGATGGTTCGGTCTCAGGATGTTCCACAAACAACCTAAATAATCCCCATTCACTCCAGA
ATCCTGGATGGGTACCTGTTCTGCAAGACTCTCTGTATGGATGCAGTGCAGCACTGGGGCAAGCAGTATGACATT
CACAATCTGTATGGCTACTCCATGGCGGTGCGCCACAGCAGAAGCTGCCAAGACTGTGTTCCCTAATAAGAGAAGC
TTCATTCTGACCCGTTCTACCTTTGCGGGCTCTGGCAAGTTTGACAGCATTGGTTAGGAGACAACACTGCCACC
TGGGATGACCTGAGATGGTCCATCCCTGGCGTGCTTGAGTTCAACCTTTTTGGCATCCCAATGGTGGGTCTTGAC
ATATGTGGCTTTGCTTTGGACACCCCTGAGGAGCTCTGTAGGCGGTGGATGCAGTTGGGTGCATTTTATCCGTTT
TCTAGAAATCACAATGGCCAAGGCTACAAGGACCAGGATCCTGCCTCCTTTGGAGCTGACTCCCTGCTGTTGAAT
TCCTCCAGGCACTACCTTAACATCCGCTATACTCTATTGCCCTACCTATACACCCTTTTCTTCCGTGCTCACAGC
CGAGGGGACACGGTGGCCAGGCCCTTTTGCATGAGTTCTACGAGGACAACAGCACTTGGGATGTGCACCAACAG
TTCTTATGGGGGCCCCGGCTCCTCATCACTCCAGTTCTGGATGAAGGTGCAGAGAAAGCGATGGCATATGTGCCT
GATGCTGTCTGGTATGACTACGAGACTGGGAGCCAAGTGAGATGGAGGAAGCAAAAAGTCGAGATGGAACCTTCT
GGAGACAAAAATTGGACTTCACCTTCGAGGAGGCTACATCTTCCCCACACAGCAGCCAAATACAACCACTCTGGCC
AGTCGAAAAGAACCTCTTGGTCTTATCATTGCCCTAGATGAGAACAAAAGAAGCAAAAGGAGAACTTTTCTGGGAT
GATGGGGAAACGAAGGATACTGTGGCCAATAAAGTGATCTTTTATGTGAGTTTTCTGTCACTCAAACCGCTTG
GAGGTGAATATTTACAAATCAACCTACAAGGACCCCAATAATTTAGCATTTAATGAGATTAAAATTCTTGGGACG
GAGGAACCTAGCAATGTTACAGTGAAACACAATGGTGTCCCAAGTCAGACTTCTCCTACAGTCACTTATGATTCT
AACCTGAAGGTTGCCATTATCACAGATATTGATCTTCTCCTGGGAGAAGCATAACAGTGGAATGGAGCATAAAG
ATAAGGGATGAAGAAAAAATAGACTGTTACCCTGATGAGAATGGTGCTTCTGCCGAAAACCTGCACTGCCCGTGGC
TGTATCTGGGAGGCATCCAATTCTTCTGGAGTCCCTTTTTGCTATTTTGTCAACGACCTATACTCTGTCACTGAT
GTTCACTATAATTCCCATGGGGCCACAGCTGACATCTCCTTAAAGTCTTCCGTTTATGCCAATGCCTTCCCCTCC
ACACCCGTGAACCCCTTCGCCTGGATGTCACTTACCATAAGAATGAAATGCCGCAAGTTCAAGATTTATGATCCC
AACAGAATCGGTATGAAGTTCCAGTCCCTCTGAACATACCCAGCATGCCATCCAGCACCCCTGAGGGTCAACTC
TATGATGTGCTCATTAAGAAGAATCCATTTGGGATTGAAATTCGCCGGAAGAGTATAGGCACTATAATTTGGGAC
TCTCAGTCTCTTGGCTTTACCTTCAGTGACATGTTTATCCGCATCTCCACCCGCCTTCCCTCCAAGTACCTCTAT
GGCTTCGGGGAAACTGAGCACAGGTCCTATAGGAGAGACTTGGAGTGGCACACTTGGGGGATGTTCTCCCGAGAC
CAGCCCCCAGGGTACAAGAAGAATTCCTATGGTGTCACCCCTACTACATGGGGCTGGAGGAGGACGGCAGTGCC

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FIGURE 496B

CATGGAGTGCTCCTGCTGAACAGCAATGCCATGGATGTGACGTTCCAGCCCCCTGCCTGCCTTGACATACCGCACC
ACAGGGGGGAGTTCTGGACTTTTATGTGTTCTTGGGGCCGACTCCAGAGCTTGTACCCAGCAGTACACTGAGTTG
ATTGGCCGGCCTGTGATGGTACCTTACTGGTCTTTGGGGTTCCAGCTGTGTGCTATGGCTACCAGAATGACTCT
GAGATCGCCAGCTTGTATGATGAGATGGTGGCTGCCAGATCCCTTATGATGTGCAGTACTCAGACATCGACTAC
ATGGAGCGGCAGCTGGACTTCACCCTCAGCCCCAAGTTTGCTGGGTTTCCAGCTCTGATCAATCGCATGAAGGCT
GATGGGATGCGGGTCATCCTCATTCTGGATCCAGCCATTCTGGCAATGAGACACAGCCTTATCCTGCCTTCACT
CGGGGCGTGGAGGATGACGTCTTCATCAAATACCCAAATGATGGAGACATTGTCTGGGGAAAGGTCTGGCCTGAT
TTTCTGATGTTGTTGTGAATGGGTCTCTAGACTGGGACAGCCAAGTGGAGCTATATCGAGCTTATGTGGCCTTC
CCAGACTTTTCCGTAATTCAACTGCCAAGTGGTGGAAAGAGGGAAATAGAAGAACTATACAACAATCCACAGAAT
CCAGAGAGGAGCTTGAAGTTTGATGGCATGTGGATTGATATGAATGAACCATCAAGCTTCGTGAATGGGGCAGTT
TCTCCAGGCTGCAGGGACGCCCTCTCTGAACCACCCTCCCTACATGCCACATTGGAGTCCAGGGACAGGGGCGCTG
AGCAGCAAGACCCCTTGTATGGAGAGTCAGCAGATCCTCCAGACGGCTCCCTGGTGCAGCACTACAACGTGCAC
AACCTGTATGGGTGGTCCCAGACCAGACCCACATACGAAGCCGTGCAGGAGGTGACGGGACAGCGAGGGGTCGTC
ATCACCCGCTCCACATTTCCCTCTTCTGGCCGCTGGGCAGGACATTGGCTGGGAGACAACACGGCCGCATGGGAT
CAGCTGAAGAAGTCTATCATTGGCATGACGGAGTTTACGCTCTTCGGCATATCCTATACGGGAGCAGATATCTGT
GGGTTCTTTCAAGATGCTGAATATGAGATGTGTGTTGCTGGATGCAGCTGGGGGCGCTTTTACCCCTTCTCAAGA
AACCACAACACCATTGGGACCAGGAGACAAGACCCCTGTGTCTGGGATGTTGCTTTTGTGAATATTTCCAGAACT
GTCTGCAGACCAGATGCACCCTGTTGCCATATCTGTATACCTTGATGCATAAGGCCACACGGAGGGCGTCACT
GTTGTGCGGCCCTCTGCTCCATGAATTTGTGTGACAGCAGGTGACATGGGACATAGACAGTCAGTTCTGTCTGGGC
CCAGCCTTCTGGTCCAGCCCTGTCTGGAGCGTAATGCCAGAAATGTCACCTGCATATTTCCCTAGAGCCCGCTGG
TATGATTACTACAGGGTGTGGATATTAATGCAAGAGGAGAGTGGAAGACCTTGCCAGCCCCTCTTGACCACATT
AATCTTCATGTCCGTGGGGGCTACATCCTGCCCTGGCAAGAGCCTGCACCTGAACACCCACTTAAGCCGCCAGAAA
TTCATGGGCTTCAAAATTGCCTTGGATGATGAAGGAAGTCTGGGGGCTGGCTCTTCTGGGATGATGGGCAAAGC
ATTGATACCTATGGGAAAGGACTCTATTACTTGGCCAGCTTTTCTGCCAGCCAGAATACGATGCAAAGCCATATA
ATTTTCAACAATTACATCACTGGTACAAATCCTTTGAAACTGGGCTACATTGAAATCTGGGGAGTGGGCAGTGTC
CCCGTTACCAGTGCCAGCATCTCTGTGAGTGGCATGGTCATAACACCCTCCTTCAACAATGACCCACGACACAG
GTATTAAGCATCGATGTGACTGACAGAAACATCAGCCTACATAATTTACTTCATTGACGTGGATAAGCACTCTG
TGAATTTTTTACAGCAAGATTCTAACTAACTATGAATGACTTTGAACTACTTATACTTCATACTCATAAAAATTA
TTGTGTGTTGCTAATTTGTTTCATACCCACTATTGGTGAAATATTTCTGTAAATTTTGTATATGTTTTTTGTGTG
AACCCTAAAGGTTAAACCTTAGCCCTGTGGGATAGGCAGTTAGGGAGGTGTGGAAAATCTATGCATTACCTTAAT
GTCTCTGTGTGGTTAGTATGGTAGTACTGTTTCATCATATGACATTTACTGAAGATGAAGTGGGTCCATGATGAA
GTGTGTGATGTCCACGTTTGTAAATCATAGAATGGACCCCATTTCTTTGTTAAATACACAAGAGAAAGCTTTCTG
TGACAGTTCAGGCTTGAAGCTAATCAGCATCTCAAGAAAGTATCCAGAAAGAACATCTGCTAGTTGGTTATAG
GCGGTGGGAGGAATAATATACCTAATTGGTTATAGGTGGGGGGAGCATGATAAGCAAAGAAAAGGCAAACACAAG
GAAAGATCAGATGAAACAGAAGATGATAGTAAAGTGATCCTAAGTAAGAACATAATGTAAATTGTGACGAGCC
TCATGGGGAGGAAAAAGGAAGAGTCAACTCACTTGAAGAAGAGGGTCTTGAGAAATCCTTAGCATAAAGGGCTAC
TGGTGAGATTGAGATCTGAGCAGGCAAAGCTCAAAAGAGAGTTTGGAGGTTAAAAATAATTTATTTTTGCAGTAG
TGTGCTTTGAAATGTGTAAATCTTATTTCTAATGTATACAACCACATTTTACATAAAAAATATGCAATTTATATGC
CAGATAAAAAATAAAACAAGTGAATTTGCAAGTGAAAAA

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FIGURE 497

MARKKLKKFTTLEIVLSVLLLVLFIISIVLIVLLAKESLKSTAPDPGTTGTPDPGTTGTPDPGTTGTTTHARTTGP
PDPGTTGTTTPVSAECPVVNELERINCIPDQPPTKATCDQRGCCWNPQGAVSVWPCYYSKNHSHVEGNLVNTNAG
FTARLKNLPSSPVFGSNVDNVLTLTAEYQTSNRFHFKLTDQTNNRFVEVPHEHVQSFSGNAAASLTYYQVEISRQPFSS
IKVTRRSNNRVLFDSSIGPLLFADQFLQLSTRLPSTNVYGLGEHVHQQYRHDNMNWKTPIFNRDTPNGNGTNY
GAQTTFFLCLEDASGLSFGVFLMNSNAMEVVLQPPAPAITYRTIGGILDYFVFLGNTPEQVVQYELIGRPALPSY
WALGFHLSRYEYGTLDNMREVVERNRAAQLPYDVQHADIDYMDERRDFTYDSVDFKGFPEFVNELHNNNGQKLVI
VDPAISNNSSSSKPYGPYDRGSDMKIWNSSDGVTPFLIGEVWPGQTVFPDYTNPCAVWWTKEFELFHNQVEFDG
IWIDMNEVSNFVDGSGVSGCSTNNLNNPFTPRILDGYLFCKTLCMDAVQHWGKQYDIHNLYGYSMATAEAAKT
VFPNKRSLFTRSTFAGSGKFAAHLGDNATWDDLRSIPGVLEFNLFGLPMVGPDICGFALDTPEELCRRWMQ
LGAFYPFSRNHNGQGYKDQDPASFGADSLLLNSSRHYLNIRYTLPLPYLYTLFFRAHSRGDTVARPLLHEFYEDNS
TWDVHQQLWGPGLLITPVLDEGAEKAMAYVPDAVWYDYETGSQVRWRKQKVEMELPGDKIGLHLRGGYIFPTQQ
PNTTTLASRKNPLGLIIALDENKEAKGELFWDDGETKDTVANKVYLLCEFSVTQNRLEVNISQSTYKDPNNLAFN
EIKILGTEEPSNVTVKHNGVPSQTSPTVTYDSNLKVAIITDIDLLEAYTVIEWSIKIRDEEKIDCYPDENGASA
ENCTARGCIWEASNSSGVFFCYFVNDLYSVSDVQYNHSGATADISLKSSVYANAFPSTPVNPLRLDVTYHKNEMP
QFKIYDPNKNRYEVPVPLNIPSMPSSTPEGQLYDVLIKKNPFGIEIRKRSIGTIIWDSQLLGFTFSDFMIRISTR
LPSKYLYGFGETEHSYRRDLEWHTWGMFSRDQPPGYKKNYGVHPYMGLEEDGSAHGVLLNSNAMDVTFQPL
PALTYRTTGGVLDYFVFLGPTPELVTOQYTELIGRPVMVPYWSLGFQLCRYGYQNDSEIASLYDEMVAQAQIPYDV
QYSDIDYMERQLDFTLSPKFAGFPALINRMKADGMRVILILDPAISGNETQYPYAFTRGVEDDVFIKYPNDGDIV
WGKVWPDFPDVVVNGSLDWDSDQVELYRAYVAFPDFFRNSTAKWWKREIEELYNNPQNPERSLKFDGMWIDMNEPS
SFVNGAVSPGCRDASLNHPPYMPHLESRRDGLSSKTLCMESQQILPDGSLVQHYNVHNLYGWSQTRPTYEAVQEV
TGQRGVVITRSTFPSSGRWAGHWLGDNTAAWDQLKKSIIGMTFSLFGISYTGADICGFFQDAEYEMCVRWMQLG
AFYPFSRNHNTIGTRRQDPVSWDAFVNISRTVLQTRCTLLPYLYTLMHKAHTEGVTVVRPLLHEFVSDQVTWDI
DSQFLLGPAFLVSPVLERNARNVTAYFPRARWYDYTGVDINARGEWKTLPAPLDHINLHVRRGGYILPWQEPALN
THLSRQKFMGFKIALDDEGTAGGWLFWDGQSIDTYGKGLYLLASFSASQNTMQSHIIFNNYITGTNPLKLGYLE
IWGVGSPVVISASISVSGMVITPSFNNDPPTQVLSIDVTDNRNISLHNFTSLTWISTL

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FIGURE 498

CGATCCTGCCGGAGCCCCGCCGCCGCCGGCTTGGATTCTGAAACCTTCCTTGTATCCCTCCTGAGACATCTTTGC
TGCAAGATCGAGGCTGTCTCTGGTGAGAAGGTGGTGAGGCTTCCCGTCATATTCCAGCTCTGAACAGCAACATG

GGGTGCAAAGTCCTGCTCAACATTGGGCAGCAGATGCTGCGGCGGAAGGTGGTGGACTGTAGCCGGGAGGAGACG
CGGCTGTCTCGCTGCCTGAACACTTTTGATCTGGTGGCCCTCGGGGTGGGCAGCACACTGGGTGCTGGTGTCTAC
GTCCTGGCTGGAGCTGTGGCCCGTGAGAATGCAGGCCCTGCCATTGTCATCTCCTTCCTGATCGCTGCGCTGGCC
TCAGTGCTGGCTGGCCTGTGCTATGGCGAGTTTGGTGCTCGGGTCCCCAAGACGGGCTCAGCTTACCTCTACAGC
TATGTCACCGTTGGAGAGCTCTGGGCCTTCATCACCGGCTGGAACCTTAATCCTCTCCTACATCATCGGTACTTCA
AGCGTAGCGAGGGCCTGGAGCGCCACCTTCGACGAGCTGATAGGCAGACCCATCGGGGAGTTCTCACGGACACAC
ATGACTCTGAACGCCCCCGGCGTGCTGGCTGAAAACCCGACATATTGCGCAGTGATCATAATTCTCATCTTGACA
GGACTTTTAACTCTTGGTGTGAAAGAGTCGGCCATGGTCAACAAAATATTCACTTGTATTAACGTCCTGGTCTCTG
GGCTTCATAATGGTGTGAGGATTTGTGAAAGGATCGGTTAAAAACTGGCAGCTCACGGAGGAGGATTTTGGGAAC
ACATCAGGCCGTCTCTGTTTGAACAATGACACAAAAGAAGGGAAGCCCGGTGTTGGTGGATTTCATGCCCTTCGGG
TTCTCTGGTGTCTGTGCGGGGCGAGCAGCTTGCTTCTATGCCCTTCGTGGGCTTTGACTGCATCGCCACCACAGGT
GAAGAGGTGAAGAACCCACAGAAGGCCATCCCCGTGGGGATCGTGCGCTCCCTCTTGATCTGCTTCATCGCCTAC
TTTGGGGTGTGCGCTGCCCTCACGCTCATGATGCCCTACTTCTGCCCTGGACAATAACAGCCCCCTGCCCGACGCC
TTTAAGCACGTGGGCTGGGAAGGTGCCAAGTACGCAGTGGCCGTGGGCTCCCTCTGCGCTCTTTCCGCCAGTCTT
CTAGGTTCCATGTTTCCCATGCCTCGGGTTATCTATGCCATGGCTGAGGATGGACTGCTATTTAAATTCTTAGCC
AACGTCAATGATAGGACCAAAACACCAATAATCGCCACATTAGCCTCGGGTGCCGTTGCTGCTGTGATGGCCTTC
CTCTTGACCTGAAGGACTTGGTGGACCTCATGTCCATTGGCACTCTCCTGGCTTACTCGTTGGTGGCTGCCTGT
GTGTTGGTCTTACGGTACCAGCCAGAGCAGCCTAACCTGGTATACCAGATGGCCAGTACTTCCGACGAGTTAGAT
CCAGCAGACCAAAATGAATTGGCAAGCACCAATGATTCCCAGCTGGGGTTTTTACCAGAGGCAGAGATGTTCTCT
TTGAAAACCATACTCTCACCCAAAACATGGAGCCTTCCAAAATCTCTGGGCTAATTGTGAACATTTCAACCAGC
CTTATAGCTGTTCTCATCATCCTTCTGCATTGTGACCGTGCTTGGAAGGGAGGCTCTCACCAAAGGGGCGCTG
TGGGCAGTCTTTCTGCTCGCAGGGTCTGCCCTCCTCTGTGCCGTGGTCACGGGCGTCATCTGGAGGCAGCCCGAG
AGCAAGACCAAGCTCTCATTTAAGGTTCCCTTCCTGCCAGTGCTCCCCATCCTGAGCATCTTCGTGAACGTCTAT
CTCATGATGCAGCTGGACCAGGGCACCTGGGTCCGGTTTGCTGTGTGGATGCTGATAGGCTTCATCATCTACTTT
GGCTATGGCCTGTGGCACAGCGAGGAGGCGTCCCTGGATGCCGACCAAGCAAGGACTCCTGACGGCAACTTGGAC
CAGTGCAAGTGAAGCGCACAGCCCCGCCCCCGGAGGTGGCAGCAGCCCCGAGGGACGCCCCCAGAGGACCGGGAGG
CACCCACCCCTCCCCACCAGTGCAACAGAAACCACCTGCGTCCACACCCTCACTGCA

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FIGURE 499

MGCKVLLNIGQQMLRRKVVDCSREETRLSRCLNTFDLVALGVGSTLGAGVYVLGAVARENAGPAIVISFLIAAL
ASVLAGLCYGEFGARVPKTGSAYLYSYVTVGELWAFITGWNILSYIIGTSSVARAWSATFDELIGRPIGEF SRT
HMTLNAPGVLAENPDIFAVIIILILTGLLTGLVKESAMVNKIFTCINVLVLGFIMVSGFVKGSVKNWQLTEEDFG
NTSGRLCLNNDTKEGKPGVGGFMPFGFSGVLSGAATCFYAFVGFDCIATTGEEVKNPQKAIPVGIVASLLICFIA
YFGVSAALTLMMPYFCLDNNSPLPDAFKHVGWEGAKYAVAVGSLCALSASLLGSMFPMPRVIYAMAEDGLLFKFL
ANVNDRTKTP I IATLASGAVAAMAFLEFLDKDLVDLMSIGTLLAYSLVAACVLVRLRYQPEQPNLVYQMASTDEL
DPADQNELASTNDSQLGFLPEAEMFSLKTI LSPKNMEPSKISGLIVNISTSLI AVLIIITFCIVTVLGREALTKGA
LWAVFLLAGSALLCAVVTGVIWRQPESKTKLSFKVPFLPVLPILSIFVNVYLMMLDQGTWVRFAVWMLIGFIY
FGYGLWHSEEASLDADQARTPDGNLDQCK

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FIGURE 500

GTTTTAGGCTCTTGGCGGTGAAGGTCAGAGTGCAGACCTGAGACCACTGCTCACCGACTTCAGACTCCAGTTTA
TCTGTGCCCCAGCTTCTCACTTAGTCTCAGAAGACTTAGGCTGAGGCCTCAGAAAGGAGATCTCCATCCTTTGTC
CAGAGCAGAACAGGATGGCCATGTCCCAGGAATCATTGACCTTCAAGGACGTGTTTGTGGACTTCACCCTGGAGG
AGTGGCAGCAACTGGACTCTGCCCAGAAGAACCTCTACAGGGATGTCATGCTTGAGAACTACAGCCACCTGGTGT
CCGTGGGGTATCTAGTTGCGAAGCCTGATGTGATCTTCAGGTTGGGACCAGGTGGAGAGTCTGGATGGCAGATG
GGGGGACCCCGGTACGGACCTGTGCAGAAGTCTGGCAAGTTGATGAGCAGATAGATCACTACAAGGAAAGCCAAG
ACAAACTTCCTTGGCAAGCTGCATTTCATAGGCAAGGAAACACTGAAGGATGAAAGCGGTCAAGAATCCAGAACAT
GTAGAAAAGCATTATCTGAGCACAGAATTTGATTCTGTAAGGCAAAGACTCCCTAAATATTATTTCGTGGGAAA
AGGCATTCAAACATCATTTAAACTTTCTTGGTCAAATGGAAGCTATGTAAGAAAGAAAGATGATGGATGTAA
GCATATTGGAAAGTATGCTTCCATTATAATCTTCATAAAGCTCAACCTGCAGAGAGATTTTTTGACCCTAATCAA
CGAGGGAAAGCCCTCCACCAAAGCAAGCCCTTAGAAAAAGTCAGAGAAGTCAAACCTGGGGAGAACTCTACAAA
TGTACTGAATGTGGAAAAGTGTTCATCCAGAAAGCAAACCTTAGTTGTACATCAAAGAACTCACACCGGAGAGAAA
CCTTATGAATGCTGCGAATGTGCAAAAGCCTTCAGCCAGAAGTCAACCTCATAGCACACCAGAGAACTCACACA
GGGGAGAAGCCCTATGAATGCAGTGAATGTGGA AAAACCTTTATCCAGAAGTCAACTCTGATTAAACATAAGAAA
ATTTCATATGGAGAGAGACCCTATAAATGCAGTGTCTGTGAGAAAGCCTTCAGTAGGAAGTCAACTCTCATTAAAC
ATCAGATAATTTCATATGGGAGAAACCTTATGAATGTAATAAATGTGGGAAATCTTTTAGTGTTAAATCAACTCTC
ATTGTATGTCACAGAACATAAATGCATAAGTTGCATGCTATTGTGAATAGTGTGATGAAATTTTGCACGTGCTCTG
CTCTTTCCTGCTCAGGATGCAAATCAGTGAATCTTTTTTTTTTTTTTTTTTTTGGAGACAGAGTCTTGCTCTGTCAT
CCAAACTGGAGTGCAGTGGCACAATCTTGGCTCACTGCAACCTCCGCCTCTTGGGTTCAACCGATTCTCCTGCCT
CAACCTCCCAAATAGTTGGGATTACAGGCACATGCCACCATACGCAGCTAATTTGTATTTTTTAGTAGAGACAGGG
TTTCACCATGTTGGCCAGCCTGGTCTTGAACCTCTGACCTCAAGTGATCCGCCTGCCTCAGCCTCCCAAAGTGCT
GGGATTACAGGCATGAGCCACTGCACCCGGCTTGAATCATCTTTTGTCCAGTATTATATCCATGCTGTATATGC
TACCCGCCCCACTAGTCCCTTAGCTGTCTCAGTTGTCAGATTGACTGTGATGGGATTGCAGTGCTTGCAATAAAGC
TACCCTTATTGTATAATGACCCCAAAGTGCAAGAGTAGTGATGTTGGCAATTTGCATACACCAAAAAATAAGTTAT
AAAGTGCTTCCTTAAAGTGAAATGGTTAAAGTTCTTGACTTAATAAAGAAAAAAATGTATGCTGAGGTTGTTAA
GATTTACAGTAAGAATGAATCTTCTATCCAGAAATTGTGAAGGAGGAAAAAGAACTTGTGCTAGTTTTGCTGTC
ACATCTGAACTGCAAAAGTTGTGGCCACAGTGCATCATAAGTGCTAAGACGAAAAAGACATTAAATTTGCGGAT
GGAAGGCGTGAATAGAAATGGGTTCTGACAGCAATCAGGTTCCGTACTATTACAGTTTCAGGCATCCGCTAGGG
ATCTTGAACATATCCCCATGGATAAGGGAGGGGTACTGTACCTTGTGTCATATTGTGCATTAAAGAATTCATTGA
GTGTAATCATGTAAGTCTAACACACATTTAAAAAGCTCTCAGATATCATTTTCGCCTTCGGTTGATGTAAGAAAAT
TCAAAGCTACTCAAATCATTCAATAAATGATAAAATTATTTAAAAA AAAAAAAAAAAAAA

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FIGURE 501

MAMSQESLTFKDVFDFTLEEWQQLDSAQKNLYRDVMLENYSHLVSVGYLVAKPDVIFRLGPGGESWMADGGTPV
RTCAEVWQVDEQIDHYKESQDKLPWQAAFIGKETLKDESGQESRTC RKSIYLS TEFD SVRQRLPKYYSWEKAFKT
SFKLSWSKWLCKKER

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FIGURE 502

AACACATTTTCATCTGGGCTTCTTAAATCTAAATCTTTAAATGACTAAGTTTTCTTCCTTTTCTCTGTTTTTCCT
AATAGTTGGGGCTTATATGACTCATGTGTGTTTCAATATGGAAATTATTGGAGGGAAAGAAGTGTACCTCATTC
CAGGCCATTTATGGCCTCCATCCAGTATGGCGGACATCACGTTTGTGGAGGTGTTCTGATTGATCCACAGTGGGT
GCTGACAGCAGCCCACTGCCAATATCGGTTTACCAAAGGCCAGTCTCCCACTGTGGTTTTAGGCGCACACTCTCT
CTCAAAGAATGAGGCCTCCAAACAAACACTGGAGATCAAAAAATTTATACCATTCTCAAGAGTTACATCAGATCC
TCAATCAAATGATATCATGCTGGTTAAGCTTCAAACAGCCGCAAACTCAATAAACATGTCAAGATGCTCCACAT
AAGATCCAAAACCTCTCTTAGATCTGGAACCAAATGCAAGGTACTGGCTGGGGAGCCACCGATCCAGATTCATT
AAGACCTTCTGACACCCTGCGAGAAGTCACTGTTACTGTCCTAAGTCGAAAACCTTGCAACAGCCAAAGTTACTA
CAACGGCGACCCTTTTATCACCAAAGACATGGTCTGTGCAGGAGATGCCAAAGGCCAGAAGGATTCCTGTAAGGG
TGACTCAGGGGGCCCTTGATCTGTAAAGGTGTCTTCCACGCTATAGTCTCTGGAGGTCATGAATGTGGTGTTC
CACAAAGCCTGGAATCTACACCCTGTAAACCAAGAAATACCAGACTTGGATCAAAAGCAACCTTGTCCCGCCTCA
TACAAATTAAGTTACAAATAATTTTATTGGATGCACTTGCTTCTTTTTTCCTAATATGCTCGCAGGTTAGAGTTG
GGTGTAAGTAAAGCAGAGCACATATGGGGTCCATTTTGCACCTGTAAGTCATTTTATTAAGGAATCAAGTTCTT
TTTCACTTGTATCACTGATGTATTTCTACCATGCTGGTTTTATTCTAAATAAAATTTAGAAGACT

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FIGURE 503

MTKFSSFSLFFLIVGAYMTHVCFNMEIIGGKEVSPHSRPFMASIQYGGHHVCGGVLDIPQWVLTAHCQYRFTKG
QSPTVVLGAHSLSKNEASKQLEIKKFIPFSRVTSDPQSNDIMLVKLQTAAKLNKHVKMLHIRSKTSLRSGTKCK
VTGWGATDPDSLPSDTLREVTVTVLSRKLCNSQSYYNQDPFITKDMVCAGDAKGQKDSCKGDSGGPLICKGVFH
AIVSGGHECGVATKPGIYTLLTKKYQTIWIKSNLVPPTHN

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FIGURE 504

GGACAGCACAGCTGACAGCCGTGCTCAGAAAGTTTCTGGATCCCAGGCTCATCTCCACAGAGGAGAACACGCAGG
CAGCAGAGACCATGGGGGCCCATCTCAGCCCCCTTCCTGCAGATGGCGCATCCCCTGGCAGGGGCTCCTGCTCACAG
CCTCACTTTTACCTTCTGGAACCCGCCACCACTGCTCAGCTCACTATTGAAGCTGTGCCATCCAATGCTGCAG
AGGGGAAGGAGGTTCTTCTACTTGTCCACAATCTGCCCCAGGACCCTCGTGGCTACAACCTGGTACAAAGGGGAAA
CAGTGGATGCCAACCGTCGAATTATAGGATATGTAATATCAAATCAACAGATTACCCCAGGGCCTGCATACAGCA
ATCGAGAGACAATATACCCCAATGCATCCCTGCTGATGCGGAACGTACCAGAAATGACACAGGATCCTACACCC
TACAAGTCATAAAGCTAAATCTTATGAGTGAAGAAGTAACTGGCCAGTTTACGCGTACATCCGGAGACTCCCAAGC
CCTCCATCTCCAGCAACAACCTCCAACCCCGTGGAGGACAAGGATGCTGTGGCCTTCACCTGTGAACCTGAGACTC
AGAACACAACCTACCTGTGGTGGGTAAATGGTCAGAGTCTCCCGGTGAGTCCCAGGCTGCAGCTGTCCAATGGCA
ACAGGACCCTCACTCTACTCAGTGTCAACAAGGAATGACGTAGGACCCTATGAATGTGAAATACAGAACCCAGCGA
GTGCAAACTTCAGTGACCCAGTCACCCTGAATGTCTCTATGGCCCAGATGCCCCCACCATTTCCTTTCAGACA
CCTATTACCATGCAGGGGTAAATCTCAACCTCTCCTGCCATGCGGCCTCTAATCCACCCTCACAGTATTCTTGGT
CTGTCAATGGCACATTCCAGCAATACACACAAAAGCTCTTTATCCCCAACATCACTACAAAGAACAGCGGATCCT
ATGCCTGCCACACCACTAACTCAGCCACTGGCCGCAACAGGACCACAGTCAGGATGATCACAGTCTCTGATGCTG
TAGTACAAGGAAGTTCTCCTGGCCTCTCAGCTAGAGCCACTGTCAGCATCATGATTGGAGTACTGGCCAGGGTGG
CTCTGATATAGTAGCTCTGGTGTAGTTTCTGCATTTCAAGAAGACTGGCAGACAGTTGTTTTTATTCTTCCTCAA
AGCATTGTCAATCAGCTACCATTCAAAATTGCTTCTTCTTCAAGATTTATGGAAAATACTCTGACGAGTACTCTT
GAACACAAGTTCTTGATAACTTTAAGATCACGCCACTGGACTGTCTATGAACTTGCAAAACAGGCTGATACCTTTG
TGAAGTTGCCCACCAAAACACAGAAGGAAAAAAACATGAATTTTATTGAACTAAATAATAATGAGGATAATGTTT
TTAAGATTTTTTTTTTTTTTTTTTTTTTGGAGATGGAATCTCGCTCTGTGCGCCAGGCTGGAGTGCAGTGGCACGATC
TCAACTCACTGCAACGTCCGCCTCCTGGGTTACACCATTCTCCTGCCTCAGCCTCCTGAGTAGCTGGGACTACA
GGCGCCTGCCACAACGCCCGGCTAATTTTTTGTATTTTTTAGTAGAGACGGGGTTTCACTGTGGTCTCAATCTCCT
GACTTCATGGTCCGCCTGCCTCAGCCTCCCAAAGTTCTGGGATTACAGGTGTGAGCCACCGCGCCAGCCCGTTT
TTAAGATTTTTTATTTGAAAAATTGCCAATCTTTAAGTGTTTTCTTTTTTTCAGATTTATGAATTTCTTTATCTTT
TAAGCTATCTATACCTTACTGCAATTTGGTAAAGCAGACTTTTGTGAACAAAAATTATAACATTTACTTTTGCTC
CCTACCTGACTGCCACAGAACTGGGCAACTATTCATGAGTATTCATATGTTTATGGTAATTCAGTTATTTGCACA
AGTTTCACTGAGAATCTGCTGTCTTTATAATGGGATATAGTTTAAACATTGGTTATATTACCAAGGCTTTGATTG
GGATGTTATATTTGAGAAAAATACAGAGAATGATAGATTAACGGAGTGTCTAATCTATCGTGTCAACCCCAAATTT
TTACGTATGAGATCCTTTAGTCCACCCAATGGCTGACAGTAACAGCATCTTTAACACAACCTCTTTGTTCAAATGT
ACTATGGTCTCTTTTAGAGTCAGACTCCTAGACTCACTGTTCTCACTGTCTGTTTTAATTTAACCCAGGCATGC
AATGCTAGATAATAAAATTGCTCCCTATTGGCTGATC

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FIGURE 505

MGPISAPSCRWRIPWQGLLLTASLFTFWNPPTTAQLTIEAVPSNAAEGKEVLLL VHNLPQDPRGYNWYKGETVDA
NRRIIGYVISNQQITPGPAYSNRETIYPNASLLMRNVTRNDTGSYTLQVIKLNLMSEEV TGQFSVHPETPKPSIS
SNNSNPVEDKDAVAFTCEPETQNTTYLWWVNGQSLPVSPRLQLSNGNRTLTL LSVTRNDVGPIECEIQNPASANF
SDPVTNLNVLYGPDAPTISPSTYYHAGVNLNLSCHAASNPPSQYSWSVNGTFQQYTQKLFIPNITTKNSGSYACH
TTNSATGRNRRTTVRMITVSDAVVQGSSPGLSARATVSIMIGVLARVALI

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FIGURE 506

CGCAAGAATGCATACAAACTCCAGGGCTGCTCTCTCCTGGAGAGGGAGGGAGGGGATTTAAAAACCTGCAGCAAC
ATGGGGGAGGAGGCTGTTTGTCTTCTCTCTCTGGGGAAGTAACTCGCTCAAACCTGCCTTCCTTGCTGAGCTGCT
TCGCGTAGCTTTGAGGAAGGTCTAGTGAAATTGGTCTTTCATTACATCTGGATGTACTACCAGAGAGTTCTGCT
GCTGTTGTTTTTTTTAGCTTTTCTTTCTTTGAGTCTTTAAAGGGCAATTGTCGACACTCTGCAAACATACCGATT
TGTTGCTCTGCCACTTTGGAGTCTTCAATCTGGGCAGTAACTATTTACCTTTTTTCTGCTAGCCTGTCCCCCTC
TCTGGATTGAAGTCACCTGCTAAGACAATGGACTACCGACCAGACTCCCGGAAATCATGTTGGTAGGATCCCAGT
CTTTTTCGCCTGGAGGGCCCAATGGGATCATTAGAAGCCAGTCTTTGCGGGTTTCAGCGGCCTCCAGGAAAGGC
GATCCAGGTGTAACCTCTTCAATTGAAAATTCCTCCGCTCTCAAGAAGCCTCAGGCCAACTGAAGAAAATGCACA
ATTTAGGCCACAAAAACAACAATCCCCCAAGAGCCTCAGCCTAAAAGGGTGGAAGAAGTCTACAGGGCCTTGA
AAAATGGACTTGATGAATATCTGGAGGTTACACAGACGGAGCTGGACAAGTTGACAGCTCAGTTAAAAGATATGA
AAAGAACTCTCGCCTGGGTGTACTGTATGACCTAGACAAGCAAATTTAAACAATTGAAAGATACATGAGACGCC
TGGAGTTTCATATAAGTAAGGTAGATGAACCTATGAAGCTTATTGTATCCAGCGACGCCTCCAGGATGGTGCCA
GCAAAATGAAGCAAGCCTTCGCAACATCCCCTGCCAGCAAAGCTGCCCGGGAGAGTCTGACAGAGATCAATCGGA
GCTTCAAGGAGTACACAGAGAATATGTGCACCATTTGAAGTGGAGCTAGAGAATCTGCTGGGAGAATTCTCCATCA
AGATGAAAGGTCTGGCTGGCTTTGCACGCCTCTGTCTGGAGATCAATATGAAATTTTCATGAAGTATGGCCGGC
AGCGGTGGAACCTGAAAGGCAAAATAGAAGTAAATGGCAAGCAGAGCTGGGATGGAGAAGAAACAGTTTTTCTGC
CCCTGATAGTTGGGTTCATCTCCATCAAGGTACGGAGCTCAAAGGGCTAGCAACTCACATCCTGGTAGGTAGCG
TGACCTGTGAGACCAAAGAGCTGTTTGCAGCCCGACCTCAGGTAGTGGCTGTGACATCAATGACCTTGGTACCA
TCAAACCTGAACCTGGAATCACCTGGTATCCATTTGACGTGGAGGACATGACCGCATCCTCAGGCGCTGGGAACA
AGGCAGCAGCCCTTCAGAGGAGAATGTCCATGTACAGCCAGGGTACCCCGGAAACGCCCACCTTCAAAGACCACT
CCTTCTTTTCAAATCTACCTGATGACATCTTTGAAAATGGAAAGGCAGCCGAGGAGAAAATGCCACTGTCTGCTCA
GCTTCAGTGACCTGCCCAACGGGGACTGCGCCCTCACCTCCCCTCAACAGGCTCCCCTTCCAACCTCAACAAATC
CAGAAATTACCATCACCCCTGCGGAGTTTAACTCAGCAGCTTGGCCTCCCAGAATGAGGGTATGGATGACACCA
GCTCAGCATCTTCAGGAACCTCCCTGGGAGAAGGCCAAGAGCCAAAGTCACACCTGAAGGAGGAAGACCCAGAGG
AGCCCAGAAAACCTGCCTCGGCCCATCTGAGGCTTGCCGCCGACAGTCTCAGGTGCTGGGGCTGAGCACCTGT
TCCTTGAGAATGATGTTGCAGAAGCACTTCTGCAAGAGTCTGAGGAGGCCTCTGAGCTCAAGCCTGTGGAACCTGG
ACACTTCGGAAGGAAACATCACAAAGCAGCTGGTCAAGAGGCTCACATCTGCAGAGGTGCCAATGGCCACAGACA
GGCTGCTCTCTGAGGGTTCTGTTGGTGGAGAATCTGAAGGCTGCAGATCCTTTCTAGATGGAAGCTTAGAGGATG
CTTTAATGGGCTTTTACTTGCATTAGAACCACATAAAGAGCAGTATAAAGAGTTTCAGGATCTGAACCAAGAAG
TCATGAATTTGGATGATATTCTAAAAAAGTAGAGAAGATCCTCTAATGGATCCAGTGCTGCCATCCCTCAACCT
CCTCAGTGATCAACTCATGGCCAATCTTGTTTCTATTCTTCAACCTGCTGACTTCCCTCTGGATTCTTCTGCAA
CCAGTCCCAGATATTGTGCCATTTTATCCATGGTTGTACTTCTTTTTTGGATATAAAGATTTTTAAATGCATTTT
TTAAATGCTAACAAAAAATAAAACTTGAAACAAAAAAAAAAAAAAAAAAAAA

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FIGURE 507

MLVGSQSFSPGGPNGIIRSQSFAGFSGLQERRSRCNSFIENSSALKKPQAKLKKMHNLGHKNNPPKEPQPKRVE
EVYRALKNGLDEYLEVHQTELDKLTQLKDMKRNSRLGVLYDLKQIKTIERYMRRLEFHISKVDELYEAYCIQR
RLQDGASKMKQAFATSPASKAARESLTEINRSFKEYTENMCTIEVELENLLGEFSIKMKGLAGFARLCPGDQYEI
FMKYGRQRWKLKGKIEVNGKQSWDGEETVFLPLIVGFISIKVTELKGLATHILVGSVTCETKELFAARPQVVAVD
INDLGTIKLNLEITWYPFDVEDMTASSGAGNKAALQRRMSMYSQGTPETPTFKDHSFFSNLPDDIFENGKAAEE
KMPLSLSFSDLPNGDCALTSHSTGSPSNSTNPEITITPAEFNLSSLASQNEGMDDTSSASSRNSLGEGQEPKSHL
KEEDPEEPRKPASAPSEACRRQSSGAGAEHLFLENDVAEALLQEESEASELKPVELDTSEGNITKQLVKRLTSAE
VPMATDRLLSEGSVGGSESEGCRSFLDGSLEDAFNGLLLALEPHKEQYKEFQDLNQEVNLDLILKK

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FIGURE 508

CGGGGGCTGGCGGCTGCGGCTCGGCGGAGAGTGCGGC**ATG**CGCTCGGAAAAGGAGGGGGCCGGAGGCCTTCGGGC
GGCCGTTGCCGCGCGGGGCCCCGAGCGGGAGGGAGAAGCTGTGGGCCCTAGAAGTGCAGTTCCACCGCGACTCGCA
GCAGCAGGAGGCTGAGACGCCGCCAACTTCGTCTCCGGTTGCGGGGGCGGTGCGGGCAAACCTCGCGAGGAGAA
GAGGACGGCCCTGAGCAAGGTGGTCATCCGCCGCCTGCCTCCGGGCCTCACCAAGGAGCAGCTGGAGGAGCAGCT
GCGCCCGCTGCCAGCACACGACTACTTCGAGTTCTTCGCCGCCGACCTGAGTCTTTATCCTCATCTCTACTCAAG
AGCATACATTAATTTTAGGAATCCTGATGACATCCTTCTTTTTAGAGATCGTTTTTGATGGATATATCTTCCTTGA
CAGCAAAGGCCCTAGAATATCCTGCAGTGGTAGAGTTTGCTCCATTCCAGAAGATAGCCAAAAAGAAGCTGAGAAA
AAAAGATGCCAAGACTGGAAGCATCGAAGATGATCCAGAATATAAGAAGTTTTTAGAAACCTACTGTGTGGAGGA
AGAGAAGACCAGTGCCAACCCTGAGACTCTGCTGGGGGAGATGGAGGCGAAGACAAGAGAGCTCATTGCTAGAAG
AACCACACCTCTTTTGGAATATATTAAAAATAGAAAATTAGAAAAGCAGAGAATTCGAGAAGAGAAGCGAGAAGA
ACGGAGGAGGAGAGAGTTAGAAAAGAAACGTTTGCGGGAAGAGGAAAAAAGAAGAAGAAGAAGAAAGATG
CAAAAAAAAAAGAGACAGATAAACAGAAGAAAATTGCAGAGAAAAGAAGTAAGGATTAAGCTTCTTAAGAAACCAGA
AAAGGGAGAGGAACCAACCACAGAGAAACCAAAAGAAAGAGGAGAGGAGATTGATACTGGAGGTGGCAAGCAGGA
ATCCTGTGCCCCCGGTGCAGTCGTAAGCCAGGCCCATGGAAGGCTCGCTGGAGGAGCCCCAGGAGACGTCACA
CAGCGGCAGTGATAAAGAGCACAGGGATGTGGAGAGATCTCAAGAACAAGAATCTGAAGCACAAAGATACCATGT
GGATGACGGCAGGAGGCACAGAGCTCACCACGAGCCTGAACGGCTTTCAGAAAGGAGTGAGGATGAGCAGAGATG
GGGGAAAGGACCTGGCCAAGACAGAGGGAAGAAGGGGAGCCAGGACAGCGGGGCTCCGGGGGAGGCCATGGAGAG
ACTGGGAAGAGCGCAGAGGTGTGACGACAGTCCAGCACCCAGAAAAGAGCGACTGGCAAACAAGGACCGGCCAGC
CTTGACAGCTGTATGATCCAGGAGCTCGCTTCCGAGCGCGAGAGTGTGGCGGAAACAGGAGGATCTGCAAGGCAGA
AGGTTCCGGGGACTGGTCCTGAGAAGAGGGAAGAGGCAGAG**TCAG**TCACTGCACGCACCTGGCCTCCATGGACGAG
CAAGGGCATCCCAGAAACGTGTAAATGACCCCGAGTGTGACTGGGAAGGAGAACTTATTCTTACCAGGAAACTG
GAAGCTAAAAATACAGAGGGTGACGTAGAAACACGCAGAAACCATTTCTAAAGAAAGTAGTGATCTTGTATTAAAT
TGAGCAGAAATTCTCACAGATTTTACCATTCTGTTATAAACTAGTATTTGTTGTTTAGCCAAAACAGAAAATGAT
TTCCACTGGACAGTAGAAAAATATGTGTAAATAGGGAAGAAAGTTAGTATTGGATCAGTGTGAGTCCTGAAGCA
CTTTCAGTGCTGTGAGAACGACATCCACTTTGGGTTTCATTTCGTTTGTAGCAGAGGAGCTGTGAGTCAGTCGTG
CTTCTCGGTGGCCTCTGAGCCATGGTGTGCGAGTGAAGAGTAGTTCTTGTGTTTACAACCTTTGTGAGTCAGCCA
TGCCCCGCAAAGCGTGCTGTGTTTTAGTCCTGGTAGGAATATTTATCAGAGTTCACACTATATAAAACCCAACAGC
TTCAACTATTGCCCTTTCAACAGTTTTGCCACTGACCGGATAGAAACGGTTTCAGTCTCTGGATGGATGTGTTTG
TGTTTGTAAACCATTACGGTTTTAAACCATGGTTTTAAGAATTTGCCCAAATAACAGAAATTTTGTTCGGGAAGGGA
TAACTAGATATAGCATACAGAGCCTGTTTTTGAGTTTTAGATACTTTATTTGTAAATAACTTAAATAGCTTTC
TGAAACCGTGCAATCTGTAGTTTCTTCCTTTCAGTGAAATTGCTAAATGTCAATGTATTTTTGGCACTGCGATTT
TAACCATTATTAAATAAAAATTTTGTTAAAGAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 509

MRSEKEGAGGLRAAVAARGPSGREKLSALEVQFHRDSQQQEAETPPTSSSGCGGGAGKPREEKRTALSKVVIRRL
PPGLTKEQLEEQRLPLPAHDYFEFFAADLSLYPHLYSRAYINFRNPDDILLFRDRFDGYIFLDSKGLEYPAVVEF
APFQKIAKKKLRKKDAKTGSIEDDPEYKKFLETYCVVEEETSANPETLLGEMEAKTRELIARRTTPLEYIKNRK
LEKQRIREEKREERRRRELEKKRLREEEKRRRREEERCKKKETDKQKKIAEKEVRIKLLKKPEKGEEPTTEKPKE
RGEEIDTGGGKQESCAPGAVVKARPMEGSLEEPQETSHSGSDKEHRDVERSQQESEAQRYHVDDGRRHRAHHEP
ERLSRRSEDEQRWGKPGQDRGKKGSQDSGAPGEAMERLGRAQRCDDSPAPRKERLANKDRPALQLYDPGARFRA
RECGGNRRICKAEGSGTGPEKREEAE

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FIGURE 510

GCCCCATCTCCTTGGGGCTGCCCGTGCTTCGTGCTTTGGACTACCGCCCAGCAGTGTCTGCCCTCTGCCTGGGGCC
TCGGTCCCTCCTGCACCTGCTGCCTGGATCCCCGGCCTGCCTGGGCCTGGGCCTTGGTTCTCCCCATGACACCAC
CTGAACGTCTCTTCCCTCCCAAGGGTGTGTGGCACCACCCTACACCTCCTCCTTCTGGGGCTGCTGCTGGTTCTGC
TGCCTGGGGCCCAGGGGCTCCCTGGTGTGGCCTCACACCTTCAGCTGCCCAGACTGCCCGTCAGCACCCCAAGA
TGCATCTTGCCACAGCACCCCTCAAACCTGCTGCTCACCTCATTGGAGACCCCAGCAAGCAGAACTCACTGCTCT
GGAGAGCAAACACGGACCGTGCCTTCCTCCAGGATGGTTTCTCCTTGAGCAACAATTCTCTCCTGGTCCCCACCA
GTGGCATCTACTTCGTCTACTCCCAGGTGGTCTTCTCTGGGAAAGCCTACTCTCCCAAGGCCACCTCCTCCCCAC
TCTACCTGGCCCATGAGGTCCAGCTCTTCTCCTCCCAGTACCCCTTCCATGTGCCTCTCCTCAGCTCCCAGAAGA
TGGTGTATCCAGGGCTGCAGGAACCTGGCTGCACTCGATGTACCACGGGGCTGCGTTCCAGCTCAGCCAGGGAG
ACCAGCTATCCACCCACACAGATGGCATCCCCACCTAGTCTCAGCCCTAGTACTGTCTTCTTTGGAGCCTTCG
CTCTGTAGAACTTGGAATAATCCAGAAAGAAAAATAATTGATTTCAGACCTTCTCCCCATTCTGCCTCCATTC
TGACCATTTAGGGGTCGTCACCACCTCTCCTTTGGCCATTCCAACAGCTCAAGTCTTCCCTGATCAAGTCACCG
GAGCTTTCAAAGAAGGAATTCTAGGCATCCCAGGGGACCACACCTCCCTGAACCATCCCTGATGTCTGTCTGGCT
GAGGATTTCAAGCCTGCCTAGGAATTCCCAGCCCAAAGCTGTTGGTCTGTCCCACCAGCTAGGTGGGGCCTAGAT
CCACACACAGAGGAAGAGCAGGCACATGGAGGAGCTTGGGGGATGACTAGAGGCAGGGAGGGGACTATTTATGAA
GGCAAAAAAATTAAATTATTTATTTATGAGGATGGAGAGAGGGGAATAATAGAAGAACATCCAAGGAGAAACAG
AGACAGGCCCAAGAGATGAAGAGTGAGAGGGCATGCGCACAAGGCTGACCAAGAGAGAAAGAAGTAGGCATGAGG
GATCACAGGGCCCCAGAAGGCAGGGAAAGGCTCTGAAAGCCAGCTGCCGACCAGAGCCCCACACGGAGGCATCTG
CACCTCGATGAAGCCCAATAAACCTCTTTTCTCTG

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FIGURE 511

MTPPERLFLPRVCGTTLHLLLLGLLLVLPGAQGLPGVGLTPSAAQTARQHFKMHLAHSTLKPA AHLIGDPSKQN
SLLWRANTDRAFLQDGFSLSNNSLLVPTSGIYFVYSQVVFSGKAYSPKATSSPLYLAHEVQLFSSQYPFHVPLLS
SQKMVYPGLQEPWLHSMYHGA AFQLTQGDQLSTHTDGIPHLVLSPSTVFFGAFAL

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FIGURE 512

TGGAAAGGGCTGTCACCCGGCTTGGCCCCCTCCACACCCAAGCTGAGCCGGCGACAGGAGGCATG
AGGGGCCCCCGGCCGAAATGACAGTGCTGGCGCCAGCCTGGAGCCCAACAACCTATCTCCTCCTGCTGCTGCTGC
TGAGCTCGGGACTCAGTGGGACCCAGGACTGCTCCTTCCAACACAGCCCCATCTCCTCCGACTTCGCTGTCAAAA
TCCGTGAGCTGTCTGACTACCTGCTTCAAGATTACCCAGTCACCGTGGCCTCCAACCTGCAGGACGAGGAGCTCT
GCGGGGCGCTCTGGCGGCTGGTCCTGGCACAGCGCTGGATGGAGCGGCTCAAGACTGTCGCTGGGTCCAAGATGC
AAGGCTTGCTGGAGCGCGTGAACACGGAGATACACTTTGTACCAAATGTGCCTTTCAGCCCCCCCCCAGCTGTC
TTCGCTTCGTCCAGACCAACATCTCCCGCCTCCTGCAGGAGACCTCCGAGCAGCTGGTGGCGCTGAAGCCCTGGA
TCACTCGCCAGAACTTCTCCCGGTGCCTGGAGCTGCAGTGTGAGCCGACTCCTCAACCTGCCACCCCCATGGA
GTCCCCGGCCCCCTGGAGGCCACAGCCCCGACAGCCCCGAGCCCCCTCTGCTCCTCCTACTGCTGCTGCCCCGTGG
GCCTCCTGCTGCTGGCCGCTGCCTGGTGCCTGCACTGGCAGAGGACGCGGCGGAGGACACCCCGCCCTGGGGAGC
AGGTGCCCCCGTCCCCAGTCCCCAGGACCTGCTGCTTGTGGAGCACTGACCTGGCCAAGGCCTCATCCTGGGGA
GGATACGTAGGCACACAGAGGGGAGTCACCAGCC

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FIGURE 513

MTVLAPAWSPTTYLLLLLLLLSSGLSGTQDCSFQHSPISSDFAVKIRELSDYLLQDYPVTVASNLQDEELCGALWR
LVLAQRWMERLKTVAGSKMQGLLERVNTEIH FVTKCAFQPPPSCLRFVQTNISRLQETSEQLVALKPWITRQNF
SRCLELQCQPDSSTLPPPWSRPLEATAPTAPQPPLLLLLLLLPVGLLLAAAWCLHWQTRRRRTPRPGEQVPPVP
SPQDLLLVEH

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FIGURE 514A

CTTCAGATAGATTATATCTGGAGTGAAGGATCCTGCCACCTACGTATCTGGCATAGTATTCTGTGTAGTGGGATG
AGCAGAGAACAAAAACAAAATAATCCAGTGAGAAAAGCCCGTAAATAAACCTTCAGACCAGAGATCTATTCTCCA
GCTTATTTTAAAGCTCAACTTAAAAAGAAGAACTGTTCTCTGATTCTTTTCGCCTTCAATACACTTAATGATTTAA
CTCCACCCTCCTTCAAAAAGAAACAGCATTTCCTACTTTTATACTGTCTATATGATTGATTGTCACAGCTCATCTG
GCCAGAAGAGCTGAGACATCCGTTCCCTACAAGAACTCTCCCCGGGTGGAACAAGATGGATTATCAAGTGTCA
AGTCCAATCTATGACATCAATTATTATACATCGGAGCCCTGCCAAAAAATCAATGTGAAGCAAATCGCAGCCCGC
CTCCTGCCTCCGCTCTACTCACTGGTGTTCATCTTTGGTTTTGTGGGCAACATGCTGGTCATCCTCATCCTGATA
AACTGCAAAAAGGCTGAAGAGCATGACTGACATCTACCTGCTCAACCTGGCCATCTCTGACCTGTTTTTCTTCTT
ACTGTCCCCCTTCTGGGCTCACTATGCTGCCGCCAGTGGGACTTTGGAAATACAATGTGTCAACTCTTGACAGGG
CTCTATTTTATAGGCTTCTTCTCTGGAATCTTCTTCATCATCCTCCTGACAATCGATAGGTACCTGGCTGTCTGTC
CATGCTGTGTTTGCCTTAAAAAGCCAGGACGGTCACCTTTGGGGTGGTGACAAGTGTGATCACTTGGGTGGTGGCT
GTGTTTGCCTCTCTCCAGGAATCATCTTTACCAGATCTCAAAAAGAAGGTCTTCATTACACCTGCAGCTCTCAT
TTCCATACAGTCAGTATCAATTCTGGAAGAATTTCCAGACATTAAAGATAGTCATCTTGGGGCTGGTCTGCGG
CTGCTTGTATGGTCATCTGCTACTCGGGAATCCTAAAACTCTGCTTCGGTGTGAAATGAGAAGAAGAGGCAC
AGGGCTGTGAGGCTTATCTTCACCATCATGATTGTTTATTTTCTTCTTGGGCTCCCTACAACATTGTCCTTCTC
CTGAACACCTTCCAGGAATCTTTGGCCTGAATAATTGCAGTAGCTCTAACAGGTTGGACCAAGCTATGCAGGTG
ACAGAGACTCTTGGGATGACGCACTGCTGCATCAACCCCATCATCTATGCCTTTGTGCGGGGAGAAGTTCAGAAAC
TACCTCTTAGTCTTCTTCCAAAAGCACATTGCCAAACGCTTCTGCAAAATGCTGTTCTATTTTCCAGCAAGAGGCT
CCCAGCGAGCAAGCTCAGTTTACACCCGATCCACTGGGGAGCAGGAAATATCTGTGGGCTTGTGACACGGACTC
AAGTGGGCTGGTGACCCAGTCAGAGTTGTGCACATGGCTTAGTTTTCATACACAGCCTGGGCTGGGGGTGGGGTG
GGAGAGGTCTTTTTTAAAAGGAAGTTACTGTTATAGAGGGTCTAAGATTATCCATTTATTTGGCAICTGTTTTAA
AGTAGATTAGATCTTTTAAAGCCCATCAATTATAGAAAAGCCAAATCAAAATATGTTGATGAAAAATAGCAACCTTT
TTATCTCCCCCTTACATGCATCAAGTTATTGACAAACTCTCCCTTCACTCCGAAAGTTCCTTATGTATATTTAAA
AGAAAAGCCTCAGAGAATTGCTGATTCTTGAGTTTGTGATCTGAACAGAAATACCAAAATTATTTTCAGAAATGTA
CAACTTTTTTACCTAGTACAAGGCAACATATAGGTTGTAAATGTGTTTAAAACAGGTCTTTGTCTTGCTATGGGGA
GAAAAGACATGAATATGATTAGTAAAGAAATGACACTTTTTCATGTGTGATTTCCTCCCTCCAAGGTATGGTTAATAA
GTTTCACTGACTTAGAACCAGGCGAGAGACTTGTGGCCTGGGAGAGCTGGGGAAGCTTCTTAAATGAGAAGGAAT
TTGAGTTGGATCATCTATTGCTGGCAAAGACAGAAGCCTCACTGCAAGCACTGCATGGGCAAGCTTGGCTGTAGA
AGGAGACAGAGCTGGTTGGGAAGACATGGGGAGGAAGGACAAGGCTAGATCATGAAGAACCTTGACGGCATTGCT
CCGTCTAAGTCATGAGCTGAGCAGGGAGATCCTGGTTGGTGTGTCAGAAGGTTTACTCTGTGGCCAAAGGAGGGT
CAGGAAGGATGAGCATTTAGGGCAAGGAGACCACCAACAGCCCTCAGGTCAGGGTGAGGATGGCCTCTGCTAAGC
TCAAGGCGTGAGGATGGGAAGGAGGGAGGTATTCTGAAGGATGGGAAGGAGGGAGGTATTCTGTCAGCATATGAG
GATGCAGAGTCAGCAGAATGGGGTGGATTTGGTTTGGAAAGTGAAGGTCAGAGAGGAGTCAGAGAGAATCCCTAG
TCTTCAAGCAGATTGGAGAAACCCTTGAAAAGACATCAAGCACAGAAGGAGGAGGAGGTTTAGGTCAAGAAG
AAGATGGATTGGTGTAAAAGGATGGGTCTGTTTGCAGAGCTTGAACACAGTCTCACCCAGACTCCAGGCTGTCT
TTCCTGAATGCTTCTGACTTCATAGATTTCTTCCCATCCCAGCTGAAATACTGAGGGGTCTCCAGGAGGAGAC
TAGATTTATGAATACACGAGGTATGAGGTCTAGGAACATACTTCAGCTCACACATGAGATCTAGGTGAGGATTGA
TTACCTAGTAGTCATTTTCATGGGTTGTTGGGAGGATTCTATGAGGCAACCACAGGCAGCATTTAGCACATACTAC
ACATTCAATAAGCATCAAACCTTAGTTACTCATTACAGGGATAGCACTGAGCAAAGCATTGAGCAAAGGGGTCCC
ATATAGGTGAGGGAAGCCTGAAAACTAAGATGCTGCCTGCCAGTGCACACAAGTGTAGGTATCATTTTCTGCA
TTTAACCGTCAATAGGCAAAGGGGGGAAGGGACATATTCAATTTGGAAATAAGCTGCCTTGAGCCTTAAAACCCAC
AAAAGTACAATTTACCAGCCTCCGTATTTTCAGACTGAATGGGGGTGGGGGGGGCGCCTTAGGTACTTATTCCAGA
TGCCTTCTCCAGACAAACCAGAAGCAACAGAAAAAATCGTCTCTCCCTCCCTTTGAAATGAATATACCCCTTAGT
GTTTGGGTATATTCAATTTCAAAGGGAGAGAGAGAGGTTTTTTTCTGTTCTTTCTCATATGATTGTGCACATACTT
GAGACTGTTTTGAATTTGGGGGATGGCTAAAACCATCATAGTACAGGTAAGGTGAGGGAATAGTAAGTGGTGAGA
ACTACTCAGGGAATGAAGGTGTGAGAATAATAAGAGGTGCTACTGACTTTCTCAGCCTCTGAATATGAACGGTGA
GCATTGTGGCTGTGACGAGGAAGCAACGAAGGGAAATGTCTTTTCTTTTGTCTTAAAGTTGTGGAGAGTGCAACA
GTAGCATAGGACCTACCTCTGGGCCAAGTCAAAGACATTCTGACATCTTAGTATTTGCATATTCTTATGTATG

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FIGURE 514B

TGAAAGTTACAAATTGCTTGAAAGAAAATATGCATCTAATAAAAAACACCTTCTA

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FIGURE 515

MDYQVSSPIYDINYTSEPCQKINVKQIAARLLPPLYSLVFIFGFVGNMLVILILINCKRLKSMTDIYLLNLAIS
DLFFLLTVPFWAHYAAAQWDFGNTMCQLLTGLYFIGFFSGIFFIILLTIDRYLAVVHAVFALKARTVTFGVVTSV
ITWVVAVFASLPGIIFTRSQKEGLHYTCSSHPYSQYQFWKNFQTLKIVILGLVLPLLVMVICYSGILKTLLRCR
NEKKRHRAVRLIFTIMIVYFLFWAPYNIVLLLNTFQEFFGLNCCSSNRDQAMQVTETLGMTHCCINPIIYAFV
GEKFRNYLLVFFQKHIAKRECKCCSIFQQEAPERASSVYTRSTGEQEISVGL

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FIGURE 516A

TGCAGAGAACAGAGAAAGGACATCTGCGAGGAAAGTTCCCTGATGGCTGTCAACAAAGTGCCACGTCTCTATGGC
TGTGTACGCTGAGCACACGATTTTATCGCGCCTATCATATCTTGGTGCATAAACGCACCTCACCTCGGTCAACCC
TTGCTCCGTCCTTATGAGACAGGCTTTATTATCCGCATTTTATATGAGGGGAATCTGACGGTGGAGAGAGAATTAT
CTTGCTCAAGGCGACACAGCAGAGCCCACAGGTGGCAGAATCCACCCGAGCCCGCTTCGACCCGCGGGGTGGAA
ACCACGGGCGCCCCGCGGCTGCGCTTCCAGAGCTGAACTGAGAAGCGAGTCTCTCCGCCCTGCGGCCACCGCC
CAGCCCCGACCCCGCCCCGCGGCGATCTCACTCGCCGCCAGCTCCCCGCGCCACCCCGGAGTTGGTGGCGCA
GAGGCGGGAGGCGGAGGCGGGAGGCGGGCGCTGGCACCGGGAACGCCCGAGCGCGGCAGAGAGCGCGGAGAGC
GCGACACGTGCGGCCAGAGCACCGGGGCCACCCGGTCCCCGAGGCCCGGGACCGCGCCCGCTGGCAGGCGACA
CGTGGAAGAATACGGAGTTCTATACCAGAGTTGATTGTTGATGGCACATACTTTTAGAGGATGCTCATTGGCATT
TATGTTTATAATCACGTGGCTGTTGATTAAAGCAAAAATAGATGCGTGCAAGAGAGGCGATGTGACTGTGAAGCC
TTCCCATGTAAATTTTACTTGGATCCACTGTCAATATTACATGCTCTTTGAAGCCCAGACAAGGCTGCTTTTACTA
TTCCAGACGTAACAAGTTAATCCTGTACAAGTTTGACAGAAGAATCAATTTTCACCATGGCCACTCCCTCAATTC
TCAAGTCACAGGTCTTCCCTTGGTACAACCTTGTTTGTCTGCAAACTGGCCTGTATCAATAGTGATGAAATTCA
AATATGTGGAGCAGAGATCTTCGTGGTGTGCTCCAGAACAGCCTCAAAAATTTATCCTGCATACAGAAGGGAGA
ACAGGGGACTGTGGCCTGCACCTGGGAAAGAGGACGAGACACCCACTTATACACTGAGTATACTCTACAGCTAAG
TGGACCAAAAAATTTAACCTGGCAGAAGCAATGTAAAGACATTTATTGTGACTATTTGGACTTTGGAATCAACCT
CACCCCTGAATCACCTGAATCCAATTTACAGCCAAGGTTACTGCTGTCAATAGTCTTGGAAAGCTCCTCTTCACT
TCCATCCACATTACATTCTTGGACATAGTGAGGCCTCTTCCCTCCGTGGGACATTAGAATCAAATTTCAAAGGC
TTCCGTGAGCAGATGTACCTTTTATTGGAGAGATGAGGGACTGGTACTGCTTAATCGACTCAGATATCGGCCCAG
TAACAGCAGGCTCTGGAATATGGTTAATGTTACAAAGGCCAAAGGAAGACATGATTTGCTGGATCTGAAACCATT
TACAGAATATGAATTTTCAATTTCTCTAAGCTACATCTTTATAAGGGAAGTTGGAGTGATTGGAGTGAATCATT
GAGAGCACAAACACCAGAAGAAGAGCCTACTGGGATGTTAGATGTCTGGTACATGAAACGGCACATTGACTACAG
TAGACAACAGATTTCTCTTTTCTGGAAGAATCTGAGTGTCTCAGAGGCAAGAGGAAAAATTTCTCCACTATCAGGT
GACCTTGACAGGAGTGACAGGAGGGAAGCCATGACACAGAACATCACAGGACACACCTCCTGGACCACAGTCAT
TCCTAGAACCAGAAATTTGGGCTGTGGCTGTGTCTGCAGCAAATTTCAAAGGCGAGTTCTCTGCCCCTCGTATTAA
CATAATGAACCTGTGTGAGGCGAGGTTGCTGGCTCCTCGCCAGGTCTCTGCAAACTCAGAGGGCATGGACAACAT
TCTGGTGACTTGGCAGCCTCCAGGAAAGATCCCTCTGCTGTTTCAAGGAGTACGTGGTGGAAATGGAGAGAGCTCCA
TCCAGGGGGTGACACACAGGTCCCTCTAAACTGGCTACGGAGTCGACCCTACAATGTGTCTGCTCTGATTTTCA
GAACATAAAATCCTACATCTGTTATGAAATCCGTGTGTATGCACTCTCAGGGGATCAAGGAGGATGCAGCTCCAT
CCTGGGTAACTCTAAGCACAAAGCACCCTGAGTGGCCCCCACATTAATGCCATCACAGAGGAAAAGGGGAGCAT
TTTAATTTTCAATGGAACAGCATTCCAGTCCAGGAGCAAATGGGCTGCCTCCTCCATTATAGGATATACTGGAAGGA
ACGGGACTCCAATCCCAGCCTCAGCTCTGTGAAATTCCTACAGAGTCTCCCAAAATTCACATCCAATAAACAG
CCTGCAGCCCCGAGTGACATATGTCTGTGGATGACAGCTCTGACAGCTGCTGGTGAAGTTCCACGGAAATGA
GAGGGAATTTTGTCTGCAAGGTAAAGCCAATTGGATGGCGTTTGTGGCACCAAGCATTGTGATTGCTATCATCAT
GGTGGGCATTTTCTCAACGCATTACTTCCAGCAAAGGTGTTTGTCTCTCTAGCAGCCCTCAGACCTCAGTGGTG
TAGCAGAGAAATTCAGATCCAGCAAATAGCACTTGCGCTAAGAAATATCCCATTCAGAGGAGAAGACACAGCT
GCCCTTGGACAGGCTCCTGATAGACTGGCCCACGCCTGAAGATCCTGAACCGCTGGTCATCAGTGAAGTCCTTCA
TCAAGTGACCCCACTTTTTCAGACATCCCCCTGCTCCAATGGCCACAAAGGGAAAAAGGAATCCAAGGTCTATCA
GGCCTCTGAGAAAAGACATGATGCACAGTGCCTCAAGCCCACCACCTCCAAGAGCTCTCCAAGCTGAGAGCAGACA
ACTGGTGGATCTGTACAAGGTGCTGGAGAGCAGGGGCTCCGACCCAAAGCCAGAAAACCCAGCCTGTCCCTGGAC
GGTGCTCCCAGCAGGTGACCTTCCCACCCATGATGGCTACTTACCCTCCAACATAGATGACCTCCCCTCACATGA
GGCACCTCTCGCTGACTCTCTGGAAGAACTGGAGCCTCAGCACATCTCCCTTTCTGTTTTCCCCTCAAGTTCTCT
TCACCCACTCACCTTCTCCTGTGGTGATAAGCTGACTCTGGATCAGTTAAAGATGAGGTGTGACTCCCTCATGCT
CTGAGTGGTGAGGCTTCAAGCCTTAAAGTCAGTGTGCCCTCAACCAGCACAGCCTGCCCCAATTTCCCCAGCCCC
TGCTCCAGCAGCTGTATCTCTGGGTGCCACCATCGGTCTGGCTGCAGCTAGAGGACAGGCAAGCCAGCTCTGGG
GGAGTCTTAGGAACCTGGGAGTTGGTCTTCACTCAGATGCCTCATCTTGCCTTTCCAGGGCCTTAAATTTACATC
CTTCACTGTGTGGACCTAGAGACTCCAATTTGAATTCCTAGTAACTTTTCTTGGTATGCTGGCCAGAAAGGGAAAT
GAGGAGGAGAGTAGAAACCACAGCTCTTAGTAGTAATGGCATAAGTCTAGAGGACCATTTCATGCAATGACTATT

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FIGURE 516B

TCTAAAGCACCTGCTACACAGCAGGCTGTACACAGCAGATCAGTACTGTTCAACAGAACTTCCTGAGATGATGGA
AATGTTCTACCTCTGCACTCACTGTCCAGTACATTAGACACTAGGCACATTGGCTGTTAATCACTTGGAATGTGT
TTAGCTTGACTGAGGAATTAAATTTTGATTGTAAATTTAAATCGCCACACATGGCTAGTGGCTACTGTATTGGAG
TGCACAGCTCTAGATGGCTCCTAGATTATTGAGAGCCTCCAAAACAAATCAACCTAGTTCTATAGATGAAGACAT
AAAAGACACTGGTAAACACCAATGTAAAAGGGCCCCAAGGTGGTCATGACTGGTCTCATTGTCAGAAGTCTAAG
AATGTACCTTTTTCTGGCCGGGCGTGGTAGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCTGA

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FIGURE 517

MAHTFRGCSLAFMFIITWLLIKAKIDACKRGDVTVKPSHVILLGSTVNITCSLKPRQGC FHYSRRNKLILYKFDR
RINFHHGHSLSNSQVTGLPLGTTLFVCKLACINSDEIQICGAEIFVGVAP EQPQNLSCIQKGEQGT VACTWERGRD
THLYTEYTLQLSGPKNL TWQKQCKDIYCDYLD FGINLTPE SPESNFTAKVTAVNSLGSSSSLPSTFTFLDIVRPL
PPWDIRIKFQKASVSRCTLYWRDEGLVLLNRLRYRPSNSRLWNMVNVT KAKGRHDLLDLKPFTEYEFQISSKLHL
YKGSWSDWSESLRAQTPEEEPTGMLDVWYMKRHIDYSRQQISLFWKNLSVSEARGKILHYQVTLQELTGGKAMTQ
NITGHTSWTTVIPRTGNWAVAVSAANSKGSSLPTRINIMNLCEAGLLAPRQVSANSEGMDNILVTWQPPRKDPSA
VQEYVVEWRELHPGGDTQVPLNWLRSRPYNVSALISENIKSYICYEIRVYALSGDQGGCSSILGNSKHKAPLSGP
HINAITEEKGSILISWNSIPVQEQMGCLLHYRIYWKERDSNSQPQLCEIPYRVSONSHPINSLQPRVTYVLWMTA
LTAAGESSHGNEREFCLOGKANWMAFVAPSICIAIIMVGIFSTHYFQQKFVLLAALRPQWCSREIPDPANSTCA
KKYPIAEEKTQLPLDRLLIDWPTPEDPEPLVISEVLHQVTPVFRHPPCSNWPQREKGIQGHQASEKDMMSASSP
PPPRALQAESRQLVDLYKVLESRGSDPKPENPACPWTVLPAGDLPTHGYLPSNIDDLPSHEAPLADSLEELEPQ
HISLSVFPSSSLHPLTFSCGDKLTLDQLKMRCDSLML

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FIGURE 518

CATTGAGAGACAGAAGGTGGATAGACAAATCTCCACCTTCAGACTGGTAGGCTCCTCCAGAAGCCATCAGACAGG
AAGATGTGAAAATCCCCAGCACTCATCCAGAATCACTAAGTGGCACCTGTCCTGGGCCAAAGTCCCAGGACAGA
CCTCATTGTTCTCTGTGGGAATACCTCCCCAGGAGGGCATCCTGGATTTCCTCCCTTGCAACCCAGGTCAGAAAT
TTCATCGTCAAGGTTGTTTCATCTTTTTTTTCTGTCTAACAGCTCTGACTACCACCCAACCTTGAGGCACAGTG
AAGACATCGGTGGCCACTCCAATAACAGCAGGTCACAGCTGCTCTTCTGGAGGTGTCCTACAGGTGAAAAGCCCA
GCGACCCAGTCAGGATTTAAGTTTACCTCAAAAATGGAAGATTTTAACATGGAGAGTGACAGCTTTGAAGATTTC
TGGAAGGTGAAGATCTTAGTAATTACAGTTACAGCTCTACCTGCCCTTTTCTACTAGATGCCGCCCATGT
GAACCAGAAATCCCTGGAAATCAACAAGTATTTTGTGGTCATTATCTATGCCCTGGTATTCTGTGCTGAGCCTGCTG
GGAAACTCCCTCGTGATGCTGGTCATCTTATACAGCAGGGTCGGCCGCTCCGTCAGTGTCTACCTGCTGAAC
CTAGCCTTGCCGACCTACTCTTTGCCCTGACCTGCCCATCTGGGCCGCTCCAAGGTGAATGGCTGGATTTT
GGCACATTCTGTGCAAGGTGGTCTCACTCCTGAAGGAAGTCAACTTCTATAGTGGCATCCTGCTACTGGCCTGC
ATCAGTGTGGACCGTTACCTGGCCATTGTCCATGCCACACGCACACTGACCCAGAAGCGCTACTTGGTCAAATTC
ATATGCTCTCAGCATCTGGGGTCTGTCTTGTCTCTGGCCCTGCCCTGTCTTACTTTTCCGAAGGACCGTCTACTCA
TCCAATGTTAGCCAGCCTGCTATGAGGACATGGGCAACAATACAGCAAACTGGCGGATGCTGTTACGGATCCTG
CCCCAGTCTTTGGCTTCATCGTGCCACTGCTGATCATGCTGTTCTGCTACGGATTACCCCTGCGTACGCTGTTT
AAGGCCACATGGGGCAGAAGCACCGGGCCATGCGGGTCATCTTGTCTGTCCTCATCTTCTGCTCTGCTGG
CTGCCCTACAACCTGGTCTGCTGGCAGACACCTCATGAGGACCCAGGTGATCCAGGAGACCTGTGAGCGCCGC
AATCACATCGACCGGGCTCTGGATGCCACCGAGATTCTGGGCATCCTTCACAGCTGCCTCAACCCCTCATCTAC
GCCTTCATTGGCCAGAAGTTTCGCCATGGACTCCTCAAGATTCTAGCTATACATGGCTTGATCAGCAAGGACTCC
CTGCCCAAAGACAGCAGGCCTTCTTTGTTGGCTCTTCTTCAGGGCACACTTCCACTACTCTCTAAGACCTCCTG
CCTAAGTGCAGCCCGTGGGGTTCCTCCCTTCTCTTCACAGTCACATTCCAAGCCTCATGTCCACTGGTTCCTTCTT
GGTCTCAGTGTCAATGCAGCCCCCATTGTGGTTCACAGGAAGTAGAGGAGGCCACGTTCTTACTAGTTTCCCTTGC
ATGGTTTAGAAAGCTTGCCCTGGTGCCTCACCCCTTGCCATAATTACTATGTCAATTTGCTGGAGCTCTGCCCATC
CTGCCCTGAGCCCATGGCACTCTATGTTCTAAGAAGTGAAAATCTACACTCCAGTGAGACAGCTCTGCATACTC
ATTAGGATGGCTAGTATCAAAAGAAAGAAAATCAGGCTGGCCAACGGGGTGAAACCTGTCTCTACTAAAAATACA
AAAAAAAAAAAAAATTAGCCGGGCGTGGTGGTGAAGTGCCTGTAATCACAGCTACTTGGGAGGCTGAGATGGGAGA
ATCATTGAACCCGGGAGCAGAGGTTGCAGTGAGCCGAGATTGTGCCCTGCCATCCAGCCTGAGCGACAGTGAG
ACTCTGTCTCAGTCCATGAAGATGTAGAGGAGAACTGGAACCTCTCGAGCGTTGCTGGGGGGGATTGTAAATGG
TGTGACCACTGCAGAAGACAGTATGGCAGCTTTCTCTCAAACTTCAGACATAGAATTAACACATGATCCTGCAAT
TCCACTTATAGGAATTGACCCACAAGAAATGAAAGCAGGGACTTGAACCCATATTTGTACACCAATATTCATAGC
AGCTTATTCACAAGACCCAAAAGGCAGAAGCAACCCAAATGTTTCATCAATGAATGAATGAATGGCTAAGCAAAAT
GTGATATGTACCTAACGAAGTATCCTTCAGCCTGAAAGAGGAATGAAGTACTCATACTGTTACAACACGGACGA
ACCTTGAAAACTTTATGCTAAGTGAAATAAGCCAGACATCAACAGATAAATAGTTTATGATTCCACCTACATGAG
GTACTGAGAGTGAACAAATTTACAGAGACAGAAAGCAGAACAGTGATTACCAGGGACTGAGGGGAGGGGAGCATG
GGAAGTGACGGTTTAAATGGGCACAGGGTTTATGTTTAGGATGTTGAAAAAGTTCTGCAGATAAACAGTAGTGATA
GTTGTACCGCAATGTGACTTAATGCCACTAAATTGACACTTAAAAATGGTTTAAATGGTCAATTTTGTATGTAT
ATTTTATATCAATTTAAAAAAAACCTGAGCCCCAAAAGGTATTTTAAATCACCAGGCTGATTAAACCAAGGCTA
GAACCACCTGCCTATATTTTTTGTAAATGATTTCAATATCTTTTTTTTAAATAACCATTTTACTTGGGT
GTTTAT

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FIGURE 519

MEDFNMESDSFEDFWKGEDLSNYSYSTLPFFLLDAAPCEPESLEINKYFVVIIYALVFLLSLLGNSLVMLVILY
SRVGRSVTDVYLLNLALADLLFALTLPWAASKVNGWIFGTFLCKVVSLLKEVNFYSGILLACISVDRYLAIVH
ATRILTQKRYLVKFICLSIWGLSLLLALPVLLFRRTVYSSNVSPACYEDMGNNTANWRMLLRILPQSFGFIVPLL
IMLCYGFILRTLTFKAHMGQKHRAMRVIFAVVLIFLLCWLPLYNLVLLADTL MRTQVIQETCERRNHIDRALDATE
ILGILHSCLNPLIYAFIGQKFRHGLLKILAIHGLISKDSL PKDSRPSFVGSSSGHTSTTL

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FIGURE 520

TTGGGGGTTTATTCTCTTCCCTTCTAACTTGACAGGGTCTTGCTCTGTCATTTCAGGCAAGAGTGCAGTAGTGTGA
TCACTTCTTACTGCCGCCTCAAGCTTCCAGCCTCAACTCAAGCAATCCTCCCACCTCAGCCACCCAAGTGGCTGG
GACTACAGATTAAGAATGACCCAAAATAAATTAAAGCTTTGTTCCAAAGCCAATGTGTATACTGAAGTGCCTGAT
GGAGGATGGGGCTGGGCGGTAGCTGTTTCATTTTTCTTCGTTGAAGTCTTCACCTACGGCATCATCAAGACATTT
GGTGTCTTCTTTAATGACTTAATGGACAGTTTTAATGAATCCAATAGCAGGATCTCATGGATAATCTCAATCTGT
GTGTTTGTCTTAACATTTTCAGCTCCCCCTCGCCACAGTCCTGAGCAATCGTTTCGGACACCGTCTGGTAGTGATG
TTGGGGGGGGCTACTTGTGACACCGGGATGGTGGCCGCCTCCTTCTCACAAGAGGTTTCTCATATGTACGTCGCC
ATCGGCATCATCTCTGGTCTGGGATACTGCTTTAGTTTTCTCCCAACTGTAACCATCCTATCACAATATTTTGGC
AAAAGACGTTCCATAGTCACTGTCAGTTGCTTCCACAGGAGAATGTTTCGCTGTGTTTGCTTTCGCACCAGCAATC
ATGGCTCTGAAGGAGCGCATTGGCTGGAGATACAGCCTCCTTTCGTGGGCCTACTACAGTTAAACATTGTCTATC
TTCGGAGCACTGCTCAGACCCATCATTATCAGAGGACCAGCGTCACCGAAAATAGTCATCCAGGAAAATCGGAAA
GAAGCGCAGTATATGCTTGAAAATGAGAAAACACGAACCTCAATAGACTCCATTGACTCAGGAGTAGAACTAACT
ACCTCACCTAAAAATGTGCCTACTCACACTAACCTGGAAGTGGAGCCGAAGGCCGACATGCAGCAGGTCCTGGTG
AAGACCAGCCCCAGGCCAAGCGAAAAGAAAGCCCCGCTATTAGACTTCTCCATTTTGAAAGAGAAAAGTTTTATT
TGTTATGCATTATTTGGTCTCTTTGCAACACTGGGATTCTTTGCACCTTCCTTGTACATCATTCCTCTGGGCATT
AGTCTGGGCATTGACCAGGACCGCGCTGCTTTTTTATTATCTACGATGGCCATTGCAGAAGTTTTTCGGAAGGATC
GGAGCTGGTTTTGTCTCAACAGGGAGCCCATTCGTAAGATTTACATTGAGCTCATCTGCGTCATCTTATTGACT
GTGTCTCTGTTTGCCTTTACTTTTGCTACTGAATTCTGGGGTCTAATGTCATGCAGCATATTTTTTGGGTTTATG
GTTGGAACAATAGGAGGACTCACATTCCACTGCTTGCTGAAGATGATGTCGTGGGCATTGCAGAAGATGTCTTCT
GCAGCTGGGGTCTACATCTTCATTTCAGAGCATAGCAGGACTGGCTGGACCGCCCCTTGCAGGTTTGTGTTGGGAC
CAAAGTAAGATCTACAGCAGGGCCTTCTACTCCTGCGCAGCTGGCATGGCCCTGGCTGCTGTGTGCCTCGCCCTG
GTGAGACCGTGTAAGATGGGACTGTGCCAGCGTCATCACTCAGGTGAAACAAAGGTAGTGAGCCATCGTGGGAAG
ACTTTACAGGACATACCTGAAGACTTTCTGGAAATGGATCTTGCAAAAAATGAGCACAGAGTTCACGTGCAATG
GAGCCGGTATGACACACTTTCTTACAACAACAGCCACTGTGTTGGCTGGAGAGGGATGGGGTGGGCCCCAACGGGG
ACACAAGGAGGCAGAGGAGCTAACCCTCTACTCCACTTTCAAACTACATTTTAAAGGGAATGTGTATGTGAAG
AGCACTACCAACATCGCTTTTGTGTTTTGTTTTGTTTTGTTTTAAGCTTTTTTTTTTTGCTTGTGTTTTAAAGCCAAA
ACAAAAAACAACCAAGCACTCTTCCATATATAAATCTGGCTGTATTTCAGTAGCAATACAAGAGATATGTAGAAAG
ACTCTTTGGTTTACATTCCGATATTAAATAGTGACATGAACTGGCAAGTGGTTTTTAAAGCTTTCACGTGGGA
TAAATGATTTTCTTTTTTCTTTTCTTTCTTCTTCTATGGTCTTGCTCTGAATAAACTACTCTCCTGAATAAAACAAC
ATCCAACCCAGGTCATTGAAATGAAATTGGCCAGTC

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FIGURE 521

MTQNKLKLCSEKAVYTEVPDGGGWAVAVSFFFVEVFTYGIKTFGVFFNDLMDSFNESNSRISWIISICVFVLT
FSAPLATVLSNRFGHRLVVMLGGLLVSTGMVAASFQEVSHMYVAIGIISGLGYCFSLPTVTILSQYFGKRRI
VTAVASTGECFAVFAFAPAIMALKERIGWRYSLLFVGLLQLNIVIFGALLRPIIIRGPASPKIVIQENRKEAQYM
LENEKTRTSIDSIDSGVELTTSPKNVPTHTNLELEPKADMQQVLVKTSRPSEKKAPLLDFSILKEKSFICYALF
GLFATLGFFAPSLYIIPLGISLGIDQDRAAFLSTMAIAEVFGRIGAGFVLNREPIRKIYIELICVILLTVSLFA
FTFATEFWGLMSCSIFFGFMVGTIGGLTFHCLLKMMSWALQKMSSAAGVYIFIQSIAGLAGPPLAGLLVDQSKIY
SRAFYSCAAGMALAAVCLALVRPCKMGLCQRHHSGETKVVS HRGKTLQDIPEDFLEMDLAKNEHRVHVQMEPV

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FIGURE 522

GCGGGGTAGTCGGCGCGAGGCGGAGCTTGGCAGTTCCGTCCACTTCAGCCGCAGCGTCCCTCGCCGGGTGTCTCG
CCGCAGCCTCCGGAGAGGAACAGACCCTCACTCTCTCTGTCAGAAAAATGCTCTGCTCCAGCTCAGCCACCTGCTG
AAGGGACAGAAGGGACTGCCCCAGGTGGGGGTCCCCCTGGCCCTCCTCCTAACATGACCAGTAACAGACGACTAC
AGCAAACCCAGGCACAAGTGGAGGAGGTGGTGGACATCATACGTGTGAACGTGGACAAGGTCTGGAGAGGGACC
AGAAGCTGTCAGAGCTGGATGACCGAGCTGATGCCTTGCAGGCAGGAGCATCACAATTTGAGAGCAGTGCTGCCA
AGCTAAAGAGGAAGTATTGGTGGAAAACTGCAAGATGATGATCATGCTGGGAGCCATCTGTGCCATCATCGTGG
TAGTTATTGTAAGGCGGGACTGAAGAGCTGGAAGAAAGCAGTCAGTACCCTCCCAACGGCCCCCTCGAAGGTCT
CCACTCTCCTCTGGGCTCCTCCTTGCCTAATGCAGGGGGTCACCGCTGGAGAAGAACCACCACTGTCTCGATGT
GTCCCAAGCCTGGAGCGAATCCGTCCTCTTGGCTCTCCAGCCCTATCACAGGAATCATTCTGGGTTTCTGTCC
CTCTGAGGCTCACCAGGTGTAGTTGGCCTTGTTCCTTTGGGGGTATTAGCCCTTCTACTTTCTTTCTCACCACCC
TGTACCCCTCTTCTGTGTGCTCTGCTATCCCCCTTTCTCCACCACCCATGTGCATGAGCAAATGTGCAACAAA
ACCTGGGACTTTGCAGTCAAATGAAGCTGA

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FIGURE 523

MSAPAQPPAEGTEGTAPGGGPPGPPNMTSNRRLLQQTQAQVEEVVDIIRVNVDKVLERDQKLSELDADRADALQAG
ASQFESSAAKLKRKYWWKNCKMMIMLGAICAIIVVVIVRRD

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FIGURE 524

CACACCCTGACAAGCTGCCAGGCAGGTTCTCTTCTCTCACATACTGACCCACGGCTCCACCCTCTCTCCCCTGG
AAAGGACACCAATGAGCACTGAAAGCATGATCCGGGACGTGGAGCTGGCCGAGGAGGCGCTCCCCAAGAAGACAGG
GGGGCCCCAGGGCTCCAGGCGGTGCTTGTTTCCTCAGCCTCTTCTCCTTCCTGATCGTGCGAGGCGCCACCACGCT
CTTCTGCCTGCTGCACTTTGGAGTGATCGGCCCCCAGAGGGAAGAGTCCCCCAGGGACCTCTCTCTAATCAGCCC
TCTGGCCCAGGCAGTCAGATCATCTTCTCGAACCCCGAGTGACAAGCCTGTAGCCCATGTTGTAGCAAACCCTCA
AGCTGAGGGGCGAGCTCCAGTGGCTGAACCGCCGGGCCAATGCCCTCCTGGCCAATGGCGTGGAGCTGAGAGATAA
CCAGCTGGTGGTGCCATCAGAGGGCCTGTACCTCATCTACTCCAGGTCTCTTCAAGGGCCAAGGCTGCCCCCTC
CACCCATGTGCTCCTCACCCACACCATCAGCCGCATCGCCGTCTCCTACCAGACCAAGGTCAACCTCCTCTCTGC
CATCAAGAGCCCCTGCCAGAGGGGAGACCCAGAGGGGGCTGAGGCCAAGCCCTGGTATGAGCCCATCTATCTGGG
AGGGGTCTTCCAGCTGGAGAAGGGTGACCGACTCAGCGCTGAGATCAATCGGCCCCGACTATCTCGACTTTGCCGA
GTCTGGGCAGGTCTACTTTGGGATCATTGCCCTGTGAGGAGGACGAACATCCAACCTTCCCAAACGCCTCCCCTG
CCCCAATCCCTTTATTACCCCCCTCCTTCAGACACCCTCAACCTCTTCTGGCTCAAAAAGAGAATTGGGGGCTTAG
GGTCGGAACCCAAGCTTAGAAGCTTTAAGCAACAAGACCACCACTTCGAAACCTGGGATTCAGGAATGTGTGGCCT
GCACAGTGAAGTGCTGGCAACCACTAAGAATTCAAACCTGGGGCCTCCAGAACTCACTGGGGCCTACAGCTTTGAT
CCCTGACATCTGGAATCTGGAGACCAGGGAGCCTTTGGTTCTGGCCAGAATGCTGCAGGACTTGAGAAGACCTCA
CCTAGAAATTGACACAAGTGGACCTTAGGCCTTCCTCTCTCCAGATGTTTCCAGACTTCCTTGAGACACGGAGCC
CAGCCCTCCCCATGGAGCCAGCTCCCTCTATTTATGTTTGCACCTGTGATTATTTATTATTTATTATTTAT
TTATTTACAGATGAATGTATTTATTGGGAGACCGGGGTATCCTGGGGGACCCAATGTAGGAGCTGCCTTGGCTC
AGACATGTTTTCCGTGAAAACGGAGGCTGAACAATAGGCTGTTCCCATGTAGCCCCCTGGCCTCTGTGCCTTCTT
TTGATTATGTTTTTTAAATATTATCTGATTAAAGTTGTCTAAACAATGCTGATTGGTGACCAACTGTCATCAT
TGCTGAGGCCTCTGCTCCCCAGGGAGTTGTGTCTGTAATCGGCCTACTATTTCAGTGGCGAGAAATAAAGGTTGCT
TAGGAAAGAA

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FIGURE 525

MSTESMIRDVELAEELPKKTGGPQGSRRCLFLSLFSFLIVAGATTLCLLHFGVIGPQREESPRDLSLISPLAQ
AVRSSSRTPSDKPVAVVNPQAEGQLQWLNRRANALLANGVELRDNQLVVPSEGLYLIYSQVLFKQGQCPSTHV
LLTHTISRIAVSYQTKVNLLSAIKSPCQRETPEGAEAKPWYEPYIYLGGVFQLEKGDRLSAEINRPDYLDFAESGQ
VYFGIIAL

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FIGURE 526A

CATGGCGGCGACTGCGGCAAAGCGAGAGCCTCGGAGACGCCGCTGCCGCCAGCACAGCCGGAGATCTGAGCCGAC
ACTGGGGGCGAGTCCGCGAGCCCCGCACTCTCTCGATGAGTCGGAGAAGTCCCGTTGTATCAGAGTAAGATGGACG
GTAGCTTTGATTGTGATTGTGGTGAGCTGGAGCCACCTGATCACTAACAAAAGACATCTTCTGTAAACCAACAGC
CGCCAGGCTTCCTGTTGAAATAAATATATAGCAACAAAGGAAAAAAGAAGCAAACGGAAATAGTGCTTACCAG
CACCTTAGAATGATGCTGCTCAGGACCAGTCCAACACTGAATGTATCTGCACTGTGAGGAGAATGTTCATAGAAG
CCTGTTGTGTGCATATTTATTCACTTTTTTGTAAATGTTAAATCGTTTAGCACGGTAATCTGAGTGCACAGTATG
TCATTTCAATCCGTTTGAGTTTTCTTGTTCGTTAAATGTCTGCAGAGTTGCTGCCCTTTCTTGAAGTATGAGT
ACTGCAATCTTTTAATTCTCAATATGAATAGAGCTTTTGAGCTTTAAATCTAAGGGGAACTCGACAGGCCTGT
TTGGCATATGCAATGAACATCAAGAAACCATCTTGCTGTGGAAGCATAATTATTTTTCTTCTCCCTTTTTGAAAG
ATCTTTCCTTTTGATGCCAGTTTTCTTCCTTGTTTACACAAGTTCAATTTGAAAGGAAAAGGCAATAGTAAGGGT
TTCAAATGGCAGAGAAATTTGAAAGTCTCATGAACATTCATGGTTTTGATCTGGGTTCTAGGTATATGGACTTA
AAACCATTGGGTTGTGGAGGCAATGGCTTGGTTTTTCTGCTGTAGACAATGACTGTGACAAAAGAGTAGCCATC
AAGAAAATTGTCCTTACTGATCCCCAGAGTGTCAAACATGCTCTACGTGAAATCAAATATTAGAAGACTTGAC
CATGATAACATTGTGAAAGTGTGTTGAGATTCTTGGTCCAGTGGAAGCCAATTAACAGACGATGTGGGCTCTCTT
ACGGAACCTGAACAGTGTGTTACATTGTTACAGGAGTACATGGAGACAGACTTGGCTAATGTGCTGGAGCAGGGCCCT
TTACTGGAAGAGCATGCCAGGCTTTTCATGTATCAGCTGCTACGGGGGCTCAAGTATATTCACTCTGCAAAATGTA
CTGCACAGAGATCTCAAACCAGCTAATCTTTTCATTAATACGGAAGACTTGGTGCTGAAGATAGGTGACTTTGGT
CTTGACGAGTATGATGATCCTCATTATTCCCATAGGGTCACTTTCTGAAGGATTGGTTACTAAATGGTACAGA
TCTCCAGTCTTTTACTTTCTCCTAATAATTATACTAAAGCCATTGACATGTGGGCTGCAGGCTGCATCTTTGCT
GAAATGCTGACTGGTAAAACCTTTTTGAGGTGCACATGAACCTGAACAGATGCAGCTGATTTTGAATCTATT
CCTGTTGTACATGAGGAAGATCGTCAGGAGCTTCTCAGCGTAATTCCAGTTTACATTAGAAATGACATGACTGAG
CCACACAAACCTTTAACTCAGCTGCTTCCAGGAATTAGTCGAGAAGCACTGGATTTCCTGGAACAAATTTTGACA
TTTAGCCCCATGGATCGGTTAACAGCAGAAGAAGCACTCTCCCATCCTTACATGAGCATATATTCTTTTCCAATG
GATGAGCCAATTTCAAGCCATCCTTTTCATATTGAAGATGAAGTTGATGATATTTTGCTTATGGATGAACTCAC
AGTCACATTTATAACTGGGAAAGGTATCATGATTGTGAGTTTTTCAGAGCATGATTGGCCTGTACATAACAACTTT
GATATTGATGAAGTTCAGCTTGATCCAAGAGCTCTGTCCGATGTCAGTATGAAGAAGAAGTACAAGTTGATCCC
CGAAAATATTTGGATGGAGATCGGGAAAAGTATCTGGAGGATCCTGCTTTTGATACCAATTACTCTACTGAGCCT
TGTTGGCAATACTCAGATCATCATGAAAACAAATATTGTGATCTGGAGTGTAGCCATACTTGTAACACAAAACG
AGGTATCATCATATTTAGATAACTTAGTTTGGAGAGAGAGTGAAGTTAACCATTAATGAACCCAAGCTTATT
ATAGATCTTTCCAATTGGAAAGAACAAGCAAAGAAAAATCTGATAAGAAAGGCAAATCAAATGTGAAAGGAAT
GGATTGGTTAAAGCCAGATAGCGCTAGAGGAAGCATCACAGCAACTGGCTGGAAAAGAAAGGGAAAAGAATCAG
GGATTGATTTTGATTCTTTATTGCAGGAACATTTCAGCTTAGTTCCAGCATGAGCCTACTGATGTTGTTGAT
AAATTAATGACTTGAATAGCTCAGTGTCCCAACTAGAATTGAAAAGTTTGATATCAAAGTCAGTAAGCCAAGAA
AAACAGGAAAAAGGAATGGCAAATCTGGCTCAATTAGAAGCCTTGTACCAGTCTTCTTGGGACAGCCAGTTTGTG
AGTGGTGGGGAGGACTGTTTTTTCATAAATCAGTTTTGTGAGGTAAGGAAGGATGAACAAGTTGAGAAGGAAAAC
ACTTACACTAGTTACTTGGACAAGTTCTTTAGCAGGAAAGAAGATACTGAAATGCTAGAACTGAGCCAGTAGAG
GATGGGAAGCTTGGGGAGAGAGGACATGAGGAAGGATTTCTGAACAACAGTGGGGAGTTTCTCTTTAACAAGCAG
CTCGAGTCCATAGGCATCCACAGTTTCACAGTCCAGTTGGGTCACCCTTAAGTCAATACAGGCCACATTAACA
CCTTCTGCTATGAAATCTTCCCTCAAATTCCTCATCAAACATACAGCAGCATTCTGAAACATCTGAACATAAAC
ACTCAGCAGACATTTATCTTTGTATTCTTCATGAAATGTGTTTTGTCTTTTTTTTATTACTAGTGTTAAGTCATT
TTTTACTTGAATCAGATGGTGTCAATTTAGTAAGGATTTTATGAGTTCCTTGTTTTTAAATCCAGACTTTCTTTT
TCTACATGTGAGATAGTTTTCAATTTAACTGGCATGTCATTTGCACACAAAATAAAGACTAGAGCAAAATAATG
CAACGCAGGAGGAGAAAAGAAATGCACTAAGACAAGAACATTCTCTCATAGAACATTGATCTGTTTTACAGGAAA
CAAACCTTGCTTGAATTTACACAGTGAGACTGTACATAATTGCATGAAAATAGCTATTTTTTCTTAAGACAT
TTTTCAATCATGAATATTTTCAAGTTTTTCACTGTACACATTTCTTAAACACATGATACCAGCAGCAACTGA
AAATGAATGCCGAATTTGGTACACATGTGTTATCTACCTCAAGGTAACAAGAGTATGTGGCAAAACATATACCAC
CCATAGTGCTTCACAAAATGCACTTCTATTTAGCCAGCGTTTATTGTAGTAAACTATTCTTAATAAAACTCACTC
ACTGTTTATAAATGTTCTGGTATGCATTCTTTATAGTGAAGTGTTAATACATCACATCTTATTTATTTTAGCAAA

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FIGURE 526B

TCAGTATATTTTCTGTATTTAATTATAAAAAATTAAGTTAGTTTTTAAAATTTATTTGCAAATATACTTTTTCCA
TTTGGCACTATGGTTTGTTCCTACCTAGCTGCATCTATAATGTCAGCTTATCCTAAGGCTGTCCACGTACTTAA
TTTACTTAAGTGTTCAATTTAAGTAACGTGCTCACTGTGTATAGGAATTTGTATTTTGGAGGTGCTTGATCTATC
TACAAAGAAAAATTAATTAGGAATTACTTTATTATAAAATGCTCCTAGAAGTCTTAATTGTGTTTATTTTTTAAA
AAAACAAATGTTAGACTTGTGTGCATGGAAGTAATTAAGGTACATCATTATTGTAGTTTGAAAGTTGTACATGAT
AAGACATTTTGTCTTTTACTGTATGTTTTTACTGAATGATCTATTCCCATCCCAAGGCAAGCATGAATAAAATTA
GGTTAAACGTAGCATGTGGCATCGCAGTCTCTTAGAATTTGTTTCATCTATTTTATTTTATTGAATACTGTCTGT
ATCTTTGGTTATCCTGTTTGAAGAAAAAGGACAAATAAAACATGGCCAGCAAATACAAAAAAAAAAAAA

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FIGURE 527

MAEKFESLMNIHGFDLGSRYMDLKPLGCGGNGLVFSAVDNDCKRVAIKKIVLTDPQSVKHALREIKIIRRLDHD
NIVKVFEILGPSGSQLTDDVGSITELNSVYIVQEYMETDLANVLEQGPLEEHARLFMYQLLRGLKYIHSANVLH
RDLKPANLFINTEDLVLKIGDFGLARIMDPHYSHKGHLSEGLVTKWYRSPRLLLSPPNNYTKAIDMWAAGCIFAEM
LTGKTLFAGAHELEQMQLILESIPVVHEEDRQELLSVIPVYIRNDMTEPHKPLTQLLPGISREALDFLEQILTFS
PMDRLTAEALSHPYMSIYSFPMDEPISSHPFHIEDEVDDILLMDETHSHIYNWERYHDCQFSEHDWPVHNNFDI
DEVQLDPRALSDVTDEEEVQVDPRKYLDGDREKYLEDPAFDTNYSTEPWCQYSDHHENKYCDLECSHTCNYKTRS
SSYLDNLVWRESEVNHYEYEPKLIIDLSNWKEQSKEKSDKKGKSKCERNGLVKAQIALEEASQQLAGKEREKNQGF
DFDSFIAGTIQLSSQHEPTDVVDKLNLDLNSSVSQLELKSLSKSVSQEKQEKGMANLAQLEALYQSSWDSQFVSG
GEDCFFINQFCEVRKDEQVEKENTYTSYLDKFFSRKEDTEMLETEPVEDGKLGERGHEEGFLNNSGEFLFNKQLE
SIGIPQFHSPVGSPLKSIQATLTSPAMKSSPQIPHQTYSSILKHLN

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FIGURE 528

GTAAAGCTAGACCGATCTCCGGGGAGCCCCGGAGTAGGCGAGCGGCGGCCAGCTAGTTGAGCGCACCCCCCG
CCCGCCCCAGCGGCGCCGCGGCGGGCGGCGTCCAGGCGGCATGGAGAAGGACGGCCTGTGCCGCGCTGACCAGCA
GTACGAATGCGTGGCGGAGATCGGGGAGGGCGCCTATGGGAAGGTGTTCAAGGCCCCGCGACTTGAAGAACGGAGG
CCGTTTTCGTGGCGTTGAAGCGCGTGCGGGTGCAGACCGGCGAGGAGGGCATGCCGCTCTCCACCATCCGCGAGGT
GGCGGTGCTGAGGCACCTGGAGACCTTCGAGCACCCCAACGTGGTTCAGGTTGTTTGATGTGTGCACAGTGTACG
AACAGACAGAGAAACCAAATACTTTAGTGTGTTGAACATGTCGATCAAGACTTGACCACTTACTTGGATAAAGT
TCCAGAGCCTGGAGTGCCCACTGAAACCATAAAGGATATGATGTTTCAGCTTCTCCGAGGTCTGGACTTTCTTCA
TTCACACCGAGTAGTGATCGCGATCTAAAACCACAGAACATTCTGGTGACCAGCAGCGGACAAATAAACTCGC
TGACTTCGGCCTTGCCCGCATCTATAGTTTCCAGATGGCTCTAACCTCAGTGGTCGTCACGCTGTGGTACAGAGC
ACCCGAAGTCTTGCTCCAGTCCAGCTACGCCACCCCGTGGATCTCTGGAGTGTTGGCTGCATATTTGCAGAAAT
GTTTCGTAGAAAGCCTCTTTTTCGTGGAAGTTCAGATGTTGATCAACTAGGAAAAATCTTGACGTGATTGGACT
CCCAGGAGAAGAAGACTGGCCTAGAGATGTTGCCCTTCCCAGGCAGGCTTTTCATTCAAAATCTGCCCAACCAAT
TGAGAAGTTTGTAAACAGATATCGATGAACTAGGCAAAGACCTACTTCTGAAGTGTTTGACATTTAACCCAGCCAA
AAGAATATCTGCCTACAGTGCCCTGTCTCACCATACTTCCAGGACCTGGAAAGGTGCAAAGAAAACCTGGATT
CCACCTGCCGCCCAGCCAGAACACCTCGGAGCTGAATACAGCCTGAGGCCTCAGCAGCCGCCTTAAGCTGATCCT
GCGGAGAACACCCTTGGTGGCTTATGGGTCCCCCTCAGCAAGCCCTACAGAGCTGTGGAGGATTGCTATCTGGAG
GCCTTCCAGCTGCTGTCTTCTGGACAGGCTCTGCTTCTCCAAGAAA

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FIGURE 529

MEKDGLCRADQQYECVAEIGEGAYGKVFKARDLKNGGRFVALKRVRVQTGEEGMPLSTIREVAVLRHLETFEHPN
VVRLFDVCTVSRTDRETKLTLVFEHVDQDLTTYLDKVPEPGVPTETIKDMMFQLLRGLDFLHSHRVVHRDLKPQN
ILVTSSGQIKLADFGLARIYSFQMALTSVVVTLWYRAPEVLLQSSYATPVDLWSVGCIFAEMFRRKPLFRGSSDV
DQLGKILDVIGLPGEEDWPRDVALPRQAFHSKSAQPIEFVTDIDELGKDLLKCLTFNPAKRISAYSALSHPYF
QDLERCKENLDShLPPSQNTSELNTA

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FIGURE 530

GTCTGCCCTCTCTGCTCGCCCTGCCTAGCTTGAGGATCTGTCACCCCAGCCATCGAGGATTATCGCCCTCCTCGCT
GCTATTCTCTTGGTAGCCCTCCAGGTCCGGGCAGGCCCCTCCAGGCAAGAGGTGATGAGGCTCCAGGCCAGGAG
CAGCGTGGGCCAGAAGACCAGGACATATCTATTTCTTTGCATGGGATAAAAGCTCTGCTCTTCAGGTTTCAGGC
TCAACAAGGGGCATGGTCTGCTCTTGCAATTAGTATTCTGCCGGCGAACAGAACTTCGTGTTGGGAACTGCCTC
ATTGGTGGTGTGAGTTTCACATACTGCTGCACGCGTGTGATTAACGTTCTGCTGTCCAAGAGAATGTCATGCTG
GGAACGCCATCATCGGTGGTGTAGCTTCACATGCTTCTGCAGCTGAGCTTGCAGAATAGAGAAAAATGAGCTCA
TAATTGCTTTGAGAGCTACAGGAAATGGTTGTTTCTCCTATACTTTGTCCTTAACATCTTTCTTGATCCTAAAT
ATATATCTCGTAACAAG

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FIGURE 531

MRIALLAAILLVALQVRAGPLQARGDEAPGQEQRGPEQDISISFAWDKSSALQVSGSTRGMVCSCRLVFCRRT
ELRVGNCLIGGVSFTYCCTRVD

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FIGURE 532

CAGTCTCAATGGGGGGCACTGGGGCTGGAGGGCAGGGGTGGGAGGCTCCAGGGGAGGGGTCCCTCCTGCTAGCTG
TGGCAGGAGCCACTTCTCTGGTGACCTTGTTGCTGGCGGTGCCTATCACTGTCCTGGCTGTGCTGGCCTTAGTGC
CCCAGGATCAGGGAGGACTGGTAACGGAGACGGCCGACCCGGGGGCACAGGCCCAGCAAGGACTGGGGTTTCAGA
AGCTGCCAGAGGAGGAGCCAGAAACAGATCTCAGCCCCGGGCTCCCAGCTGCCCACCTCATAGGCGCTCCGCTGA
AGGGGCAGGGGCTAGGCTGGGAGACGACGAAGGAACAGGCGTTTCTGACGAGCGGGACGCAGTTCTCGGACGCCG
AGGGGCTGGCGCTCCCGCAGGACGGCCTCTATTACCTCTACTGTCTCGTCGGCTACCGGGGCCGGGCGCCCCCTG
GCGGCGGGGACCCCCAGGGCCGCTCGGTACGCTGCGCAGCTCTCTGTACCGGGCGGGGGGCGCCTACGGGCCGG
GCACTCCCGAGCTGCTGCTCGAGGGCGCCGAGACGGTGAAGTCCAGTGCTGGACCGGCCAGGAGACAAGGGTACG
GGCCTCTCTGGTACACGAGCGTGGGGTTCGGCGGCCTGGTGCAGCTCCGGAGGGGCGAGAGGGTGTACGTCAACA
TCAGTCACCCCGATATGGTGGACTTCGCGAGAGGGAAGACCTTCTTTGGGGCCGTGATGGTGGGGTGAGGGAATA
TGAGTGCGTGGTGCGAGTGCGTGAATATTGGGGGCCCGGACGCCCAGGACCCCATGGCAGTGGGAAAAATGTAGG
AGACTGTTTGAAATTGATTTTGAACCTGATGAAAATAAAGAATGGAAAGCTTCAGTGCTGCCGATAAA

b

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FIGURE 533

MGALGLEGRGGRLOGRGSLLLAVAGATSLVTLLAVPITVLAVLALVPDQGGLGFRSCQRRSQKQISAPGSQLP
TS

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FIGURE 534

CCCAGAGCAGCGCTCGCCACCTCCCCCGGCCTGGGCAGCGCTCGCCGGGGAGTCCAGCGGTGTCCTGTGGAGC
TGCCGCCATGCCCCGCGGCGGGCGCGGGCTGCCGGACCCTCGGTCTCCCGGCGCTGCTACTGCTGCTGCTGCT
CCGGCCGCCGGCGACGCGGGGCATCACGTGCCCTCCCCCATGTCCGTGGAACACGCAGACATCTGGGTCAAGAG
CTACAGCTTGTA^{CT}CCAGGGAGCGGTACATTTGTA^{CT}CTGGTTTCAAGCGTAAAGCCGGCACGTCCAGCCTGAC
GGAGTGCGTGTTGAACAAGGCCACGAATGTCGCCCCTGGACAACCCCCAGTCTCAAATGCATTAGAGACCCTGC
CCTGGTTACCAAAGGCCAGCGCCACCCTCCACAGTAACGACGGCAGGGGTGACCCACAGCCAGAGAGCCTCTC
CCCTTCTGGAAAAAGAGCCCGCAGCTTCATCTCCAGCTCAAACAACACAGCGGCCACAACAGCAGCTATTGTCCC
GGGCTCCCGAGCTGATGCCTTCAAAATCACCTTCCACAGGAACCAAGAGATAAGCAGTCATGAGTCTCCACGG
CACCCCTCTCAGACAACAGCCAAGA^{CT}GGGAACTCACAGCATCCGCCTCCACAGCCGCCAGGTGTGTATCC
ACAGGGCCACAGCGACACCCTGTGGCTATCTCCACGTCCACTGTCTGTGTGGGTGAGCGCTGTGTCTCT
CCTGGCATGCTACCTCAAGTCAAGGCAA^{CT}CCCCCGCTGGCCAGCGTTGAAATGGAAGCCATGGAGGCTCTGCC
GGTGACTTGGGGGACCAGCAGCAGAGATGAAGACTTGGAAAACTGCTCTCACCACCTATTGAAACTCGGGGAAACC
AGCCCAGCTAAGTCCGGAGTGAAGGAGCCTCTCTGCTTTAGCTAAAGACGACTGAGAAGAGGTGCAAGGAAGCGG
GCTCCAGGAGCAAGCTCACCAGGCCTCTCAGAAGTCCCAGCAGGATCTCACGGACTGCCGGGTGCGCGCCTCCTG
CGCGAGGGAGCAGGTTCTCCGCATTCCCATGGGCACCACCTGCCTGCCTGTCGTGCCTTGGACCCAGGGCCAGC
TCCCAGGAGAGACCAAAGGCTTCTGAGCAGGATTTTATTTTATTACAGTGTGAGCTGCCTGGAATACATGTGG
TAATGAAATAAAAACCCTGCCCCGAATCTTCCGTCCCTCATCCTAACTTGCAGTTACAGAGAAAAGTGACATAC
CCAAAGCTCTCTGTCAATTACAAGGCTTCTCCTGGCGTGGGAGACGTCTACAGGGAAGACACCAGCGTTTGGGCT
TCTAACCACCCTGTCTCCAGCTGCTCTGCACACATGGACAGGGACCTGGGAAAGGTGGGAGAGATGCTGAGCCCA
GCGAATCCTCTCCATTGAAGGATTGAGGAAGAAGAAA^{CT}CAACTCAGTGCCATTTTACGAATATATGCGTTTAT
ATTTATACTTCCTTGTCTATTATATCTATACATTATATATTATTTGTATTTTGACATTGTACCTTGTATAAACAA
AATAAAACATCTATTTTCAATATTTTTTAAAATGCA

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FIGURE 535

MAPRRARGCRTLGLPALLLLLLLRPPATRGITCPPPMSVEHADIWVKSYSLSRERYICNSGFKRKAGTSSLTEC
VLNKATNVAHWTTPSLKCIRD PALVHQR PAPPSTVTTAGVTPQESLSPSGKEPAASSPSSNNTAATTAAIVPGS
QLMPSPSTGTTEISSHESHGTPSQTTAKNWELTASASHQPPGVYPQGHSDTTVAISTSTVLLCGLSAVSLLA
CYLKSRTPTPLASVEMEAMEALPVTWGTSSRDEDLNCSHHL

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FIGURE 536

CTGAAGCTTGCATGCCTGCAGGTCGACCCACGCGTCCGCGGACGCGTGGGCGGACGCGTGGGTTTTTCTTTCTT
CCAGAAGGAGATTTAACCATAGTAGAAAGAATGGAGAACTATTAAGTGCCTTCCTTCTGTGGGCTGTGATTTTCA
GAGGGGAATGCTAAGAGGTGATTTTCAATGTTGGGACTCAAAGGTGAAGACACTGAAGGACAGAATTTTGGCAG
AGGAAAGATCTTCTTCGGTCACCATACTTGAGTTAGCTCTAGGGAAAGTGGAGGTTTCCATTTGGAATTCTATAGC
TTCTTCCAGGTCATAGTGTCTGCCCCCACCTTCCAGTATCTCCTGATATGCAGCATGAATGAAAATGGCAAGTT
TCCTGGCCTTCCTTCTGCTCAACTTTCTGTGTCTGCCTCCTTTTGCTTCAGCTGCTCATGCCTCACTCAGCTCAGT
TTTCTGTGCTTGGACCCCTCTGGGCCCATCTGGCCATGGTGGGTGAAGACGCTGATCTGCCCTGTACCTGTTCC
CGACCATGAGTGCAGAGACCATGGAGCTGAAGTGGGTGAGTTCCAGCCTAAGGCAGGTGGTGAACGTGTATGCAG
ATGGAAAGGAAGTGGAAAGACAGGCAGAGTGCACCGTATCGAGGGAGAAGTTCGATTCTGCGGGATGGCATCACTG
CAGGGAAGGCTGCTCTCCGAATACACAACGTACAGCCTCTGACAGTGGAAAGTACTTGTGTTATTTCCAAGATG
GTGACTTCTATGAAAAAGCCCTGGTGGAGCTGAAGGTTGCAGCACTGGGTTCTGATCTTCACGTTGATGTGAAGG
GTTACAAGGATGGAGGGATCCATCTGGAGTGCAGGTCCACTGGCTGGTACCCCCAACCCCAATACAGTGGAGCA
ACAACAAGGGGAGAGAACATCCCAGCTGTGGAAGCACCTGTGGTTGCAGACGGAGTGGGCCTGTATGCAGTAGCAG
CATCTGTGATCATGAGAGGCAGCTCTGGGGAGGGTGTATCCTGTACCATCAGAAGTTCCTCCTCGGCCTGGAAA
AGACAGCCAGCATTTCCATCGCAGACCCCTTCTTCAGGAGCGCCAGAGGTGGATCGCCGCCCTGGCACGGACCC
TGCTGTCTTGCTGTCTGCTTCTTGGGGGAGCCGGTTACTTCTGTGGCAACAGCAGGAGGAAAAAAGACTCAGT
TCAGAAAGAAAAAGAGAGAGCAAGAGTTGAGAGAAATGGCATGGAGCACAATGAAGCAAGAACAAGCACAAAGAG
TGAAGCTCCTGGAGGAACTCAGATGGAGAAGTATCCAGTATGCATCTCGGGGAGAGAGACATTACGCCTATAATG
AATGGAAGAAAGGCCCTCTTCAAGCCTGCGGATGTGATTCTGGATCCAAAAACAGCAAAACCCCATCCTCCTTGTTT
CTGAGGACCAGAGGAGTGTGCAGCGTGCCAAGGAGCCCCAGGATCTGCCAGACAACCTGAGAGATTTAATTGGC
ATTATTGTGTTCTCGGCTGTGAGAGCTTCATATCAGGGAGACATTACTGGGAGGTGGAGGTAGGGGACAGGAAAG
AGTGGCATATAGGGGTGTGCAGTAAGAATGTGCAGAGAAAAGGCTGGGTCAAAATGACACCTGAGAATGGATTCT
GGACTATGGGGCTGACTGATGGGAATAAGTATCGGACTCTAAGTGGAGCCAGAACCAACCTGAAACTTCCTAAGC
CCCCTAAGAAAGTGGGGGTCTTCTGGACTATGAGACTGGAGATATCTCATTCTACAATGCTGTGGATGGATCGC
ATATTCTACTTTCTCGGACGTCTCCTTCTCTGAGGCTCTATATCCTGTTTTTCAAGATTTTGACCTTGGAGCCCA
CGGCCCTGAGTATTTGTCCAGCGTGAAGAAAGAGAGAGTTCTCCAATTCTGACCGAGTGCTGATCATTCCCT
AGAGACACCAGTAACCCCGGGCTTAGCTAACGAAAGTGGGGAGCCTCAGGCTGAAGTAACTTTTCTCTGCTTCTC
CCTGCCAGCTCAGAGCTGAGGGCCTCCCCCTCCACAGCAACCAATCACAAACATAAAGCTACAAGCACGCACTG
AAGCACTTTACTGATACTCATTCAATTATTATCATATGACAGTTGTTTGGAGTTTGGTACCATCTTATTTCCCTTA
TACAGATAAGGAACTGGGGTGCAGAAAAGTGAATTGACTACAAAGTAGACATGACTAGTTAACAACACAGCTGG
GATCTAAACAGCAATAACTAACAATTAATGGAGAAGTTAAATGCTCTGAGTGTGTGTATGAGCTTTGGTGGAT
GTCACCTCTTTAATCCTCGCAACACCCGTCTCGGGTAGTCTCATTAGCAAGTATGGAAGTTGAGGCAGGGCAACA
TTAAGCAACTTACATAACTCATGCAGTAATTTCTGCAGTTGGGAGATGTTTCAAGTTCAGTCCCCGGCCCTATGGC
CGTTCTTTTCCACCCTGTTTCTTCCCCCATAGGAAGAACCACCTGTAGCCCTGAGGTTCTTTTCCAGGATGGC
TCCAGGATAAGGATCACTGTAGGTGGTTGTGGAGTTGACACCCCTGTTGACTCCTTCCAGCTGATTGTCAGAGC
CTTAGACCCAGCACGCTTGGATTAGCTTTCAGAGTGTCTTGGTTGAGAGAATAACCTCACCGTACCCACATGA
CACGTGATTTGGAAGAGAGACTAGAGGCCACACTTGATAAATCATGGGGAACAGATGTGTTCCACCCAACAAATGT
GATAAGTGATCATGCAGCCAGAGCCAGCCTTCTTCAATCAAGGTTTCCAGGCAGAGCAAAATACCCTAGAGATT
TCTGTGATATAGGAAATTTGGATGAAGGGAGCTAGAAGAAATACAGGGATTTTTTTTTTTTTTTTAAAGATGGAGTC
TTACTCTGTTGCTAGGCTGGAGTGCAGTGGTGCAGTCTCAGCTCCCTGCAACCTCCACCTCCTGGGTTCAAACAA
TTCTCCTGCCTCAGCCTCCCGAGTACTGGGAATATAGGTGCACGCCACCACACCCAACAAATTTTGTACTTTTA
GTACAGATGAGGGTTCACTATGTTGGCCAGGATGGTCTCGATCTCTTGACCTCATGATCCACCCACCTCGGTCTC
CCAAAGTGCTGGGATTACAGGCTTGAGCCACCGGGTGACCGGCTTACAGGGATATTTTTAATCCCGTTATGGACT
CTGTCTCAGGAGAGGGGTCTATCCACCCCTGCTCATTGGTGGATGTTAAACCAATATTCCTTTCAACTGCTGCC
TGCTAGGGAAAACTACTCCTCATTATCATCATTATTATGCTCTCCACTGTATCCCTCTACCTGGCATGTGCT
TGTCAGTTCTAGTTGTTCAATAAATTTGTTAATAATGCTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AA

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FIGURE 537

MKMASFLAFLLLNFRVCLLLLQLLMPHSAQFSVLGPSGFILAMVGEDADLPCHLFPTMSAETMELKWVSSSLRQV
VNVYADGKEVEDRQSAPYRGRTSILRDGITAGKAALRIHNVTASDSGKYL CYFQDGD FYEKALVELKVAALGSDL
HVDVKGYKDGGIHLECRSTGWYPQPQIQWSNNKGENIPTVEAPVVADGVGLYAVAASVIMRGSSGEGVSCTIRSS
LLGLEKTASISIA DPFFRSAQRWIAALARTLPVLLLLLGGAGYFLWQQQEEKKTQFRKKKREQELREMAWSTMKQ
EQSTRVKLLEELRWRSIQYASRGERHSAYNEWKKALFKPADVILDPKTANPILLVSEDQRSVQRAKEPQDLDPNP
ERFNWHYCVLGCE SFISGRHYWEVEVGDRKEWHIGVCSKNVQRKGWVKMTPENGFWTMGLTDGNKYRTLTEPRTN
LKLPKPPKKVGVFLDYETGDISFYNAVDGSHIHTFLDV SFSEALYPVFRILTLEPTALSICPA

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FIGURE 538

GGCACGAGGGGAGTGGAAGTTCTCCGGCAGCCCTGAGATCTCAAGAGTGACATTTGTGAGACCAGCTAATTTGA
TTAAAATTCTCTTGGAATCAGCTTTGCTAGTATCATACCTGTGCCAGATTTTCATCATGGGAAACAGCTGTTACAA
CATAGTAGCCACTCTGTTGCTGGTCCTCAACTTTGAGAGGACAAGATCATTGCAGGATCCTTGTAGTAACTGCCC
AGCTGGTACATTCTGTGATAATAACAGGAATCAGATTTGCAGTCCCTGTCCTCCAAATAGTTTCTCCAGCGCAGG
TGGACAAAGGACCTGTGACATATGCAGGCAGTGTAAGGTGTTTTAGGACCAGGAAGGAGTGTTCTCCACCAG
CAATGCAGAGTGTGACTGCACTCCAGGGTTTCACTGCCTGGGGGCAGGATGCAGCATGTGTGAACAGGATTGTAA
ACAAGGTCAAGAAGTACAAAAAAGGTTGTAAAGACTGTTGCTTTGGGACATTTAACGATCAGAAACGTGGCAT
CTGTCGACCCTGGACAACTGTTCTTTGGATGGAAAGTCTGTGCTTGTGAATGGGACGAAGGAGAGGGACGTGGT
CTGTGGACCATCTCCAGCCGACCTCTCTCCGGGAGCATCTCTGTGACCCGCTGCCCTGCGAGAGAGCCAGG
ACACTCTCCGCAGATCATCTCCTTCTTTCTTGCGCTGACGTGCACTGCGTTGCTCTTCTGCTGTCTTCTCAC
GCTCCGTTTCTCTGTTGTTAAACGGGGCAGAAAGAACTCCTGTATATATTCAAACAACCATTTATGAGACCAGT
ACAACTACTCAAGAGGAAGATGGCTGTAGCTGCCGATTTCCAGAAGAAGAAGGAGGATGTGAAGTGTGA
TGGAAGTCAATAGGGCTGTTGGGACTTTCTTGAAAAGAAGCAAGGAAATATGAGTCATCCGCTATCACAGCTTTC
AAAAGCAAGAACACCATCCTACATAATACCCAGGATTCCCCAACACACGTTCTTTTCTAAATGCCAATGAGTTG
GCCTTTAAAAATGCACCACTTTTTTTTTTTTTTTTGACAGGGTCTCACTCTGTCACCCAGGCTGGAGTGCAGTGGC
ACCACCATGGCTCTCTGCAGCCTTGACCTCTGGGAGCTCAAGTGATCCTCCTGCCTCAGTCTCCTGAGTAGCTGG
AACTACAAGGAAGGGCCACCACACCTGACTAAGTTTTTTGTTTTTTGTTTGGTAAAGATGGCATTTACCATGTT
GTACAGGCTGGTCTCAAACCTTAGGTTCACTTTGGCCTCCCAAAGTGCTGGGATTACAGACATGAAGTGCAGG
CCCGGCCAAAATAATGCACCACTTTTAACAGAACAGACAGATGAGGACAGAGCTGGTGATAAAAAAAAAAAAAA
AAAGCATTTTCTAGATACCACTTAACAGGTTTGAGCTAGTTTTTTTTGAAATCCAAAGAAAATTATAGTTTAAATT
CAATTACATAGTCCAGTGGTCCAACCTATAATTATAATCAAATCAATGCAGGTTTGTTTTTGGTGCTAATATGA
CATATGACAATAAGCCACGAGGTGCAGTAAGTACCCGACTAAAGTTTCCGTGGGTTCTGTCATGTAACACGACAT
GCTCCACCGTCAGGGGGGAGTATGAGCAGAGTGCCTGAGTTTAGGGTCAAGGACAAAAAACCTCAGGCCTGGAGG
AAGTTTTGGAAAGAGTTCAAGTGTCTGTATATCCTATGGTCTTCTCCATCCTCACACCTTCTGCCTTTGTCTCTGC
TCCCTTTTAAGCCAGGTTACATTCTAAAAATTCTTAAGTTTAAACATAATATTTTATACCAAAGCCAATAAATGA
ACTGCATATGAAA

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FIGURE 539

MGNSCYNIVATLLLVLNFERTRSLQDPCSNCPAGTFCDNNRNQICSPCPPNSFSSAGGQRTCDICRQCKGVFRTR
KECSSTSNAECDCTPGFHCLGAGCSMCEQDCKQGQELTKKGCKDCCFGTFNDQKRGICRPWTNCSLDGKSVLVNG
TKERDVVCGPSPADLSPGASSVTPPAPAREPGHSPQIISSFFLALTSTALLFLLFFLTLRFSVVKRGRKKLLYIFK
QPFMRPVQTTQEEDGCSCRFPEEEEGGCEL

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FIGURE 540A

ACGGCTGCGAGAAGACGACAGAAGGGGAGAGGTGAATATTATTGAATGAAAATGGCTGACAGAAGTGGGAAGATT
ATTCCAGGACAAGTGTATATTGAGGTGGAATATGATTATGAATATGAAGCAAAGGACAGAAAGATTGTGATAAAA
CAAGGGGAGAGGTACATCTTGGTGAAAAAGACCAATGATGACTGGTGGCAAGTCAAGCCAGATGAAAACCTCCAAA
GCGTTTTATGTGCCAGCCCAGTATGTGAGGGAGGTCACGCGCAAAGCTCTCATGCCACCTGTTAAGCAGGTAGCT
GGTCTGCCAAATAACTCCACGAAAATAATGCAGAGTTTGCATCTTCAGAGATCAACAGAAAATGTGAACAAATTG
CCTGAGCTTTCAAGTTTCGGAAAGCCATCGTCATCTGTTCAAGGAACAGGTCTTATTTCGTGATGCCAATCAGAAT
TTTGGACCCAGTTATAATCAAGGTGAGACTGTCAACCTAAGCCTGGACCTGACCCATAATAACGGAAAGTTTAAC
AATGACTCACATTCTCCTAAAGTTTCCAGCCAGAATAGGACACGCTCATTGTTGTCATTTTCCCGGTCCAGAGTTC
TTGGATGTAGAGAAAACCTAGCTTCTCCAGGAACAATCTTGTGATTCCGCAGGAGAAGGCTCTGAAAGAATACAT
CAAGATTCTGAATCTGGTGATGAACCTTAGCAGCAGCTCCACTGAACAGATAAGGGCAACCACACCTCCAAATCAA
GGAAGGCCAGATTCTCCTGTCTATGCTAACCTTCAAGAACTGAAAATATCCAGTCTGCTCTTCCCCCACTTCTT
GGGAGCCCGCAATTGAGTTAATGGAGAATGGGAAACTCATAAAGACAGCTCAGGGCGTTGCTATTACTATAAC
AGAGGGACACAGGAAAGAACTTGGAAACCTCCTCGTTGGACCCGGGATGCAAGCATCAGCAAAGGAGATTTCCAA
AATCCAGGGGATCAAGAGTGGCTCAAGCATGTTGATGATCAAGGTAGACAATATTACTACAGTGCAGACGGATCT
CGGTGAGAATGGGAATTGCCAAAGTATAATGCTTCATCCAGCAGCAAAGAGAAATAATTAAGAGTAGGAGCCTG
GACAGGCGGCTGCAAGAACCAATAGTATTAACAAAGTGGAGACATAGCACCATTGTATTGGACACTAATGATAAG
GAATCTCCAACCTGCCTCAAAACCTGCTTTTCTGAAAATGAGTCTTCTCCCTCCTCACCAGGACCAAGATACA
GATCAAGAGAAATATGGATTATTAATGTAACAAAAATGCTGAAAATGGGAAAAGGTTGAAAGAACTGGTTG
TCTTCTTGGGCGGTGTTGCAGGGTTCATCTTTACTTTTACCAAACTCAAGGAAGTAGCACAAGTTGGTTTGGC
AGTAATCAGTCCAAACCAGAGTTCACAGTGGACCTCAAGGGGGCAACAATTGAGATGGCTTCAAAGGATAAATCC
AGCAAAAAGAAATGTATTTGAGCTGAAAACCTCGTCAAGGAACAGAACTGCTAATTCAGTCTGACAATGACACTGTT
ATTAATGATTGTTTTAAAGTTCTTAGTAGTACAATCAATAATCAGGCAGTAGAACTGATGAAGGAATTGAAGAG
GAGATACCGGATTACCAGGAATAGAAAAGCATGATAAGAAAAGGAACAAAAGGATCCCAAAAAGCTTCGTTC
TTTAAAGTATCTAGCATAGATTCTTCAGAACAGAAAAAACCAAGAAAACTTAAAGAAGTTTCTTACACGACGC
CCCCTTTGCAAGCTGTTTCGTGAAAAGGTTATATTAAAGATCAGGTATTTGGATCCAATCTCGCTAATCTGTGT
CAGAGAGAGAATGGCACAGTACCAAAGTTTGTGAAGTTATGTATTGAACATGTTGAAGAACATGGTTTGGATATT
GATGGGATATACAGAGTAAGTGGCAACCTCGCAGTGATCCAGAAAATAAGGTTTGCAGTCAATCATGATGAGAAA
TTGGACTTGAATGACAGTAAATGGGAAGATATTCATGTCATTACTGGAGCCCTCAAAATGTTTTTCGAGAATTA
CCAGAACCTCTTTTTACATTTAATCATTTTTAATGATTTTTGTAAATGCAATTAAGCAAGAACCAAGACCGCGAGTC
GCTGCTGTTAAGGACCTAATCAGACAGTTGCCAAAGCCAAACCAAGACACAATGCAGATTCTTTTCCGACATCTC
AGAAGAGTTATAGAAAATGGAGAGAAAAATCGAATGACCTATCAGAGTATAGCAATTGTTTTTGGTCCCACTCTA
TTAAAACCAAGAAAAGAGACTGGTAATATAGCAGTTTCATACTGTGTACCAGAATCAGATTGTAGAATTAATCTT
CTGGAACCTGAGTTCCATCTTCGGACGTTGATTCTTACTGAAGACAACCTGTGGAATAGAAGCTGGATTCCATCAG
ATTTCAAATGTTTATACACAATGTATTTTTATTTTTTGGACCAAGCAGTGACTCTTTGATTTTGCACCTTTTTTTT
GAGGGATCAGAAGGGAAGGGGAGAGTCGAGATGTGTGTTAGGCCCTCATATTTGCTGCTTTGTTGCAAGTTGATA
TAACTGCGTGTAATTATGAATTCATTTTTATCCTGAATGTTTGCAATTCATACTCTGAATTTTCAGTAAAAATCAA
ACTTAAAAATTCTAACCAGTCATATACACTGGATAATTTGGTAAGAAAACCTGTATTTTTTTTCCCTGAAATTGGAT
AATGTACTTTCTTCTCAAGATTCATGACTTGATAGAACAATACTTTCAGTTATGTTGCAAAGGCTCTTGGGCATT
TTAAACAAAAATGAAGTATATCCATTTTGAAACCTGTGTATTTCTTTTTCGGGGTTTCTGCATGCAGTGGCAGTCT
TAAGTGCCAAAATTCATTATAACCCCAAAATAACCCCTTGATGAAGGCTTGCTGTCTTTTACTGTGTTACACAGC
ATCCTTACTGGATATCTTAGTTGCTTGTGTTGGGCAGCACACTAATATTACTTAAACACTGTGATATACTGGAGT
TTTAGTTAGCGGAAGTCAGTTCAGGGCATTTTAGGGCTGTCTTGCTATACTGAATTGTAGCTAACAATCCTAATT
ATATCTAGTACCATACTGAGTTATTGGTATGACCCTGTGGAAACACACATTATTTTATGTAAATATAGGCTAAAG
ACTTAATGTCCTTTAGCTTGTGTATATAATTGTGTTGTATAGTCTCAGAGTACATTCTAACCTACATTTCTAAT
CATGTTATTGGTAATCTTTTCTGTGAATATTAGGTTTCTCCAGAAAATAGTCCGTTATTTGGGAAAGTTAACTG
TGTGCACTTTTAGATATTAACCTACATTTACAGGCAAACTCACTGTAATGAGAATGGTACTGGAAAATACTGAATA
GACTTGCTAAATGGCACATGCACTACAAGAGGAACCTTTTGGGTTATTTAATATGTACAGAAAACATTAGAAAAA
ATTTATTACAGAATTCTAATTCAGTATGAATAGTGGAAACCCACCTGTAAATTAGATGGATGTTGGATGGAAAA

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FIGURE 540B

TGACATTGCTAAATTTGAGAATTTCTTTTTACCTACTAATGTAGATTGCTTTGTATAATAAAACACAGGGTTTGG
AAGGTTTTGTTACAGGGAGCATGGTCTGTTGAAGATTTTTTAAATGTATTTTCTAGATTAACTTCTGTACATGA
AATGTCTAATAAACTCTAAGAGGCTTAGAGATTTTTCCATTGGAAATGTGCATTTTGTTTTCTAATTTTTTTGT
TTTTTCATTTACTGGCATACTGTTATACCTCATTTTTTTAAAAATCAACTGAATCCAATATTTCTGTGGCAAATAA
CACTTTCCTCATTTCATACCTTTTCTCCTCTCTTCCATGCCAACATTTCTCCACCCACAACGTACACTTTTTATT
TCTCCATCAATATTTGAAAGCGAGTGATTTGTGACCAGGATTTTTTTTTCTTAGGGTTGCATTTATAATTTACAG
ATTGCCTTCCTTGGGAACAAGTATTTTTTTGTATGATCTGTCTAAAAACCTCTCACCTGAATTTTGTGGTAGAAA
GTCTGTATTTGTTGTTGTGAGCGTGTAAATTGATAACAAACCAACTACTTGATAGCTAAAGCAGATTGTTTCG
GGTGGGGAGAAAAAGCCCTAAATCAGAAATGTTTATATTTGCCTAAAGTTGTCCTTAATAATACAATATGCTTTAG
ATCTTGCTTATTTAGTGATTGTATACCAGGAAAACAATTAGACTCAAATCAGTGATGTTCTTGTTCTTGGTGTTT
ATGAACATATATCAAAGATTAAAATTGTCCTGTGTTTCTTGTTTCAAGGTACGTGTGTGTGTGTGTGTGTGTGTG
TGTGTGTGTGTGTGTGAAGTCTTAAATGTTTTATTAGTCTACAGCTAATCAGTTTATTGTAATATTGTATGTA
CAGTGAGATTAAATGTCTTGCGTTTTTCATCCTTTGTGAATTAATAATTTCTCACTTGTTTTGTAATAACAAAGCTAG
TAATATTTTCTGTCTTGACAGCTTGGTTTTATAGTAGAAAAATATATTAAGCTGAAATAAATTATCAGTGGA
TTTTAAAAAAGAAAAAAAAAAAAAAAAAAAA

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FIGURE 541

MKMADRSGKIIPGQVYIEVEYDYEYEAKDRKIVIKQGERYILVKKTNDWWQVKPDENSKAFYVPAQYVREVTRK
ALMPPVKQVAGLPNNSTKIMQSLHLQRSTENVNKLPELSSFGKPSSSVQGTGLIRDANQNFGPSYNQGQTVNLSL
DLTHNNGKFNNDSHSPKVSSQNRTRSFHFGPEFLDVEKTSFSQEQSCDSAGEGSEIRHQDSESGDELSSSSTE
QIRATTPPNQGRPDSPVYANLQELKISQSALPPLPGSPAIIQINGEWETHKDSGRCYYYNRGTQERTWKPPRWTR
DASISKGDFQNPQDQEWLKHVDDQGRQYYSADGSRSEWELPKYNASSQQQREIIKSRLDRRLQEPVLTWKWRH
STIVLDTNDKESPTASKPCFPENESSPSSPKHQDTDQEKYGLLNVTKIAENGKKVRKNWLSSWAVLQGSLLFTK
TQGSSTSWFGSNQSKPEFTVDLKGATIEMASKDKSSKKNVFELKTRQGTELLIQSDNDTVINDWFKVLSSTINNO
AVETDEGIEEEEIPDSPGIEKHDKEKEQKDPKKLRSFKVSSIDSSEQKKTKKNLKKFLTRRPTLQAVREKGYIKDQ
VFGSNLANLCQRENGTVPKFVKLCIEHVEEHGLDIDGIYRVSGNLAVIQKLRFVAVNHDEKLDLNDKWDIHVIT
GALKMFFRELPEPLFTFNHFNDFVNAIKQEPRPRVAVKDLIRQLPKPNQDTMQILFRHLRRVIENGEKNRMTYQ
SIAIVFGPTLLKPEKETGNIAVHTVYQNQIVELILLELSSIFGR

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FIGURE 542

ATGACCATGGAAACAGTTGAATCCCAGCATGATGGAAGTATAACAGCTTCTTTGACAGAGAGCAAGTCTGCTCAT
GTGCAGACTCAGACTGGGCAAATTTCAATCCCTGCTTTAGCTCAGTGCAGTGAGCTGAGATCAGGCACCAGAAGA
GGCTCCCCAGCTGTAACCTAGTGTCAGTTACCTTCGGGCCAAACTATACATGTCCAGGGAGTAATTCAGACACCA
CAGCCATGGGTATTTCAGTCATCAGAAATACACACCGTTTCAGGTAGCAGCAATTGCAGAGACAGATGAATCTGCA
GAATCAGAAGGTGTAATTGATTCTCATAAACGTAGAGAAATCCTTTACGAAGACCCTCTTATAGGAAAATACTG
AATGAACTGTCCTCTGATGTGCCTGGTGTTCCCAAGATTGAAGAAGAGAGATCAGAGGAAGAAGGAACACCACCT
AGTATTGCTACCATGGCAGTACCAACTAGCATATATCAGACTAGCACGGGGCAATACATTGCTATAGCCCAAGGT
GGAACAATCCAGATTTCTAACCAGGATCTGATGGTGTTTCAGGGACTGCAGGCATTAACAATGACAAATTCAGGA
GCTCCTCCACCAGGTGCTACAATTGTACAGTACGCAGCACAATCAGCTGATGGCACACAGCAGTTCTTTGTCCCA
GGCAGCCAGGTTGTTGTTCAAGCTGCCACTGGTGACATGCCAACTTACCAGATCCGAGCTCCTACTGCTGCTTTG
CCACAGGGAGTGGTGATGGCTGCATCGCCCGGAAGTTTGACAGTCCCCAGCAGCTGGCAGAAGAAGCAACACGC
AAACGAGAGCTGAGGCTAATGAAAAACAGAGAAGCTGCCCGGGAGTGTCGCAGGAAGAAGAAAGAATATGTCAA
TGTCTTGAAAATCGTGTGGCTGTGCTTGAAAACCAAAACAAGACTCTCATTGAGGAATCAAGGCCCTCAAAGAT
CTTTATTGCCATAAAGTAGAGTAACTGTCTTTGACTTGGACCTTGTTTACTCTAATCAAGGCAGGAGATGCAGCA
GTCCTACTTATTGCCATGTGGACTTGTGGGAAGGACACGTGTGACCCTTAAGAATCCAGTTTGGATTAGTGTTTG
AAATTGAATTGGGAATGTTGTTCCAGGATGTGGAATGCAGCGTGATCACACTTACCGAGCTTACTTTGATCTGTT
TGTCAATAGCATGCAAAAAATGCTTTGTTTGCCCTTTGCTTCTGCTTTTTTTCAGGGAAGCTGCCAAAGAATGTC
GACGTCGAAAGAAAGAATATGTAAAATGCCTGGAGAGCCGAGTTGCAGTGCTGGAAGTCCAGAACAAGAAGCTTA
TAGAGGAACCTTGAAACCTTGAAAGACATTTGTTCTCCAAAACCTGATTACTAGAAATATTTAACTATGAACTGAT
TACAGA

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FIGURE 543

MTMETVESQHDGSITASLTESKSAHVQTQTGQISIPALAQCSSELRSCTRGGSPAVTLVQLPSGQTIHVQGVIQTP
QPWVIQSSEIHTVQVAAIAETDESAESEGVIDSHKRREILSRRPSYRKILNELSSDVPGVPKIEEERSEEEGTPP
SIATMAVPTSIYQTSTGQYIAIAQGGTIQISNPGSDGVQGLQALMTNSGAPPPGATIVQYAAQSADGTQQFFVP
GSQVVVQAATGDMPTYQIRAPTAALPQGVVMAASPGSLHSPQQLAEEATRKRRLMLMKNREAARECRRKKKEYVK
CLENRVAVLENQNKTLLIEELKALKDLYCHKVE

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FIGURE 544

GAATTCGGCCAAAGAGGCCTATGCTTCTCTGAAGACTTGCAGCAAGGCTTGCTGAGGCTCACAGAAGATAGCCCC
AGTGTGTTTGGAGTGGTTTTGAATGTGATTCTGAGATCAGACTGACTGAGCTGGAATCCTGGCTTTATATCTTACC
AGCTACACAACCTTGGAGTCTTAGAAATTTTTCTTTTCAATAAGCAGTCATCCTTACTTTCCCTCAAGATGACA
AACAGTTCGTTCTTCTGCCCAGTTTATAAAGATCTGGAGCCATTACGTAATTTTTTTTATTTAGTTTTTCCTTGTT
GGAATTATTGGAAGTTGTTTTGCAACCTGGGCTTTTATACAGAAGAATACGAATCACAGGTGTGTGAGCATCTAC
TTAATTAATTTGCTTACAGCCGATTTCTGCTTACTCTGGCATTACCAGTGAAAATTGTTGTTGACTTGGGTGTG
GCACCTTGGAAGCTGAAGATATTCCACTGCCAAGTAACAGCCTGCCTCATCTATATCAATATGTATTTATCAATT
ATCTTCTTAGCATTTGTGTCAGCATTGACCGCTGTCTTCAGCTGACACACAGCTGCAAGATCTACCGAATACAAGAA
CCCGGATTTGCCAAAATGATATCAACCGTTGTGTGGCTAATGGTCCTTCTTATAATGGTGCCAAATATGATGATT
CCCATCAAAGACATCAAGGAAAAGTCAAATGTGGGTTGTATGGAGTTTAAAAAGGAATTTGGAAGAAATTGGCAT
TTGCTGACAAAATTCATATGTGTAGCAATATTTTTAAATTTCTCAGCCATCATTTTAATATCCAATTGCCTTGTA
ATTCGACAGCTCTACAGAAACAAAGATAATGAAAATTACCCAAATGTGAAAAAGGCTCTCATCAACATACTTTTA
GTGACCACGGGCTACATCATATGCTTTGTTTCCTTACCACATTGTCCGAATCCCGTATACCCTCAGCCAGACAGAA
GTCATAACTGATTGCTCAACCAGGATTTCACTCTTCAAAGCCAAAGAGGCTACACTGCTCCTGGCTGTGTGCGAAC
CTGTGCTTTGATCCTATCCTGTACTATCACCTCTCAAAGCATTCCGCTCAAAGGTCAGTACTGAGACTTTTGCCTCA
CCTAAAGAGACCAAGGCTCAGAAAGAAAAATTAAGATGTGAAAATAATGCATATAAGACAGGATTTTTTGTGCTA
CCAATTCTGGCCTTACTGGACCATAAAGTTAATTATAGCTTTGAAAGATAAAAAAAAAAAAAAAAAAGCGGCCGC

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FIGURE 545

MTNSSFFCPVYKDLEPFTYFFYLVLVGIIGSCFATWAFIQKNTNHRCSVSIYLINLLTADFLTLALPVKIVVDL
GVAPWKLKIFHCQVTACLIYINMYLSIIFLAFVSDRCLQLTHSCKIYRIQEPGFAKMISTVVWLMVLLIMVPM
MIPKDIKEKSNVGCMEFKKEFGRNWHLLTNFICVAIFLNFSAILISNCLVIRQLYRNKDNENYPNVKKALINI
LLVTTGYIICFVPYHIVRIPYTLSQTEVITDCSTRISLFKAKEATLLLA VSNLCFDPILYYHLSKAFRSKVTETF
ASPKETKAQKEKLRCE NNA

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FIGURE 546

GAATTCGGCACGAGTCAGGGAAGCAGCCCCGGCGGCCAGCAGGGAGCTCAGGACAGAGCAGGCTCCCTGGGAAGC
CTCCGGGTGATAGGGGTGTTCCAGCTGCGGCGCTCTGGGGGTTTCAAGGGGGATCTTGAATGAACAAATGAATGA
ACTGCTTTCTGGGCAAACAGCCACAGCCAGAGGAGCCTGTGATTGGCAGAAAGAAGCCAGGGTGTGCAAGTCTCC
CCAACAGCCTCGAGTGGCCTGCAGTCACAGGGAACCTCAGGAAGACCTTCCGGGCAGAGACCAGAGGGAAGCCC
ATCTCTCCAGCAGAACTGCTTGGATTTTTTCTACCAGGAGGCTCAGGGCTCTGCAACAATGATAGCAGAAGCTGAT
GGCATCTAGAGATCTAGGCTGGGACTAGCACAGCATCACTTCTACCACTTTCTGTTGGTCACAGCAACTCACCAT
GCCAGTGCAGATTCAAGGGGAGGAGAAATAGAGTCCACTTCTTGATGGGAGGCGTGACATAGAATGGAGGATGAA
GATTACAACACTTCCATCAGTTACGGTGATGAATACCCTGATTATTTAGACTCCATTGTGGTTTTGGAGGACTTA
TCCCCCTTGGAAGCCAGGGTGACCAGGATCTTCCTGGTGGTGGTCTACAGCATCGTCTGCTTCCCTCGGGATTCTG
GGCAATGGTCTGGTGATCATCATTGCCACCTTCAAGATGAAGAAGACAGTGAACATGGTCTGGTTCCCTCAACCTG
GCAGTGGCAGATTTCTGTTCAACGTCTTCCTCCCAATCCATATCACCTATGCCGCCATGGACTACCACTGGGTT
TTCGGGACAGCCATGTGCAAGATCAGCAACTTCCTTCTCATCCACAACATGTTTACCAGCGTCTTCCTGCTGACC
ATCATCAGCTCTGACCGCTGCATCTCTGTGCTCCTCCCTGTCTGGTCCCAGAACCACCGCAGCGTTTCGCTGGCT
TACATGGCCTGCATGGTCATCTGGGTCTGGCTTTCTTCTTGAGTCCCCATCTCTCGTCTTCCGGGACACAGCC
AACCTGCATGGGAAAATATCCTGCTTCAACAACCTTCAGCCTGTCCACACCTGGGTCTTCCTCGTGGCCCACTCAC
TCCCAAATGGACCCTGTGGGGTATAGCCGGCACATGGTGGTGACTGTCACCCGCTTCCTCTGTGGCTTCCTGGTC
CCAGTCCTCATCATCACAGCTTGCTACCTACCATCGTGTGCAAACCTGCAGCGCAACCGCCTGGCCAAGACCAAG
AAGCCCTTCAAGATTATTGTGACCATCATCATTACCTTCTTCCTCTGCTGGTGCCCTACCACACACTCAACCTC
CTAGAGCTCCACCACACTGCCATGCCTGGCTCTGTCTTCAGCCTGGGTTTGCCCTGGCCACTGCCCTTGCCATT
GCCAACAGCTGCATGAACCCCAATTCTGTATGTTTTTATGGGTGAGGACTTCAAGAAGTTCAAGGTGGCCCTCTTC
TCTCGCCTGGTCAATGCTCTAAGTGAAGATACAGGCCACTCTTCCTACCCAGCCATAGAAGCTTTACCAAGATG
TCATCAATGAATGAGAGGACTTCTATGAATGAGAGGGAGACCGGCATGCTTTGATCTCTCACTGTGGAACCCCTCA
ATGGACTCTCTCAACCCAGGGACACCCAAGGATATGTCTTCTGAAGATCAAGGCAAGAACCTCTTTAGCATCCAC
CAATTTTCACTGCATTTTGCATGGGATGAACAGTGTCTTATGCTGGGAATCTAGGGCCTGGAACCCCTTTCTTCT
AGTGGACAGAACATGCTGTGTTCCATACAGCCTTGGACTAGCAATTTATGCTTCTTGGGAGGCCAGCCTTGACTG
ACTCAAAGCAAAAAAGGAAGAATTC

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FIGURE 547

MEDEDYNTSISYGDEYPDYLD SIVVLEDLSPLEARVTRIFLVVVSIVCFLGILGNGLV III IATFKMKKTVMVW
FLNLAVADFLFNVFLPIHITYAAMDYHWVFGTAMCKISNFLLIHNMFTSVFLLTIISSDRCSVLLPVWSQNHRS
VRLAYMACMVIWVLAFFLSSPSLVFRDTANLHGKISCFNNFSLSTPGSSSWPTHSQMDPVGYSRH MVVTVTRFLC
GFLVPVLIITACYLTIVCKLQRNRLAKTKKPFKIIVTIIITFFLCWCPYHTLN LLELHHTAMPGSVFSLGLPLAT
ALAIANS CMNPILYVFMGQDFKKFKVAFSRLVNALSED TGHSSYP SHRSFTKMSSMNERTSMNERETGML

[illegible]

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FIGURE 549

MDFSRLYDIGEQLDSEDLASLKFLSLDYIPQRKQEP IKDALMLFQRLQEKRMLEESNLSFLKELLFRINRLDLL
ITYLNTRKEEMERELQTPGRAQISAYRFHFCRMSWAEANSQCQTQSVPFWRRVDHLLIRVMLYQISEEVSRSELR
SFKFLLQEEISKCKLDDDMNLLDIFIEMEKRVILGEGKLDILKRVCAQINKSLLKIINDYEEFSKGEELCGVMTI
SDSPREQDSESQTLDKVYQMKSKPRGYCLINNHNFAKAREKVPKLHSIRDRNGTHLDAGALTTTFEELHFEIKP
HDDCTVEQIYEILKIYQLMDHSNMDCFICCILSHGDKGIYGTGQEAPIYELTSQFTGLKCPSLAGKPKVFFIQ
ACQGDNYQKGIPVETDSEEQPYLEMDLSSPQTRYIPDEADFLGMATVNNCVSYRNPAEGTWYIQSLCQSLRERC
PRGDDILTILTEVNIEVSNKDDKKNMGKQMPQPTFTLRKKLVFPD

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FIGURE 550

GTTTTTTTCCCTTCTGAGCAATGGAGCTTACCATCTTTATCCTGAGACTGGCCATTTACATCCTGACATTTCCT
TGTACCTGCTGAACCTTCTGGGCTTGTGGAGCTGGATATGCAAAAAATGGTTCCCCTACTTCTTGGTGAGGTTCA
CTGTGATATACAACGAACAGATGGCAAGCAAGAAGCGGGAGCTCTTCAGTAACCTGCAGGAGTTTGCGGGCCCT
CCGGGAAACTCTCCCTGCTGGAAGTGGGCTGTGGCACGGGGGCCAACTTCAAGTTCTACCCACCTGGGTGCAGGG
TGACCTGTATTGACCCCAACCCCAACTTTGAGAAGTTTTTGGATCAAGAGCATTGCAGAGAACCGACACCTGCAGT
TTGAGCGCTTTGTGGTAGCTGCCGGGGAGAACATGCACCAGGTGGCTGATGGCTCTGTGGATGTGGTGGTCTGCA
CCCTGGTGCTGTGCTCTGTGAAGAACCAGGAGCGGATTCTCCGCGAGGTGTGCAGAGTGCTGAGACCGGGAGGGG
CTTTCTATTTTCATGGAGCATGTGGCAGCTGAGTGTTTCGACTTGGAATTACTTCTGGCAACAAGTCTGGATCCTG
CCTGGCACCTTCTGTTTGATGGGTGCAACCTGACCAGAGAGAGCTGGAAGGCCCTGGAGCGGGCCAGCTTCTCTA
AGCTGAAGCTGCAGCACATCCAGGCCCCACTGTCCTGGGAGTTGGTGCGCCCTCATATCTATGGATATGCTGTGA
AATAGTGTGAGCTGGCAGTTAAGAGCTGAATGGCTCAAAGAATTTAAAGCTTCAGTTTTACATTTAAAATGCTAA
GTGGGAGAAGAGAAACCTTTTTTTTTGGGGGGCGGTTTTTTTGGTTTGTGTTGGTTTTTTTTTTTTTTTTGGCAA
GACTCCGTCTCAAAAAAAAAAAAAAAAAAAAAAAGAAGTAGAGACAGGGAGACAGGGTCTCACTGTGTTGCCTAG
GCCGGTCTTGAACCTCTGGGCTCAAGTGATTCTCCACCTTGACCTCCTAAATTGTTGGGATTACAGGTGTGAGA
CAGTGACCTGGCCGAAATAGCTCAAGTTTCTGAAAAACAAATCTGAATCTATTTGTTATTCTTAGCGTCACTGG
TCTGGCTTTCAGAAATTAACATACAAGGTTGCCACACCTAGTTCTGCCAGCTTTATGTCTTTTATTCCAGTATTC
CACCAAAGTTTGTTTTCTGCATTCCAGTTCTCAAGTCTTAAGATAAAGATTGTACTTGACAGTTTAGTATATCC
ATAAACTATTTGAGGTGGTTAAGGTTCTTGGGTTCATTTTCTTAATACTTTGCTGAATATTGTAGATTGTAGG
CAATGAAAAAGTCTACTAAATTAGGAAAACCTTGAATAATTAGGTATCCTAGGTAAGAGCCCCTAAACATCAAGC
AATCTGTGAGTCTGTAAAGAAATAAATATTTTTTGGATTATTCTTATCTAATTCCACCCCTGTTGGAAGATGATT
TCTTTGTTCTTTGCAACTATGGAAGCTGTGAAAATCATCACAAGTGCTCTGAAAGCGAGTGTTAGGTTGGTTAG
AGGGTTTAATATTTTCTGCAATGGTTTGTAGGAATTTAATAAATGTAGTATATTTTCTGAGATGATTTTGTAAA
AGTACTATTTTAAATATCAAATCAACCAATAAATTCACATTTGTGTTAGGAACAG

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FIGURE 551

MELTIFILRLAIYILTFPLYLLNFLGLWSWICKKWFPYFLVRETVIYNEQMASKKRELF SNLQEFAGPSGKLSLL
EVGCGTGANFKFYPPGCRVTCIDPNPNFEKFLIKSIAENRHLQFERFVVAAGENMHQVADGSVDVVVCTLVLCSV
KNQERILREVCRLRPGGAFYFMEHVAAECSTWNYFWQQVLDPAWHLLFDGCNLTRESWKALERASF SKLKLQHI
QAPLSWELVRPHIYGAVK

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FIGURE 552

GGGCAACGGAGGGGAAATAAAAGGGAACGGCTCCGAATCTGCCCCAGCGGCCGCTGCGAGACCTCGGCGCCGACA
TCGCGACAGCGAAGCGCTTTGCACGCCAGGAAGGTCCCCTCTATGTGCTGCTGAGCCGGTCCTGGACGCGACGAG
CCCGCCCTCGGTCTTCGGAGCAGAATTCGCAAAAACGGAAGGACTGGAAATGGCAGACCATATGATGGCAATGAA
CCACGGGCGCTTCCCCGACGGCACCAATGGGCTGCACCATCACCTGCCACC GCATGGGCATGGGGCAGTTCCC
GAGCCCCCATCACACCAGCAGCAGCAGCCCCAGCAGCCTTCAACGCCCTAATGGGCGAGCACATACTACGCG
CGCGGGCAACATGAATGCCACGAGCGGCATCAGGCATGCGATGGGGCCGGGGACTGTGAACGGAGGGCACCCCC
GAGCGCGCTGGCCCCCGCGGCCAGGTTTAAACAACTCCCAGTTTCATGGGTCCCCCGGTGGCCAGCCAGGGAGGCTC
CCTGCCGGCCAGCATGCAGCTGCAGAAGCTCAACAACCAGTATTTCAACCATCACCCCTACCCCCACAACCACTA
CATGCCGGATTTGCACCCTGCTGCAGGCCACCAGATGAACGGGACAAAACCAGCACTTCCGAGATTGCAACCCCAA
GCACAGCGGCGGCAGCAGCACCCCCGGCGGCTCGGGCGGCAGCAGCACCCCCGGCGGCTCTGGCAGCAGCTCGGG
CGGCGGCGCGGGCAGCAGCAACAGCGGCGGCGGCAGCGGCAGCGGCAACATGCCCCGCTCCGTGGCCCACGTCCC
CGCTGCAATGCTGCCGCCCAATGTTCATAGACACTGATTTTCATCGACGAGGAAGTTCTTATGTCTTGTTGATAGA
AATGGGTTTGGACCGCATCAAGGAGCTGCCCGAACCTCTGGCTGGGGCAAAACGAGTTTGATTTTATGACGGACTT
CGTGTGCAAAACAGCAGCCCAGCAGAGTGAGCTGTTGACTCGATCGAAACCCCGGCAGAAAGAAATCAAACCCCCAA
CTTCTTCGGCGTGAATTTAAAGAAACATTCCCTTAGACACAGTATCTCACTTTTCAGATCTTGAAAGGTTTGAGA
ACTTGAAACAAAGTAACTATAAATTGTACAAATTGGTTTTTAAAAAAATTGCTGCCACTTTTTTTCTGTGTT
TTGTTTCGTTTTTTGTAGCCTTGACATTACCCACCTCCCTTATGTAGTTGAAATATCTAGCTAAGTTGGTCTTTT
TCGTTGTTTGTTTTTACTCCTTTCCCTCACTTTCTCCAGTGCTCAACTGTTAGATATTAATCTTGCCAACTGCT
TAATCTTGTTGATTTTGTAGATGGTTTCAAATGACTGAACTGCATTTCAGATTTACGAGTGAAAGGAAAAATTGCA
TTAGTTGGTTGCATGAACTTCGAAGGGCAGATATTACTGCACAACTGCCATCTCGCTTCATTTTTTTAACTATG
CATTTGAGTACAGACTAATTTTTTAAATATGCTAACTGGAAGATTAAACAGATGTGGGCCAACTGTTCTGGAT
CAGGAAAGTCATACTGTTCACTTTCAAGTTGGCTGTCCCCCGCGCCCCCCCCACCCCCATATGTACAGATGA
TAATAGGGTGTGGAATGTCGTGAGTGGCAAACATTTACAGATTTTATTTTGTGTTCTGTCTTCAACATTTTTGA
CACTGTGCTAATAGTTATATTAGTACATGAAAAGATACTACTGTGTTGAAAGCTTTTTAGGAAATTTTGACAGT
ATTTTTGTACAAAACATTTTTTTGAAAAAATACTTGTTAATTTATCTATTTTAATTTGCCAATGTCAATAAAAA
GTTAAGAAAAAAAAAAAAAAAAAAAAA

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FIGURE 553

MADHMMAMNHGRFPDGTNGLHHHPAHRMGMGQFPSPHHHQQQPQHAFNALMGEHIHYGAGNMNATSGIRHAMGP
GTVNGGHPPSALAPAARFNNSQFMGPPVASQGGSLPASMQLQKLNNQYFNHHPYPHNHYPDLHPAAGHQMNGTN
QHFRDCNPKHSGGSSTPGGSGGSSTPGGSGSSSGGAGSSNSGGGSGSGNMPASVAHVPAAMLPPNVIDTDFIDE
EVLMSLVIEMGLDRIKELPELWLGQNEFDFMTDFVCKQQPSRVSC

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FIGURE 554

ACACGGACCAAGGAGTCTAACACGTGCGCGAGTCGGGGGCTCGCACGAAAGCCGCCGTGGCGCAATGAAGGTGAA
GGCCGGCGCGCTCGCCGGCCGAGGTGGGATCCCCGAGGCCCTCTCCAGTCCGCCGAGGGCGCACCACGGCCCGTCT
CGCCCGCCGCGCCGGGGAGGTGGAGCACGAGCGCACGTGTTAGGACCCGAAAGATGGTGAACCTATGCCTGGGCAG
GGCGAAGCCAGAGGAAACTCTGGTGGAGGTCCGTAGCGGTCTTGACGTGCAAATCGGTTCGTCCGACCTGGGTATA
GGGCGGGCTCCAGGCGAGGCGGTTCGACGCTCCTGAAAACTTGCGCGCGCGCTCGCGCCACTGCGCCCCGGAGCGA
TGAAGATGGTTCGCGCCCTGGACGCGGTTCTACTCCAACAGCTGCTGCTTGTGCTGCCATGTCCGCACCGGCACCA
TCCTGCTCGGCGTCTGGTATCTGATCATCAATGCTGTGGTACTGTTGATTTTATTGAGTGCCCTGGCTGATCCGG
ATCAGTATAACTTTTTCAAGTTCTGAACCTGGGAGGTGACTTTGAGTTCATGGATGATGCCAACATGTGCATTGCCA
TTGCGATTTCTCTTCTCATGATCCTGATATGTGCTATGGCTACTTACGGAGCGTACAAGCAACGCGCAGCCTGGA
TCATCCCATTCTTCTGTTACCAGATCTTTGACTTTGCCCTGAACATGTTGGTTGCAATCACTGTGCTTATTTATC
CAAACCTCCATTGAGGAATACATACGGCAACTGCCTCCTAATTTTCCCTACAGAGATGATGTGATGTGCTGAGTGAATC
CTACCTGTTTGGTCTTATTATTCTTCTGTTTATTAGCATTATCTTGACTTTTAAGGGTTACTTGATTAGCTGTG
TTTGGAACTGCTACCGATACATCAATGGTAGGAACTCCTCTGATGTCCTGGTTTATGTTACCAGCAATGACACTA
CGGTGCTGCTACCCCGTATGATGATGCCACTGTGAATGGTGTGCTGCCAAGGAGCCACCGCCACCTTACGTGTCTG
CCTAAAGCCTTCAAGTGGGCGGAGCTGAGGGCAGCAGCTTGACTTTGCAGACATCTGAGCAATAGTTCTGTTATTT
CACTTTTGCCATGAGCCTCTCTGAGCTTGTTTGTGCTGAAATGCTACTTTTTAAAATTTAGATGTTAGATTGAA
AACTGTAGTTTTCAACATATGCTTTGCTAGAACTGTGATAGATTAAGTGTAGAATTCTTCTGTACGATTGGG
GATATAATGGGCTTCACTAACCTTCCCTAGGCATTGAAACTTCCCCCAAATCTGATGGACCTAGAAGTCTGCTTT
TGTACCTGCTGGGCCCCAAAGTTGGGCATTTTTCTCTCTGTTCCCTCTCTTTTGAATATGTAATAAAACCAAA
AATAGACAACTTTTCTTCCAGCCATTCCAGCATAGAGAACAAACCTTATGGAAACAGGAATGTCAATTGTGTAA
TCATTGTTCTAATTAGGTAAATAGAAGTCCTTATGTATGTGTTACAAGAATTTCCCCCACAACATCCTTTATGAC
TGAAAGTTCAATGACAGTTTGTGTTTGGGTGGTAAAGGATTTTCTCCATGGCCTGAATTAAGACCATTAGAAAGCA
CCAGGCCGTGGGAGCAGTGACCATCTGCTGACTGTTCTTGTGGATCTTGTGTCCAGGGACATGGGGTGACATGCC
TCGTATGTGTTAGAGGGTGGAAATGGATGTGTTTGGCGCTGCATGGGATCTGGTGCCCTCTTCTCCTGGATTAC
ATCCCCACCCAGGGCCCGCTTTTACTAAGTGTCTGCCCCTAGATTGGTTCAAGGAGGTCATCCAACCTGACTTTAT
CAAGTGGAAATTGGGATATATTTGATATACTTCTGCCTAACAAACATGGAAAAGGGTTTTCTTTTCCCTGCAAGCTA
CATCCTACTGCTTTGAACTTCCAAGTATGTCTAGTCACCTTTTAAAATGTAAACATTTTCAGAAAAATGAGGATT
GCCTTCCTTGTATGCGCTTTTTACCTTGACTACCTGAATGCAAGGGATTTTTATATATTCATATGTTACAAAGT
CAGCAACTCTCCTGTTGGTTCATTATTGAATGTGCTGTAAATTAAGTTGTTTGCAATTAACAAGGTTTGCCCA
CAAAAAAAAAA

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FIGURE 555

MVNYAWAGRSQRKLWRSVAVLTCKSVVRPGYRGGLQARRSTLLKTCARARATAPGAMKMVAPWTRFYNSCCLC
CHVRTGTILLGVWYLIINAVVLLILLSALADPDQYNFSSELGGDFEFMDDANMCIAIAISLLMILICAMATYGA
YKQRAAWIIPFFCYQIFDFALNMLVAITVLIYPNSIQEYIRQLPPNFPYRDDVMSVNPTCLVLIILLFISIIILTF
KGYLISCVWNCYRYINGRNSSDVLVYVTSNDTTVLLPPYDDATVNGAAKEPPPPYVSA

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FIGURE 556

GGACAACCGGCTGGGGTCCTTGCGCGCCGCGGCTCAGGGAGGAGCACCGACTGCGCCGCACCCCTGAGAGATGGTT
GGTGCCATGTGGAAGGTGATTGTTTCGCTGGTCCTGTTGATGCCTGGCCCCTGTGATGGGCTGTTTCGCTCCCTA
TACAGAAGTGTTCATGCCACCTAAGGGAGACTCAGGACAGCCATTATTTCTCACCCCTTACATTGAAGCTGGG
AAGATCCAAAAGGAAGAGAATTGAGTTTGGTCGGCCCTTTCCAGGACTGAACATGAAGAGTTATGCCGGCTTC
CTCACCGTGAATAAGACTTACAACAGCAACCTCTTCTCTGGTTCTTCCCAGCTCAGATACAGCCAGAAGATGCC
CCAGTAGTTCTCTGGCTACAGGGTGGGCCGGGAGGTTTCATCCATGTTTGGACTCTTTGTGGAACATGGGCCTTAT
GTTGTACACAAGTAACATGACCTTGCGTGACAGAGACTTCCCCTGGACCACAACGCTCTCCATGCTTTACATTGAC
AATCCAGTGGGCACAGGCTTCAGTTTTACTGATGATACCCACGGATATGCAGTCAATGAGGACGATGTAGCACGG
GATTTATACAGTGCCTAATTCAGTTTTTCCAGATATTTCTGAATATAAAAAATAATGACTTTTATGTCAGTGGG
GAGTCTTATGCAGGGAAATATGTGCCAGCCATTGCACACCTCATCCATTCCCTCAACCCCTGTGAGAGAGGTGAAG
ATCAACCTGAACGGAATTGCTATTGGAGATGGATATTCTGATCCCGAATCAATTATAGGGGGCTATGCAGAATTC
CTGTACCAAATTGGCTTGTTGGATGAGAAGCAAAAAAAGTACTTCCAGAAGCAGTGCCATGAATGCATAGAACAC
ATCAGGAAGCAGAACTGGTTTGAGGCCTTTGAAATACTGGATAAACTACTAGATGGCGACTTAACAAGTGATCCT
TCTTACTTCCAGAATGTTACAGGATGTAGTAATTACTATAACTTTTTGCGGTGCACGGAACCTGAGGATCAGCTT
TACTATGTGAAATTTTTGTCACTCCCAGAGGTGAGACAAGCCATCCACGTGGGGAATCAGACTTTTAATGATGGA
ACTATAGTTGAAAAGTACTTGCGAGAAGATACAGTACAGTCAGTTAAGCCATGGTTAACTGAAATCATGAATAAT
TATAAGGTTCTGATCTACAATGGCCAACCTGGACATCATCGTGGCAGCTGCCCTGACAGAGCGCTCCTTGATGGGC
ATGGACTGGAAAGGATCCAGGAATACAAGAAGGCAGAAAAAAAGTTTGAAGATCTTTAAATCTGACAGTGAA
GTGGCTGGTTACATCCGGCAAGTGGGTGACTTCCATCAGGTAATTATTGAGGTGGAGGACATATTTTACCCTAT
GACCAGCCTCTGAGAGCTTTTGACATGATTAATCGATTCAATTTATGGAAGGATGGGATCCTTATGTTGGATTAA

ACTACCTTCCCAAAAGAGAACATCAGAGGTTTTTCATTGCTGAAAAGAAAATCGTAAAAACAGAAAATGTCATAGG
AATAAAAAAATTATCTTTTCATATCTGCAAGATTTTTTTTCATCAATAAAAAATTATCCTTGAAA

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FIGURE 557

MVGAMWKVIVSLVLLMPGPCDGLFRSLYRSVSMPPKGD SGQPLFLTPYIEAGKIQGRELSLVGPFPG LNMKSYA
GFLT VNKTYNSNLFFWFFPAQIQPEDAPVVLWLQGGPGGSSMFG L FVEHGPYVVT SNMTLRDRDFPWT T T L S M L Y
IDNPVGTGFSFTDDTHGYAVNEDDVARDLYSALI QFFQIFPEYKNND FYVTGESYAGKYVPAIAHLI HSLNPVRE
VKINLNGIAIGDGYSDPESIIGGYAEFLYQIGLLDEKQKKYFQKQCHECIEHIRKQNWFEAFEILDKLLDGD L TS
DPSYFQNV TGCSNYNFLRCTEPEDQLYYVKFLSLPEVRQAIHVGNQTFNDGTIVEKYLREDTVQSVK P WLTEIM
NNYKVLIYNGQLDIIVAAALTE RSLMGMDWKGSQEYKKA EKKVWKIFKSDSEVAGYIRQVGDFHQVIIRGGGHIL
PYDQPLRAFDMINRFIYGKGWDPYVG

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FIGURE 558

CTACCTCTTCCTCTCCACGCGGTTGAGAAGACCGGTTCGGCCTGGGCAACCTGCGCTGAAGATGCCGGGAAAACTC
CGTAGTGACGCTGGTTTGGAAATCAGACACCGCAATGAAAAAAGGGGAGACACTGCGAAAGCAAACCGAGGAGAAA
GAGAAAAAAGAGAAGCCAAAATCTGATAAGACTGAAGAGATAGCAGAAGAGGAAGAACTGTTTTCCCCAAAGC
TAAACAAGTTAAAAAGAAAGCAGAGCCTTCTGAAGTTGACATGAATTCTCCTAAATCCAAAAAGGCCAAAAAGAA
AGAGGAGCCATCTCAAAATGACATTTCTCCTAAAAACCAAAGTTTGAGAAAGAAAAAGGAGCCCATTGAAAAGAA
AGTGGTTTCTTCTAAAAACCAAAGAGTGACAAAAAATGAGGAGCCTTCTGAGGAAGAAATAGATGCTCCTAAGCC
CAAGAAGATGAAGAAAGAAAAGGAAATGAATGGAGAACTAGAGAGAAAAGCCCCAACTGAAGAATGGATTTC
TCATCCTGAACCGGACTGTAACCCCAGTGAAGCTGCCAGTGAAGAAAGTAACAGTGAGATAGAGCAGGAAATACC
TGTGGAACAAAAAGAAGGCGCTTTCTCTAATTTTCCCATATCTGAAGAACTATTAAACTTCTCAAAGGCCGAGG
AGTGACCTTCCTATTTCTATACAAGCAAAGACATTCCATCATGTTTACAGCGGGAAGGACTTAATTGCACAGGC
ACGGACAGGAAGTGGGAAGACATTCTCCTTTGCCATCCCTTTGATTGAGAACTTCATGGGGAAGTCAAGACAG
GAAGAGAGGCCGTGCCCCCTCAGGTACTGGTCTTGACCTACAAGAGAGTTGGCAAATCAAGTAAGCAAAGACTT
CAGTGACATCACAAAAAGCTGTCAGTGGCTTGTTTTTATGGTGGAACTCCCTATGGAGGTCAATTTGAACGCAT
GAGGAATGGGATTGATATCCTGGTTGGAACACCAGGTCGTATCAAAGACCACATACAGAATGGCAAAGTAGATCT
CACCAAATTAAGCATGTTGTCTGGATGAAGTGGACCAGATGTTGGATATGGGATTTGCTGATCAAGTGGGAAGA
GATTTTAAGTGTGGCATAACAAGAAAGATTCTGAAGACAATCCCCAAACATTGCTTTTTTCTGCAACTTGCCCTCA
TTGGGTATTTAATGTTGCCAAGAAATACATGAAATCTACATATGAACAGGTGGACCTGATTGGTAAAAAGACTCA
GAAAACGGCAATAACTGTGGAGCATCTGGCTATTAAGTGCCACTGGACTCAGAGGGCAGCAGTTATTGGGGATGT
CATCCGAGTATATAGTGGTCATCAAGGACGCACTATCATCTTTTGTGAAACCAAGAAAGAAGCCAGGAGCTGTC
CCAGAATTCAGCTATAAAGCAGGATGCTCAGTCCTTGCATGGAGACATTCCACAGAAGCAAAGGGAAATCACCTT
GAAAGGTTTTAGAAATGGTAGTTTTTGGAGTTTTTGGTGGCAACCAATGTTGCTGCACGTGGGTTAGACATCCCTGA
GGTTGATTGGTTATACAAAGCTCTCCACCAAAGGATGTAGAGTCCTACATTCATCGATCCGGGCGGACAGGCAG
AGCTGGAAGGACGGGGGTGTGCATCTGCTTTTATCAGCACAAGGAAGAATATCAGTTAGTACAAGTGGAGCAAAA
AGCGGGAATTAAGTTCAAACGAATAGGTGTTCTTCTGCAACAGAAATAATAAAAGCTTCCAGCAAAGATGCCAT
CAGGCTTTTGGATTCCGTGCCTCCCACTGCCATTAGTCACTTCAAACAATCAGCTGAGAAGCTGATAGAGGAGAA
GGGAGCTGTGGAAGCTCTGGCAGCAGCACTGGCCCATATTTAGGTGCCACGTCCGTAGACCAGCGCTCCTTGAT
CAACTCAAATGTGGGTTTTTGTGACCATGATCTTGCAGTGCTCAATTGAAATGCCAAATATTAGTTATGCTTGGA
AGAAGTTAAAGAGCAGCTGGGCGAGGAGATTGATTCCAAAGTGAAGGGAATGGTTTTTCTCAAAGGAAAGCTGGG
TGTTTTGCTTTGATGTACCTACCGCATCAGTAACAGAAATACAGGAGAAATGGCATGATTACAGACGCTGGCAGCT
CTCTGTGGCCACAGAGCAACCAGAAGTGAAGGACCGGGAAGGATATGGAGGCTTCAGGGGACAGCGGGAAGG
CAGTCGAGGCTTCAGGGGACAGCGGGACGGAAACAGAAGATTAGAGGACAGCGGGAAGGCAGTAGAGGCCCGAG
AGGACAGCGATCAGGAGGTGGCAACAAAAGTAACAGATCCCAAAACAAAGGCCAGAAGCGGAGTTTCAGTAAAGC
ATTTGGTCAATTAATTAGAAATAGAAGATTTATATAGCAAAAAGAGAATGATGTTTGGCAATATAGAACTGAACAT
TATTTTTCATGCAAAGTTAAAAGCACATTGTGCCTCCTTTTGACCACTTGCCAAGTCCCTGTCTCTTTCAGACAC
AGACAAGCTTCATTTAAATTATTTTCATCTGATCATTATCATTTATAACTTTATTGTTACTTCATCAGTTTTTCT
TTTGAAAGGTGTATGAATTCATTACATTTTATTCTAATGTATTATCTGTAGATTAGAAGATAAAATCAAGCATG
TATCTGCCATATACTTTGTGAGTTACCTGTCTTTATACTCAAAAGTGTCCCTTAATAGTGTCTTCCCTGAAATA
AATACCTAAGGGAGTGTAACAGTCTCTGGAGGACCACTTTGAGCCTTTGGAAGTTAAGGTTTCTCAGCCACCTG
CCGAACAGTTTCTCATGTGGTCTATTATTTGTCTACTGAGACTTAATACTGAGCAATGTTTTGAAACAAGATTT
CAAATAATCTGGGTTGTAATACAGTTTATACCAAGTGATGCTCTAGACTTGGAAGATGTAGTATGTTTGATGTG
GATTACCTATACTTATGTTTCGTTTTGATACATTTTTAGCTTCTCATTATAAGGTGATTTCATGCTTTAGTGAATTC
TTCATAGATAGTATATATAAAAGTACATTTTAAATAGAAAAGCCAGGGTTTTAAGGAATTTACATGTATAAGGTGG
CTCCATAGCTTTATTTGTAAGTAGGCTGGATAAATGGTGCTTAAATGGTAATGTACTCCACTTCTTCTTATTGGA
AGATTAACATTATTTACCAAGAAGGACTTAAGGGAGTAAGGGGCGCAGATTAGCATTGCTCAAGAGTATGTAAAA
AAAAAAAAAAAAAAAAAAAA

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FIGURE 559

MNSPKSKKAKKKKEEPSQNDISPKTSLRKKKEPIEKKVVSSTKKVTKNEEPSEEEIDAPKPKMKMKKEKEMNGET
REKSPKLKNGFPHPEPDCNPSEAASEESNSEIEQEIPVEQKEGAFSNFPISEETIKLLKGRGVTFLLFPIQAKTFH
HVYSGKDLIAQARTGTGKTFSFAIPLIEKLHGELQDRKRGRAPQVLVLAPTRELANQVSKDFSDITKKLSVACFY
GGTPYGGQFERMRNGIDILVGTPGRIKDHIQNGKLDLTKLKHVVLDQMLDMGFADQVEEILSVAYKKDSEDN
PQTLLFSATCPHWVFNVAKKYMKSTYEQVDLIGKKTQKTAITVEHLAIKCHWTQRAAVIGDVIRVYSGHQGRITII
FCETKKEAQELSONSAIKQDAQSLHGDIPQKQREITLKGFRNGSFGVLVATNVAARGLDIPVDLVIQSSPPKDV
ESYIHRSGRTGRAGRTGVCICFYQHKEEYQLVQVEQKAGIKFKRIGVPSATEIIKASSKDAIRLLDSVPPTAISH
FKQSAEKLIEEKGAVEALAAALAHISGATSVDQRSLSNSNVGFVTMILQCSIEMPNISYAWKELKEQLGEEIDSK
VKGMVFLKGKLGVCFDVPTASVTEIQEKWHSRRWQLSVATEQPELEGPREGYGGFRGQREGSRGFRGQRDGNRR
FRGQREGSRGPRGQRSGGKNKSNRSQNGKQKRSFSKAFGQ

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FIGURE 560

CGATTTCATTCCCTCGCTCCCCACAGGTCCCTCTCCCCAAAATATTCCCATCTTGTCTAGCCCATCCCCCAGACT
ATCTCAAGGACCAGCTGTCCCCACGCCCCGACCTCCACTAGGCCTGTGCCACCCGCTGCCTGCAGGAAGACGCC
CGGTCCCGGGCCGGGTTAGCCCCATGGGAACGCAGCGCCTGTGTGGCCGCGGGACTCAAGGCTGGCCTGGCTCAA
GTGAACAGCACGTCCAGGAGGCGACCTCGTCCGCGGGTTTGCATTCTGGGGTGGACGAGCTGGGGGTTCCGGTCCG
AGCCCGGTGGGAGGCTCCCGAGCGCAGCCTGGGCCCAGCCCACCCGCGCCGGCGGCCATGGCAGGCACCCCTGG
ACCTGGACAAGGGCTGCACGGTGGAGGAGCTGTCTCCGCGGGTGCATCGAAGCCTTCGATGACTCCGGGAAGGTGC
GGGACCCGCGAGCTGGTGCATGTTCTCATGATGCACCCCTGGTACATCCCCCTCTCAGCTGGCGGCCAAGC
TGCTCCACATCTACCAACAATCCCGGAAGGACAACCTCCAATTCCCTGCAGGTGAAAACGTGCCACCTGGTCAGGT
ACTGGATCTCCGCCTTCCCAGCGGAGTTTGAAGCTTGAACCCGGAGTTGGCTGAGCAGATCAAGGAGCTGAAGGCTC
TGCTAGACCAAGAAGGGAACCGACGGCACAGCAGCCTAATCGACATAGACAGCGTCCCTACCTACAAGTGGAAGC
GGCAGGTGACTCAGCGGAACCCCTGTGGGACAGAAAAAGCGCAAGATGTCCCTGTTGTTTGACCACCTGGAGCCCA
TGGAGCTGGCGGAGCATCTCACCTACTTGGAGTATCGCTCCTTCTGCAAGATCCTGTTTTCAGGACTATCACAGTT
TCGTGACTCATGGCTGCACTGTGGACAACCCCGTCTGGAGCGGTTTCATCTCCCTCTTCAACAGCGTCTCACAGT
GGGTGCAGCTCATGATCCTCAGCAAACCCACAGCCCCGAGCGGGCCCTGGTCATCACACACTTTGTCCACGTGG
CGGAGAAGCTGCTACAGCTGCAGAACTTCAACACGCTGATGGCAGTGGTCGGGGGCCCTGAGCCACAGCTCCATCT
CCCGCTCAAGGAGACCCACAGCCACGTTAGCCCTGAGACCATCAAGCTCTGGGAGGGTCTCACGGAAGTGTGA
CGGCGACAGGCAACTATGGCAACTACCGGCGTGGCTGGCAGCCTGTGTGGGCTTCCGCTTCCCGATCCTGGGTG
TGCACCTCAAGGACCTGGTGGCCCTGCAGCTGGCACTGCCTGACTGGCTGGACCCAGCCCGGACCCGGCTCAACG
GGGCAAGATGAAGCAGCTCTTTAGCATCCTGGAGGAGCTGGCCATGGTGACCAGCCTGCGGCCACCAGTACAGG
CCAACCCCGACCTGCTGAGCCTGCTCACGGTGTCTCTGGATCAGTATCAGACGGAGGATGAGCTGTACCAGCTGT
CCCTGCAGCGGGAGCCGCGCTCCAAGTCTCGCCAACCCAGCCCCACGAGTTGCACCCACCACCCCGGCCCCCGG
TACTGGAGGAGTGGACCTCGGCTGCCAAACCCAAGCTGGATCAGGCCCTCGTGGTGGAGCACATCGAGAAGATGG
TGGAGTCTGTGTTCCGGAACCTTTGACGTCGATGGGGATGGCCACATCTCACAGGAAGAATTCCAGATCATCCGTG
GGAACCTTCCCTTACCTCAGCGCCTTTGGGGACCTCGACCAGAACCAGGATGGCTGCATCAGCAGGGAGGAGATGG
TTTCTATTTCTGCGCTCCAGCTCTGTGTTGGGGGGGCGCATGGGCTTCGTACACAACCTTCCAGGAGAGCAACT
CCTTGCGCCCCGTCGCTGCCGCCACTGCAAAGCCCTGATCCTGGGCATCTACAAGCAGGGCCTCAAATGCCGAG
CCTGTGGAGTGAAGTGCACAAAGCAGTGCAAGGATCGCCTGTGAGTTGAGTGTGGCGCAGGGCCAGAGTGTGA
GCCTGGAGGGGTCTGCACCCCTACCCCTACCCATGCACAGCCACCATCACCGCGCCTTCAGCTTCTCTGCCCC
GCCCTGGCAGGCGAGGCTCCAGGCCTCCAGAGATCCGTGAGGAGGAGGTACAGACGGTGGAGGATGGGGTGTGTTG
ACATCCACTTGTAAATAGATGCTGTGGTTGGATCAAGGACTCATTCTGCCTTGGAGAAAATACTTCAACCAGAGC
AGGGAGCCTGGGGGTGTGGGGCAGGAGGCTGGGGATGGGGGTGGGATATGAGGGTGGCATGCAGCTGAGGGCAG
GGCCAGGGCTGGTGTCCCTAAGGTTGTACAGACTCTTGTGAATATTTGTATTTCCAGATGGAATAAAAAGGCC
GTGTAATTAACCTTCA

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FIGURE 561

MGTQRLCGRGTQGWPGSSEQHVQEATSSAGLHSGVDELGVRSEPGGRLPERSLGPAPAPAAAMAGTLDLDKGCTV
EELLRGCI EAFDDSGKVRDPQLVRMFLMMHPWYIPSSQLAAKLLHIYQQSRKDNSNSLQVKTCHLVRYWISAFPA
EFDLNP ELAEQIKELKALLDQEGNRRHSSLIDIDSVP TYKWK RQVTQRNPVGQKKRKM SLLFDHLEPMELAEHLT
YLEYRSFCKILFQDYHSFVTHGCTVDNPVLERFISLFNSVSQWVQLMILSKPTAPQRALVITHFVHVAEKLQLQ
NFNTLMAVVGGLSHSSISRLKETHSHVSPETIKLWEGLTELV TATGNYGNYRRRLAACVGFRFPILGVHLKDLVA
LQLALPDWLDPARTRLNGAKMKQLFSILEELAMVTS LRPPVQANPDLLSLLTVSLDQYQTEDELYQLSLQREPRS
KSSPTSPTSCTPPPRPPVLEEWTSAAKPKLDQALVVEHIEKMVESVFRNFDVDGDGHISQEEFQIIRGNFPYLSA
FGDLDQNQDGCISREEMVSYFLRSSSVLGGRMGFVHNFQESNSLRPVACRHCKALILGIYKQGLKCRACGVNCHK
QCKDRLSVECRRRAQSVSLEGSAPSPSPMHSHHHRAFSFSLPRPGRRGSRPPEIREEEVQTVEDGVFDIHL

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FIGURE 562

GCCTGTCCTGACACAATGTGGCTGGGTCCAGACATGAAGAGGTGCTACCGAGCACCTCAATCTACCTCAACTACG
ACGTTAGCTTCTACCATGACGAGGACAGTACCTGCCACCACAAGAGCCCCGGGACCACCGTCCACAGATCCACC
TACCAGAACCACAGCACAGAGACACCAAGCCTGACAGCTGCAGTCCCAAGCTCAGTTAGTGTCCCCAGGGCTCCC
AGCATCAGCCCGTCTACCCTAAGCCCTGCAACCAGCAACCACTCCCAGCACTATGCAAATGAAGACAGTAAGATG
GGCTCAACAGTCACTGCCGCTGTTATCGGGATCATCGTGCCCATAGTGGTGATAGCCCTCCTGTGCATGAGTGGA
TACCTGATCTGGAGAACTGGAAGCGGAAGAACACCAAAAGCATGAATTTTGACAACCCAGTCTACAGGAAAACA
ACAGAAGAAGAAGACGAAGATGAGCTCCATATAGGGGAGAACTGCTCAGATTGGCCATGTCTATCCTGCAGCAATC
AGCAGCTTTGATCGCCCACTGTGGGCAGAGCCCTGTCTTGCGGAGACCAGAGAACCAGGAAGACCCAGCCCCCTGCC
CTCAAGGAGCTTTTTGTCTTGCCGGGGGAACCAAGGTCACAGCTGCACCAACTCCCGAAGAACCCTCTTTCCGAG
CTGCCTGTGCTCAAATCCAAGCGAGTGGCATTAAAGCCTTGAAGATGATGGACTACCCTGAGGATGGGATCACCCC
CTTCGTGCCTCATGGAATTCAGTCCCATGCACTACACTCTGGATGGTGTATGACTGGATGAATGGGTTTCTATAT
ATGGGTCTGTGTGAGTGTATGTGTGTGTGATTTTTTTTTTAAATTTATGTTGCGGAAAGGTAACCACAAAGTT
ATGATGAAGTCAAACATCCAAGGATGTGAGAGTTTTTCTATGTATAATGTTTTATACACTTTTTAACTGGTTG
CACTACCCATGAGGAATTCGTGGAATGGCTACTGCTGACTAACATGATGCACATAACCAAATGGGGGCCAATGGC
ACAGTACCTTACTCATCATTTAAAAACTATATTTACAGAAGATGTTTGGTTGCTGGGGGGGCTTTTTTTAGGTTT
TGGGGCATTGTTTTTTGTAAATAAGATGATTATGCTTTGTGGCTATCCATCAACATAAGTAAAAAAAAAAAAAA
AACACTTCAACTCCCTCCCCATTTAGATTATTTATTAACATATTTTAAAAATCAGATGAGTTCTATAAATAATT
TAGAGAAGTGAGAGTATTTATTTTTGGCATGTTTGGCCCACCACACAGACTCTGTGTGTGTATGTGTGTGTTTAT
ATGTGTATGTGTGTGACAGAAAAATCTGTAGAGAAGAGGCACATCTATGGCTACTGTTCAAATACATAAAGATAA
ATTTATTTTACACAGTCCACAAGGGGTATATCTTGTAGTTTTTCAGAAAAGCCTTTGGAAATCTGGATCAGAAAA
TAGATACCATGGTTTGTGCAATTATGTAGTAAAAAAGGCAAAATCTTTTACCTCTGGCTATTCTTGAGACCCAG
GAAGTCAGGAAAAGCCTTTAGCTCACCCTATGGCTGCTGTGACTCCTACCAGGGCTTTCTTGCTTTGGCGAAGG
TCAGTGTACAGACATTCCATGGTACCAGAGTGCTCAGAACTCAAGATAGGATATGCCTCACCCTCAGCTACTCC
TTGTTTTAAAGTTCAGCTCTTTGAGTAACTTCTTCAATTTCTTTCAGGACACTTGGGTTGAATTCAGTAAGTTTC
CTCTGAAGCACCCCTGAAGGGTGCCATCCTTACAGAGCTAAGTGGAGACGTTTCCAGATCAGCCCAAGTTTACTAT
AGAGACTGGCCCAGGCACTGAATGTCTAGGACATGCTGTGGATGAAGATAAAGATGGTGGAATAGGTTTTATCAC
ATCTCTTATTTCTCTTTTCCCCTTACTCTCTACCATTTCCCTTATGTGGGGAAACATTTTAAGGTAATAAATAGG
TTACTTACCATCATATGTTTATATAGATGAACTAATTTTTGGCTTAAGTCAGAACAACCTGGCCAAAATTGAAGT
CATATTTGAGGGGGGAAATGGCATAACGCAATATTATATTATTTGATATTTATGTTTACACAGGAATTTGGTTT
ACTGCTTTGTAAATAAAAGGAAAACTCCGGGTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 563

GGGAGGACCCCAATCTAGGCCCAAGAGGGAAAGGCCACGTGCCTGTATGAGCGTATGAGCATGTGCATGCGCGTG
TGTGCACAGGGTGGTGCACCTGGCAGGGGTCTTGTAGTGAGGCATGCCCCATTCTGTAGCAGGGAACCTGGAATG

GGCTGTGTGTTCTGCAAGAAATTGGAGCCGGTGGCCACGGCCAAGGAGGATGCTGGCCTGGAAGGGGACTTCAGA
AGCTACGGGGCAGCAGACCACTATGGGCCTGACCCCACTAAGGCCCGGCCCTGCATCCTCATTTGCCACATCCCC
AACTACAGCAACTTCTCCTCTCAGGCCATCAACCCTGGCTTCCTTGATAGTGGCACCATCAGGGGTGTGTCAGGG
ATTGGGGTGACCCTGTTTCATTGCCCTGTATGACTATGAGGCTCGAACTGAGGATGACCTCACCTTCACCAAGGGC
GAGAAGTTCCACATCCTGAACAATACTGAAGGTGACTGGTGGGAGGCTCGGTCTCTCAGCTCCGGAAAACTGGC
TGCAATCCAGCAACTACGTGGCCCCCTGTTGACTCAATCCAAGCTGAAGAGTGGTACTTTGGAAAGATTGGGAGA
AAGGATGCAGAGAGGCAGCTGCTTTACCAGGCAACCCCCAGGGGGCCTTTCTCATTGGGAAAGCGAGACCACC
AAAGGTGCCTACTCCCTGTCCATCCGGGACTGGGATCAGACCAGAGGCGATCATGTGAAGCATTACAAGATCCGC
AACTGGACATGGGCGGCTACTACATCACCACACGGGTTCAAGTCAACTCGGTGCAGGAGCTGGTGCAGCACTAC
ATGAGGTGAATGACGGGCTGTGCAACCTGCTCATCGCGCCCTGCACCATCATGAAGCCGCAGACGCTGGGCCTG
GCCAAGGACGCCCTGGGAGATCAGCCGCAGCTCCATCAGCTGGAGCGCCGGCTGGGCACCGGCTGCTTCGGGGAT
GTGTGGCTGGGCACGTGGAACGGCAGCACTAAGGTGGCGGTGAAGACGCTGAAGCCGGGCACCATGTCCCCGAAG
GCCTTCCTGGAGGAGGCGCAGGTCATGAAGCTGCTGCGGCACGACAAGCTGGTGCAGCTGTACGCCGTGGTGTGCG
GAGGAGCCCATCTACATCGTGACCGAGTTTCATGTGTACGGCAGCTTGCTGGATTTTCTCAAGAACCCAGAGGGC
CAGGATTTGAGGCTGCCCCAATTGGTGGACATGGCAGCCAGGTAGCTGAGGGCATGGCCTACATGGAACGCATG
AACTACATTACCGCGACCTGAGGGCAGCCAACATCCTGGTTGGGGAGCGGCTGGCGTGCAAGATCGCAGACTTT
GGCTTGGCGCGTCTCATCAAGGACGATGAGTACAACCCCTGCCAAGGTTCCAAGTTCCCCATCAAGTGGACAGCC
CCAGAAGCTGCCCTCTTTGGCAGATTACCATCAAGTCAGACGTGTGGTCTTTGGGATCCTGCTCACTGAGCTC
ATCACCAAGGGCCGAATCCCTTACCCAGGCATGAATAAACGGGAAGTGTGGAACAGGTGGAGCAGGGCTACCAC
ATGCCGTGCCCTCCAGGCTGCCAGCATCCCTGTACGAGGCCATGGAACAGACCTGGCGTCTGGACCCGGAGGAG
AGGCCTACCTTCGAGTACCTGCAGTCCTTCTGGAGGACTACTTCACCTCCGCTGAACCACAGTACCAGCCCGGG
GATCAGACATAGCCTGTCCGGGCATCAACCCTCTCTGGCGGTGGCCACCAGTCTTGCCAATCCCAGAGCTGTT
CTTCCAAAGCCCCCAGGCTGGCTTAGAACCCCATAGAGTCTAGCATCACCGAGGACGTGGCTGCTCTGACACCA
CCTAGGGCAACCTACTTGTGTTTACAGATGGGGCAAAAGGAGGCCAGAGCTGATCTCTCATCCGCTCTGGCCCCA
AGCACTATTTCTTCCTTTTCCACTTAGGCCCCTACATGCCTGTAGCCCTTTCTCACTCCATCCCCACCCAAAAGT
GCTCAGACCTTGTCTAGTTATTTATAAACTGTATGTACCTCCCTCACTTCTCTCCTATCACTGCTTTCTACTCT
CCTTTTATCTCACTCTAGTCCAGGTGCCAAGAATTTCCCTTCTACCTCTATTCTCTTGTGTCTGTAAGTTACAA
AGTCAGGAAAAGTCTTGGCTGGACCCCTTTCTGCTGGGTGGATGCAGTGGTCCAGGACTGGGGTCTGGGCCCAG
GTTTGAGGGAGAAGTTTGAGAGCACTTCCACCTCTCTGAATAGTGTGTATGTGTTGATTTATTGATTCTGTAA
ATAAGTAAAATGACAATATGAATCCTCCA

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FIGURE 564

MGCVFCKKLEPVATAKEDAGLEGDFRSYGAADHYGPDPTKARPASSFAHIPNYSNFSSQAINPGFLDSGTIRGVS
GIGVTLFIALYDYEARTEDDLTFTKGEKFHILNNTGDDWWEARSLSSGKTGCIPSNYVAPVDSIQAEWYFGKIG
RKDAERQLLSPGNPQGAFLIRESETTKGAYSLSIRDWDQTRGDHVKHYKIRKLDMGYYITTRVQFNSVQELVQH
YMEVNDGLCNLLIAPCTIMKPQTLGLAKDAWEISRSSITLERRLGTGCFGDVWLGTWNGSTKVAVKTLKPGTMSP
KAFLEEAQVMKLLRHDKLVQLYAVVSEEPYIIVTEFMCHGSLLDFLKNPEGQDLRLPQLVDMAAQVAEGMAYMER
MNYIHRDLRAANILVGERLACKIADFGLARLIKDDDEYNPCQGSKFPIKWTAPEAALFGRFTIKSDVWSFGILLTE
LITKGRIPYPGMNKREVLEQVEQGYHMPCPPGCPASLYEAMEQTWRLDPEERPTFEYLSFLEDYFTSAEPQYQP
GDQT

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FIGURE 565A

CGGAGAGGAGTCGGGATCTGCGCTGCAGCCACCGCCGCGGTTGATACTACTTTGACCTTCCGAGTGCAGTGAGGC
ATACATCACAATTTGGAATTATGCATTGGTTTATCAATTTACTTGTATTATTGTCACCCTGCTGCCAGATATGAC
TTCATGAGGACAGTGATGTGTGTTCTGAAATTGTGAACCATGAGTCTAGTACTTAATGATCTGCTTATCTGCTGC
CGTCAACTAGAACATGATAGAGCTACAGAACGAAAGAAAGAAGTTGAGAAATTTAAGCGCCTGATTGAGATCCT
GAAACAATTAACATCTAGATCGGCATTGAGATTCCAAACAAGGAAAATATTTGAATTGGGATGCTGTTTTTAGA
TTTTTACAGAAATATATTGAGAAAGAACAGAATGTCTGAGAATAGCAAAACCAAATGTATCAGCCTCAACACAA
GCCTCCAGGCAGAAAAAGATGCAGGAATCAGTAGTTTGGTCAAATACTTCATCAAATGTGCAAAACAGAAGAGCA
CCTAGGCTAAAATGTCAAGAACTCTTAAATTATATCATGGATACAGTGAAAGATTTCATCTAATGGTGCTATTTAC
GGAGCTGATTGTAGCAACATACTACTCAAAGACATTCTTCTGTGAGAAAATACTGGTGTGAAATATCTCAGCAA
CAGTGGTTAGAATTGTTCTCTGTGTACTTCAGGCTCTATCTGAAACCTTCACAAGATGTTTCATAGAGTTTTAGTG
GCTAGAATAATTTCATGCTGTTACCAAAGGATGCTGTTCTCAGACTGACGGATTAAATTCCAAATTTTTGGACTTT
TTTTCCAAGGCTATTCAGTGTGCGAGACAAGAAAAGAGCTCTTCAGGTCTAAATCATATCTTAGCAGCTCTTACT
ATCTTCTCAAGACTTTGGCTGTCAACTTTTGAATTCGAGTGTGTGAATTAGGAGATGAAATCTTCCCACTTTG
CTTTATATTTGGACTCAACATAGGCTTAATGATTCTTTAAAAAGAGTCATTATTGAATTATTTCAACTGCAAATT
TATATCCATCATCCGAAAGGAGCCAAAACCCAAAGAAAAGGTGCTTATGAATCAACAAAATGGAGAAGTATTTTA
TACAACCTATATGATCTGCTAGTGAATGAGATAAGTCATATAGGAAGTAGAGGAAAGTATTCTTCAGGATTTCTG
AATATTGCCGTCAAAGAAAATTTGATTGAATTGATGGCAGATATCTGTACCAGGTTTTTAATGAAGATACCAGA
TCCTTGGAGATTTCTCAATCTTACACTACTACACAAAAGAGAATCTAGTGATTACAGTGTCCCTTGCAAAAGGAAG
AAAATAGAACTAGGCTGGGAAGTAATAAAAGATCACCTTCAGAAGTCACAGAATGATTTTGATCTTGTGCCTTGG
CTACAGATTGCAACCCAATTAATATCAAAGTATCCTGCAAGTTTACCTAAGTGTGAGCTGTCTCCATTACTGATG
ATACTATCTCAGCTTCTACCCCAACAGCGACATGGGGAACGTACACCATATGTGTTACGATGCCTTACGGAAGTT
GCATTGTGTCAAGACAAGAGGTCAAACCTAGAAAAGCTCACAAAAGTCAGATTTATTAATACTCTGGAATAAAATT
TGGTGTATTACCTTTCGTGGTATAAGTTCTGAGCAAATACAAGCTGAAAACCTTTGGCTTACTTGGAGCCATAATT
CAGGGTAGTTTAGTTGAGGTTGACAGAGAATTCTGGAAGTTATTTACTGGGTGAGCCTGCAGACCTTCATGTCTT
GCAGTATGCTGTTTGACTTTGGCACTGACCACCAGTATAGTTCCAGGAGCGGTAAAATGGGAATAGAGCAAAAT
ATGTGTGAAGTAAATAGAAGCTTTTCTTTAAAGGAATCAATAATGAAATGGCTCTTATTCTATCAGTTAGAGGGT
GACTTAGAAAATAGCACAGAAGTGCCTCCAATTCTTCACAGTAATTTTCTCATCTTGTACTGGAGAAAATCTT
GTGAGTCTCACTATGAAAACGTGTAAGCTGCAATGAATTTTTTCCAAAGCGTGCCAGAATGTGAACACCACCAA
AAAGATAAAGAAGAACCTTTCATTCTCAGAAGTAGAAGAACTATTTCTTCAGACAACCTTTTGACAAGATGGACTTT
TTAACCATTGTGAGAGAATGTGGTATAGAAAAGCACCAGTCCAGTATTGGCTTCTCTGTCCACCAGAATCTCAAG
GAATCACTGGATCGCTGTCTTCTGGGATTATCAGAACAGCTTCTGAATAATTACTCATCTGAGATTACAAATTCA
GAACTCTTGTCCGGTGTTCACGTCTTTTGGTGGGTGTCCTTGGCTGCTACTGTTACATGGGTGTAATAGCTGAA
GAGGAAGCATATAAGTCAGAATTATTCAGAAAAGCCAACCTCTAATGCAATGTGCAGGAGAAAGTATCACTCTG
TTTAAAAATAAGACAAATGAGGAATTGAGAAATTGGTTCCTTGAGAAATATGATGCAGCTATGTACACGTTGCTTG
AGCAACTGTACCAAGAAGAGTCCAAATAAGATTGCATCTGGCTTTTTCTGCGATTGTTAACATCAAAGCTAATG
AATGACATTGCAGATATTTGTAAAAGTTTAGCATCCTTCATCAAAAAGCCATTTGACCGTGGAGAAGTAGAATCA
ATGGAAGATGATACTAATGGAAATCTAATGGAGGTGGAGGATCAGTCATCCATGAATCTATTTAACGATTACCTT
GATAGTAGTGTTAGTGATGCAACGAACCTGGAGAGAGCCAAAGTACCATAGGTGCCATTAACTCTTTAGCTGAA
GAATATCTGTCAAAGCAAGATCTACTTTTCTTAGACATGCTCAAGTTCTTGTGTTTGTGTGTAATACTACTGCTCAG
ACCAATACTGTGTCCTTTAGGGCAGCTGATATTCGGAGGAAATTGTTAATGTTAATTGATTCTAGCACGCTAGAA
CCTACCAAATCCCTCCACCTGCATATGTATCTAATGCTTTTAAAGGAGCTTCTTGAGAGAAGAGTACCCCTTGCCA
ATGGAAGATGTTCTTGAACCTTCTGAAACCACTATCCAATGTGTGTTCTTTGTATCGTCGTGACCAAGATGTTTGT
AAAATATTTTAAACCATGTCTTTCATGTAGTGAAAACCTAGGTCAAAGCAATATGGACTCTGAGAACACAAGG
GATGCTCAAGGACAGTTTCTTACAGTAATTGGAGCATTTTGGCATCTAACAAAGGAGAGGAAATATATATCTCT
GTAAGAATGGCCCTAGTAAATTGCCTTAAACCTTTGCTTGAGGCTGATCCTTATTCAAATGGGCCATTCTTAAT
GTAATGGGAAAAGACTTTCTGTAAATGAAGTATTTACACAATTTCTTGCTGACAATCATACCAAGTTCGCATG
TTGGCTGCAGAGTCAATCAATAGATTGTTCCAGGACACGAAGGGAGATTCTTCCAGGTTACTGAAAGCACTTCCT
TTGAAGCTTCAGCAAACAGCTTTTGAAAATGCATACTTGAAAGCTCAGGAAGGAATGAGAGAAATGTCCCATAGT

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FIGURE 565B

GCTGAGAACCCTGAACTTTGGATGAAATTTATAATAGAAAATCTGTTTTACTGACGTTGATAGCTGTGGTTTTA
TCCTGTAGCCCTATCTGCGAAAAACAGGCTTTGTTTGCCCTGTGTAAATCTGTGAAAGAGAATGGATTAGAACCT
CACCTTGTGAAAAAGGTTTTAGAGAAAGTTTTCTGAAACTTTTGGATATAGACGTTTAGAAGACTTTATGGCATCT
CATTTAGATTATCTGGTTTTTGAATGGCTAAATCTTCAAGATACTGAATACAACCTTATCTTCTTTTCCTTTTATT
TTATTAACTACACAAATATTGAGGATTTCTATAGATCTTGTATAAGGTTTTGATTCCACATCTGGTGATTAGA
AGTCATTTTGATGAGGTGAAGTCCATTGCTAATCAGATTCAAGAGGACTGGAAAAGTCTTCTAACAGACTGCTTT
CCAAAGATTCTTGTAAATATTCTTCCTTATTTTGCCTATGAGGGTACCAGAGACAGTGGGATGGCACAGCAAAGA
GAGACTGCTACCAAGGTCTATGATATGCTTAAAAGTGAAAACCTTATTGGGAAAACAGATTGATCACTTATTCAAT
AGTAATTTACCAGAGATTGTGGTGGAGTTATTGATGACGTTACATGAGCCAGCAAATTCTAGTGCCAGTCAGAGC
ACTGACCTCTGTGACTTTTCAGGGGATTTGGATCCTGCTCCTAATCCACCTCATTTTCCATCGCATGTGATTAAA
GCAACATTTGCCTATATCAGCAATTGTCATAAAACCAAGTTAAAAAGCATTTTAGAAATCTTTCCAAAAGCCCT
GATTCCCTATCAGAAAATTCTTCTTGCCATATGTGAGCAAGCAGCTGAAACAAATAATGTTTATAAGAAGCACAGA
ATTCTTAAAATATATCACCTGTTTGTAGTTTATTACTGAAAGATATAAAAAGTGGCTTAGGAGGAGCTTGGGCC
TTTGTCTTCGAGACGTTATTTATACTTTGATTCATATATCAACCAAAGGCCTTCTTGTATCATGGATGTGTCA
TTACGTAGCTTCTCCCTTTGTTGTGACTTATTAAGTCAGGTTTGCCAGACAGCCGTGACTTACTGTAAGGATGCT
CTAGAAAACCATCTTCATGTTATTGTTGGTACACTTATACCCCTTGTGTATGAGCAGGTGGAGGTTTCAGAAACAG
GTATTGGACTTGTGAAATACTTAGTGATAGATAACAAGGATAATGAAAACCTCTATATCACGATTAAGCTTTTA
GATCCTTTTCCCTGACCATGTTGTTTTTAAGGATTTGCGTATTACTCAGCAAAAAATCAAATACAGTAGAGGACCC
TTTTCACTCTTGGAGGAAATTAACCATTTTCTCTCAGTAAGTGTTTATGATGCACCTTCATTGACAAGACTTGAA
GGACTAAAGGATCTTCGAAGACAACCTGGAACCTACATAAAGATCAGATGGTGGACATTATGAGAGCTTCTCAGGAT
AATCCGCAAGATGGGATTATGGTGAAACTAGTTGTCAATTTGTTGCAGTTATCCAAGATGGCAATAAACCCACT
GGTGAAAAAGAAGTTCTAGAGGCTGTTGGAAGCTGCTTGGGAGAAGTGGGTCCTATAGATTTCTCTACCATAGCT
ATACAACATAGTAAAGATGCATCTTATACCAAGGCCCTTAAGTTATTTGAAGATAAAGAACCTTCAGTGGACCTTC
ATAATGCTGACCTACCTGAATAACACACTGGTAGAAGATTGTGTCAAAGTTCGATCAGCAGCTGTTACCTGTTTG
AAAAACATTTTAGCCACAAAGACTGGACATAGTTTCTGGGAGATTTATAAGATGACAACAGATCCAATGCTGGCC
TATCTACAGCCTTTTAGAACATCAAGAAAAAAGTTTTTAGAAGTACCCAGATTTGACAAAGAAAACCCTTTTGAA
GGCCTGGATGATATAAATCTGTGGATTCTCTAAGTGAAAATCATGACATTTGGATAAAGACACTGACTTGTGCT
TTTTTGGACAGTGGAGGCACAAAATGTGAAATCTTCAATTATTAAGCCAATGTGTGAAGTGAAAACCTGACTTT
TGTCAGACTGTACTTCCATACTTGATTCATGATATTTACTCCAAGATACAAATGAATCATGGAGAAATCTGCTT
TCTACACATGTTTCAGGGATTTTTCACCAGCTGTCTTCGACACTTCTCGCAAACGAGCCGATCCACAACCCCTGCA
AACTTGGATTGAGAGTCAGAGCACTTTTCCGATGCTGTTTGGATAAAAAATCACAAAGAACAATGCTTGCTGTT
GTGGACTACATGAGAAGACAAAAGAGACCTTCTTCAGGAACAATTTTAAATGATGCTTTCTGGCTGGATTTAAAT
TATCTAGAAGTTGCCAAGGTAGCTCAGTCTTGTGCTGCTCACTTTACAGCTTTACTCTATGCAGAAATCTATGCA
GATAAGAAAAGTATGGATGATCAAGAGAAAAGAAGTCTTGCAATTTGAAGAAGGAAGCCAGAGTACAACCTATTTCT
AGCTTGAGTGAAAAAAGTAAAGAAGAACTGGAATAAGTTTACAGGATCTTCTCTTAGAAATCTACAGAAGTATA
GGGGAGCCAGATAGTTTGTATGGCTGTGGTGGAGGGAAGATGTTACAACCCATTACTAGACTACGAACATATGAA
CACGAAGCAATGTGGGGCAAAGCCCTAGTAACATATGACCTCGAAACAGCAATCCCCTCATCAACACGCCAGGCA
GGAATCATTGAGGCTTGCAGAATTTGGGACTCTGCCATATTCTTCCGTCTATTTAAAGGATTGGATTATGAA
AATAAAGACTGGTGTCTGAACTAGAAGAACTTCATTACCAAGCAGCATGGAGGAATATGCAGTGGGACCATTGC
ACTTCCGTCAGCAAAGAAGTAGAAGGAACCGATTACCATGAATCATTGTACAATGCTCTACAATCTCTAAGAGAC
AGAGAATTCTCTACATTTTATGAAAGTCTCAAATATGCCAGAGTAAAAGAAGTGGAAAGAGATGTGTAAGCGCAGC
CTTGAGTCTGTGATTTCGCTCTATCCCACACTTAGCAGGTTGCAGGCCATTGGAGAGCTGGAAAGCATTGGGGAG
CTTTTCTCAAGATCAGTCACACATAGACAACCTCTCTGAAGTATATATTAAGTGGCAGAAACACTCCAGCTTCTC
AAGGACAGTGATTTTAGTTTTTCAGGAGCCTATCATGGCTCTACGCACAGTCATTTTGGAGATCCTGATGGAAAAG
GAAATGGACAACCTCACAAAGAGAATGTATTAAGGACATTTCTACCAAACACCTTGTAGAATCTCTATACTGGCC
AGAATTTCAAGAACACTCAGCTCCCTGAAAGGGCAATATTTCAAATTAACAGTACAATTCAGTTAGCTGTGGA
GTCTCTGAGTGGCAGCTGGAAGAAGCACAAGTATTCTGGGCAAAAAAGGAGCAGAGTCTTGCCTGAGTATTCTC
AAGCAAATGATCAAGAAGTTGGATGCCAGCTGTGCAGCGAACAATCCCAGCCTAAAACCTTACATACACAGAATGT

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FIGURE 565C

CTGAGGGTTTGTGGCAACTGGTTAGCAGAAACGTGCTTAGAAAAATCCTGCGGTCATCATGCAGACCTATCTAGAA
AAGGCAGTAGAAGTTGCTGGAAATTATGATGGAGAAAGTAGTGATGAGCTAAGAAATGGAAAAATGAAGGCATTT
CTCTCATTAGCCCGGTTTTTCAGATACTCAATACCAAAGAATTGAAAACTACATGAAATCATCGGAATTTGAAAAAC
AAGCAAGCTCTCCTGAAAAGAGCCAAAGAGGAAGTAGGTCTCCTTAGGGAACATAAAATTCAGACAAACAGATAC
ACAGTAAAGGTTTCAGCGAGAGCTGGAGTTGGATGAATTAGCCCTGCGTGCACTGAAAGAGGATCGTAAACGCTTC
TTATGTAAAGCAGTTGAAAATTATATCAACTGCTTATTAAGTGGAGAAGAACATGATATGTGGGTATTCCGGCTT
TGTTCCCTCTGGCTTGAAAATTCTGGAGTTTCTGAAGTCAATGGCATGATGAAGAGAGACGGAATGAAGATTCCA
ACATATAAATTTTTGCCTCTTATGTACCAATTGGCTGCTAGAATGGGGACCAAGATGATGGGAGGCCTAGGATTT
CATGAAGTCCTCAATAATCTAATCTCTAGAATTTCAATGGATCACCCCATCACACTTTGTTTATTATACTGGCC
TTAGCAAATGCAAACAGAGATGAATTTCTGACTAAACCAGAGGTAGCCAGAAGAAGCAGAATAACTAAAAATGTG
CCTAAACAAAGCTCTCAGCTTGATGAGGATCGAACAGAGGCTGCAAATAGAATAATATGTACTATCAGAAGTAGG
AGACCTCAGATGGTCAGAAGTGTTGAGGCACTTTGTGATGCTTATATTATATTAGCAAACCTTAGATGCCACTCAG
TGGAAGACTCAGAGAAAAGGCATAAATATTCCAGCAGACCAGCCAATTACTAAACTTAAGAATTTAGAAGATGTT
GTTGTCCCTACTATGGAAATTAAGGTGGACCACACAGGAGAATATGGAAATCTGGTGACTATACAGTCATTTAAA
GCAGAATTTTCGCTTAGCAGGAGGTGTAAATTTACCAAAAAATAATAGATTGTGTAGGTTCCGATGGCAAGGAGAGG
AGACAGCTTGTTAAGGGCCGTGATGACCTGAGACAAGATGCTGTCATGCAACAGGTCTTCAGATGTGTAATACA
TTACTGCAGAGAAACACGGAACCTAGGAAGAGGAAATTAACATCTGTACTTATAAGGTGGTTCCCTCTCTCAG
CGAAGTGTTGTTCTTGAATGGTGACAGGAACTGTCCCCATTGGTGAATTTCTTGTTAACAATGAAGATGGTGCT
CATAAAAGATACAGGCCAAATGATTTTCAGTGCCCTTTTCAGTGCCAAAAGAAAATGATGGAGGTGCAAAAAAAGTCT
TTTGAAGAGAAATATGAAGTCTTCATGGATGTTTGCCAAAATTTTCAACCAGTTTTCCGTTACTTCTGCATGGAA
AAATTTCTTGATCCAGCTATTTGGTTTTGAGAAGCGATTGGCTTATACGCGCAGTGTAGCTACTTCTTCTATTGTT
GGTTACATACCTGGACTTGGTGATAGACATGTACAGAATATCTTGATAAATGAGCAGTCAGCAGAACCTGTACAT
ATAGATCTAGGTGTTGCTTTTTGAACAGGGCAAAATCCTTCTACTCCTGAGACAGTTTCCTTTTAGACTCACCAGA
GATATTGTGGATGGCATGGGCATTACGGGTGTTGAAGGTGTCTTCAGAAGATGCTGTGAGAAAACCATGGAAGTG
ATGAGAACTCTCAGGAACTCTGTTAACCATGTAGAGGTCTTCTATATGATCCACTCTTTGACTGGACCATG
AATCCTTTGAAAGCTTTGTATTTACAGCAGAGGCCGGAAGATGAAACTGAGCTTCACCCTACTCTGAATGCAGAT
GACCAAGAATGCAAACGAAATCTCAGTGATATTGACCAGAGTTTCAACAAAGTAGCTGAACGTGTCTTAATGAGA
CTACAAGAGAACTGAAAGGAGTGGAAGAAGGCACTGTGCTCAGTGTTGGTGGACAAGTGAATTTGCTCATACAG
CAGGCCATAGACCCCAAAAATCTCAGCCGACTTTTCCCAGGATGGAAAGCTTGGGTGTGATCTTCAGTATATGAA
TTACCCTTTCATTACGCCTTTAGAAATTATATTTTAGCCTTTATTTTTAACCTGCCAACATACTTTAAGTAGGGA
TTAATATTTAAGTGAATATTGTGGGTTTTTTTTGAATGTTGGTTTTAATACTTGATTTAATCACCCTCAAAAAAT
GTTTTGATGGTCTTAAGGAACATCTCTGCTTTCACTCTTTAGAAATAATGGTCATTTCGGGCTGGGCGCAGCGGCT
CACGCCGTGAATCCCAGCACTTTGGGAGGCCGAGGTGAGCGGATCACAAGTTCAGGAGTTCGAGACCAGCCTGGC
CAAGAGACCAGCCTGGCCAGTATGGTGAAACCTGTCTCTACTAAAAATACAAAAATTAGCCGAGCATGGTGGCG
GGCACCTGTAGTCCCAGCTACTCGAGAGGCTGAGGCAGGAGAATCTCTGAACCTGGGAGGTGAAGGTTGCTGTG
GGCCAAAATCATGCCATTGCACTCCAGCCTGGGTGACAAGAGCGAACTCCATCTCAAAA

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FIGURE 566

MTLHEPANSSASQSTDLCDFSGDLDPAPNPPHFP SHVIKATFAYISNCHKTKLKSILEILSKSPDSYQKILLAI
EQAAETNNVYKKHRILKIYHLFVSLLLKDIKSGLGGAFAVLRDVIYTLIHYINQRPSCIMDVSLRSFSLCCDLL
SQVCQTAVTYCKDALENHHLHVIVGTLIPLVYEQVEVQKQVLDLLKYLVIDNKNENLYITIKLLDPFPDHVVF
LRITQQKIKYSRGPFSLLLEEINHFSLSVSYDALPLTRLEGLKDLRRQLELHKDQMVDIMRASQDNPDGIMVKLV
VNLLQLSKMAINHTGEKEVLEAVGSCLEGEVGPIDFSTIAIQHSDKASYTKALKLFEDKELQWTFIMLTYLNNTLV
EDCVKVRSAAVTCLKNILATKTGHSFWEIYKMTTDPMLAYLQPFRTSRKKFLEVPRFDKENPFEGGLDDINLWIPL
SENHDIWIKTLTCAFLDSGGTKCEILQLLKPMCEVKTDFCQTVLPYLIHDILLQDTNESWRNLLSTHVQGFFTSC
LRHFSQTSRSTTPANLDESEHFFRCCLDKKSQRTMLAVVDYMRQKRPSSGTIFNDAFWLDLNYLEVAKVAQSC
AAHFTALLYAEIYADKKSMDDQEKSLAFEEGSQSTTISSSEKSKEETGISLQDLLLEIYRSIGEPDSLYGCGG
GKMLQPITRLRTEHEAMWGKALVTYDLETAIPSSSTRQAGIIQALQNLGLCHILSVYLKGLDYENKDWCPLEEL
HYQAAWRNMQWDHCTSVSKEVEGTSYHESLYNALQSLRDREFSTFYESLKYARVKEVEEMCKRSLESVYSLYPTL
SRLQAIGELESIGELFSRSVTHRQLSEVYIKWQKHSQLLKDSDFSQEPIMALRTVILEILMEKEMDNSQRECIK
DILTKHLVELSILARTFKNTQLPERAIFQIKQYNSVSCGVSEWQLEEAQVFWAKKEQSLALSILKQMIKKLDASC
AANNPSLKLTYTECLRVCGNWLAEETCLENPAVIMQTYLEKAVEVAGNYDGESSDELNGMKMAFLSLARFSDTQY
QRIENYMKSSSEFENKQALLKRAKEEVGLLREHKIQTNRYTVKVQRELELDELALRALKEDRKRFLCKAVENYINC
LLSGEEHDMWVFRCLCSLWLENSGVSEVNGMMKRDGMKIPTYKFLPLMYQLAARMGTMMGGLGFHEVLNNLISRI
SMDHPHHTLFIILALANANRDEFLTKEVARRSRITKNVPKQSSQLDEDRTAEANRIICTIRSRPQMVRVSVEAL
CDAYIILANLDATQWKTQRKGINIPADQPITKLKNLEDVVVPTMEIKVDHTGEYGNLVTIQSFKAEFRLAGGVNL
PKIIDCVGSDGKERRQLVKGRDDLQDAVMQQVFQMCNTLLQRNTETRKRKLTICTYKVVPLSQRSQVLEWCTGT
VPIGEFLVNEDGAHKRYRPNDFSAFQCQKKMMEVQKKSFEKYEVEFMDVCQNFQPVFRYFCMEKFLDPAIWFEK
RLAYTRSVATSSIVGYILGLGDRHVQNILINEQSAELVHIDLGVAFEQGKILPTPETVPFRLTRDIVDGMGITGV
EGVFRRCCEKTMEVMRNSQETLLTIVEVLLYDPLFDWTMNPALKALYLQQRPEDETELHPTLNADDQECKRNLSDI
DQSFNKVAERVLMLRLOEKLKGVEEGTVLSVGGQVNLLIQQAIDPKNLSRLFPGWKAWV

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FIGURE 567

CGCGCCTCGGGCGGTACCCAGCCAGTCCCCAGCGCCGCGCTACCGCGCTGACCGGCCCTCCAGACGCCTCCCGGT
ACCCGGGACCCAGCCCGGCCGCTCGCCCGCAGCCCGCGGCCGCACACGTCCCCGGAGCCGGGCCCTAGGGCGGG
CGGCAGCGGCGGCTCGGCGCAGTCAGGCTGGGCTCTGTAGCGTCCCCATGCCCGCGGCCGCTGGCGGGACGGCT
CCGGCCAGGAGAAGTACCGGCTCGTGGTGGTCGGCGGGGGCGGCGTGGGCAAGTCGGCGCTCACCATCCAGTTCA
TCCAGTCCTATTTTGTAAACGGATTATGATCCAACCATTGAAGATTCTTACACAAAGCAGTGTGTGATAGATGACA
GAGCAGCCCGGCTAGATATTTTGGATACAGCAGGACAAGAAGAGTTTGGAGCCATGAGAGAACAGTATATGAGGA
CTGGCGAAGGCTTCCTGTTGGTCTTTTCAGTCACAGATAGAGGCAGTTTGAAGAAATCTATAAGTTTCAAAGAC
AGATTCTCAGAGTAAAGGATCGTGATGAGTTCCCAATGATTTTAATTGGTAATAAAGCAGATCTGGATCATCAAA
GACAGGTAACACAGGAAGAAGGACAACAGTTAGCACGGCAGCTTAAGGTAACATACATGGAGGCATCAGCAAAGA
TTAGGATGAATGTAGATCAAGCTTTCATGAACCTTGTCGGGTTATCAGGAAATTTCAAGAGCAGGAATGTCCTC
CTTCACCAGAAACCAACACGGAAAGAAAAAGACAAGAAAGGCTGCCATTGTGTCATTTTCTAGAATCCCTTCAGTT
TTAGCTACCAACGGCCAGGAAAAGCCCTCATCTTCTCTTCTCTCCTCAGTTTACATCTTGTGGTACCTTTCTA
GCCTTAGACAAATGATCACCATGTTAGCCTTAGACCAAGAAGCTGGCTAGTCCTTTCTGTGAAGCTAATACAATG
GTCATTTCCAGACAAATTTAAAGGAAACACTAAGGCTGCTTCAAAGATTATCTGATTCTTTAAATATATGTCT
ATATACACAGACATGCTCTTTTTTTAAGTGCTTACATTTTAATAGAGATGAATCAGTTTGGAAATCTAAGCTGTT
TGCCAAGCTGAAGCTACAGGTTGTGAAATAATTTTTAACTTTTGGAAATCATACTGCCTACTGTTACTCTAAATAG
AAATATAGGGTTTTTTTTAATGTGAATTTTTGCCTATCTTTAAACATTTCAATGTCAGCCTTTGTTAACCTTAAA
TACACTGAATTGAATCTACAAAAGTGAACCATCTCAGACCTTTACTGATACTACAACTTTTGTTTTCTGATGGCC
AAAATACCAAATGCCTGTTGTATTTATGGATTAAAACTGCTTATAAAAAAAAAAAAAA

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FIGURE 568

MAAAGWRDGSQGEKYRLVVVGGGGVGKSALTIQFIQSYFVTDYDPTIEDSYTKQCVIDDRAARLDILDTAGQEEF
GAMREQYMRTGEGFLLVFSVTDGRSFEEIYKFQRQILRVKDRDEFPMILIGNKADLDHQRQVTQEEGQQLARQLK
VTYMEASAKIRMNVDQAFHELVIRKFEQECPPSPEPTRKEKDKKGCHCVIF

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FIGURE 569

AAAATGTGCTTCTTACAGGAATATAAATAGTTTCTGGAAAGGACACTGACAACCTCAAAGCAAAATGAAGTTCTT
TCTGTTGCTTTTCACCATTGGGTTCTGCTGGGCTCAGTATTCCTCCAAATACACAACAAGGACGGACATCTATTGT
TCATCTGTTTGAATGGCGATGGGTTGATATTGCTCTTGAATGTGAGCGATATTTAGCTCCGAAGGGATTGGAGG
GGTTCAGGTCTCTCCACCAAATGAAAATGTTGCAATTTACAACCTTTTCAGACCTTGGTGGGAAAGATAACCAACC
AGTTAGCTATAAATTATGCACAAGATCTGGAAATGAAGATGAATTTAGAAAACATGGTGACTAGATGTAACAATGT
TGGGGTTCGTATTTATGTGGATGCTGTAATTAATCATATGTGTGGTAACGCTGTGAGTGCAGGAACAAGCAGTAC
CTGTGGAAGTTACTTCAACCTGGAAGTAGGGACTTTCCAGCAGTCCCATATTCTGGATGGGATTTCAATGATGG
TAAATGTAAAACCTGGAAGTGGAGATATCGAGAACTACAATGATGCTACTCAGGTCAGAGATTGTCGTCTGACTGG
TCTTCTTGATCTTGCACCTGGAGAAGGATTACGTGCGTTCTAAGATTGCCGAATATATGAACCATCTCATTGACAT
TGGTGTGTCAGGGTTCAGACTTGATGCTTCCAAGCACATGTGGCCTGGAGACATAAAGGCAATTTTGGACAAACT
GCATAATCTAAACAGTAACTGGTTCCCTGCAGGAAGTAAACCTTTCATTTACCAGGAGGTAATTGATCTGGGTGG
TGAGCCAATTAAAAGCAGTGACTACTTTGGTAATGGCCGGGTGACAGAATTCAAGTATGGTGCAAACTCGGCAC
AGTTATTGCAAGTGAATGGAGAGAAGATGTCTTACTTAAAGAACTGGGGAGAAGGTTGGGGTTTTCGTACCTTC
TGACAGAGCGCTTGCTTTTGTGGATAACCATGACAATCAACGAGGACATGGGGCTGGAGGAGCCTCTATTCTTAC
CTTCTGGGATGCTAGGCTGTACAAAATGGCAGTTGGATTTATGCTTGCTCATCCTTACGGATTTACACGAGTAAT
GTCAAGCTACCGTTGGCCAAGACAGTTTCAAATGGAAACGATGTTAATGATTGGGTTGGGCCACCAAATAATAA
TGGAGTAATTAAAGAAGTTACTATTAATCCAGACACTACTTGTGGCAATGACTGGGTCTGTGAACATCGATGGCG
CCAAATAAGGAACATGGTTATTTTCCGCAATGTAGTGGATGGCCAGCCTTTTACAAATTGGTATGATAATGGGAG
CAACCAAGTGGCTTTTGGGAGAGGAAACAGAGGATTCATTGTTTTCAACAATGATGACTGGTCATTTTCTTTAAC
TTTGCAAACTGGTCTTCCCTGCTGGCACATACTGTGATGTCATTTCTGGAGATAAAATTAATGGCAATTGCACAGG
CATTAAAAATTTACGTTTCTGATGATGGCAAAGCTCATTTTTCTATTAGTAACTCTGCTGAAGATCCATTTATTGC
AATTCATGCTGAATCTAAATTGTAATAATTTAAAATTAATGCATGTCCTCAAAACAAAAAAAAAAAAAAAAAAAA
AAAAAAAAA

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FIGURE 570

MKFFLLLEFTIGFCWAQYSPNTQQGRTSIVHLFEWRWVDIALECERYLAPKGFGGVQVSPPNENVAIYNPFRPWWE
RYQPVSYKLCTRSGNEDEFNMVTRCANNVGVRIVDAVINHMCNAVSAGTSSTCGSYFNPGSRDFPAVPYSGWD
FNDGKCKTGSGDIENYNDATQVRDCRLTGLLDLALEKDYVRSKIAEYMNHLIDIGVAGFRLDASKHWPFGDIKAI
LDKLHNLNSNWFPAGSKPFIYQEVIDLGGEPIKSSDYFGNGRVTEFKYGAKLGTVIRKWNGEKMSYLKNWGEWG
FVP SDRALVFVDNHDNQRGHGAGGASILTFWDARLYKMAVGFM LAHPYGFTRVMSSYRWPRQFQNGNDVNDWVGP
PNNNGVIKEVTINPDITTCGNDWVCEHRWRQIRNMVIFRNVVDGQPFNTWYDNGSNQVAFGRGNRGFIVFNDDWS
FSLTLQTGLPAGTYCDVISGDKINGNCTGIKIYVSDDGKAHFSISNSAEDPFIAIHAESKL

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FIGURE 571A

TCTAGATGGGGGTCTTGGGCCCCAGGGTGTGCAGCCACTGACTTGGGGACTGCTGGTGGGGTAGGGATGAGGGAG
GGAGGGGCATTGTGATGTACAGGGCTGCTCTGTGAGATCAAGGGTCTCTTAAGGGTGGGAGCTGGGGCAGGGACT
ACGAGAGCAGCCAGATGGGCTGAAAGTGGAACTCAAGGGGTTTCTGGCACCTACCTACCTGCTTCCCGCTGGGGG
GTGGGGAGTTGGCCCAGAGTCTTAAGATTGGGGCAGGGTGGAGAGGTGGGCTCTTCTGCTTCCCACTCATCTTA
TAGCTTTCTTTCCCCAGATCCGAATTCGAGATCCAAACCAAGGAGGAAAGGATATCACAGAGGAGATCATGCTCTG
GGGCCCCGACTGCCTCCACACCCACCCCTCCCCAGACGGGAGGCAGTCTGGAGCCTCAAGCTAATGGGGAGACGC
CCCAGGTTGCTGTCTATTGTCCGGCCAGATGACCGGTACAGGGAGCAATCATTGCTGACCGGCCAGGGCTGCCTG
GCCCAGAGCATAGCCCTTCAGAATCCCAGCCTTCGTGCGCTTCTCCGACCCCATCACCATCCCCAGTCTTGGAAC
CGGGGTCTGAGCCTAATCTCGCAGTCTCTCTATTCTGGGGACACTATGACAACTATACAAATGTCTGTAGAAG
AATCAACCCCATCTCCCGTGAACTGGGGAGCCATATCGCCTCTCTCCAGAACCCACTCCTCTCGCCGAACCCA
TACTGGAAGTAGAAGTGACACTTAGCAAACCGGTTCCAGAATCTGAGTTTTCTTCCAGTCTCTCCAGGCTCCCCA
CCCCTTTGGCATCTCACACAGTGGAATTCATGAGCCTAATGGCATGGTCCCATCTGAAGATCTGGAACCAGAGG
TGGAGTCAAGCCCAGAGCTTGCTCCTCCCCAGCTTGCCCCCCGAATCCCCTGTGCCATTGCTCCAACCTGCC
AACCTGAGGAACCTGCTCAACGGAGCCCCCTCGCCACCAGCTGTGGACTTAAGCCAGTCAGTGAGCCAGAGGAGC
AGGCCAAGGAGGTGACAGCATCAGTGGCGCCCCCACCATCCCCTCTGCTACTCCAGCTACGGCTCCTTCAGCTA
CTTCCCCAGCTCAGGAGGAGGAAATGGAAGAAGAAGAAGATGAGGAAGAAGGAGAAGTAGGGGAAGCAGGGGAAG
GTGAGAGTGAGAAGAGAGGAGAGGAAGTCTCCCCCAGAGAGTACCCCTATTCCAGCCAACCTGTCTCAGAATT
TGGAGGCAGCAGCAGCCACTCAAGTGGCAGTATCTGTGCCAAAGAGGAGACGGAAAATTAAGGAGCTAAATAAGA
AGGAGGCTGTTGGAGACCTTCTGGATGCCTTCAAGGAGGCGAACC CGCAGTACCAGAGGTGGAATCAGCCTC
CTGCAGGCAGCAATCCAGGCCAGAGTCTGAGGGCAGTGGTGTGCCCCACGTCTGAGGAAGCAGATGAGACCT
GGGACTCAAAGGAAGACAAAATTCACAATGCTGAGAACATCCAGCCCCGGGAACAGAAGTATGAATATAAGTCAG
ATCAGTGGAAGCCTCCAAACCTAGAGGAGAAAAACGTTACGACCGTGAGTTCCTGCTTGGTTTTAGTTTCATCT
TTTGCCAGATGCAGAAGCCAGAGGGATTGCCACATATCAGTGACGTGGTGTGGACAAGGCCAATAAAACACCAC
TGCGGCCACTGGATCCCCTAGACTACAAGGCATAAATTGTGGCCAGACTTCACTCCATCCTTTGCCAACCTTG
GCCGGACAACCCCTTAGCACCCGTGGGCCCCCAAGGGGTGGGCCAGGTGGGGAGCTCGCCCGTGGCGCGCAGGCTG
GCCTGGGACCCCGCGCTCTCAGCAGGGACCCCGAAAAGAACCACGCAAGATCATTGCCACAGTGTTAATGACCG
AAGATATAAACTGAACAAAGCAGAGAAAGCCTGGAACCCAGCAGCAAGCGGACAGCGGCTGATAAGGATCGAG
GGGAAGAAGATGCTGATGGCAGCAAAACCCAGGACCTATTCCGCGAGGTGGCGCTCCATCCTGAATAAACTGACAC
CCCAGATGTTCCAGCAGCTGATGAAGCAAGTGACGCAGCTGGCCATCGACACCGAGGACGCCTCAAAGGGGTGAT
TGACCTCATTTTTGAGAAGGCCATTTAGAGCCCAACTTCTCTGTGGCCTATCCAACATGTGCCGCTGCCTCATG
GCGCTGAAAGTGCCCACTACGGAAGCCAACAGTGACTGTGAACTCCGAAAGCTGTTGTTGAATCGATGTCAGA
AGGAGTTTGAGAAAGACAAAGATGATGATGAGGTTTTTGAGAAGAAGCAAAAAGAGATGGATGAAGCTGCTACGG
CAGAGGAACGAGAACGCCCTGAAGGAGGAGCTGGAAGAGGCTCGGGACATAGCCCGGCGCTGCTCTTTAGGGAATA
TCAAGTTTATTGGAGAGTTGTTCAAACCTGAAGATGTTAAGAGAGGCAATAATGCATGACTGTGTGGTCAAACCTGC
TTAAGAACCATGATGAAGAGTCCCTTGAGTGCCTTTGTGCTGCTGCTCACCACCATTGGCAAAGACCTGGACTTTG
AAAAAGCCAAGCCCCGAATGGATCAGTATTTCAACCAGATGGAAAAAATCATTAAAGAAAAGAAGACGTCATCCC
GCATCCGCTTTATGCTGCAGGACGTGCTGGATCTGCGAGGGAGCAATTGGGTGCCACGCCGAGGGGATCAGGGTC
CAAGACCATTGACCAGATCCATAAGGAGGCTGAGATGGAAGACATCGAGAGCACATCAAAGTGCAGCAGCTCATG
CAAGGGCAGTGACAAGCGTCGGGGCGGTCTTCCAGGCCCTCCCATCAGCCGTGGACTTCCCCTTGTGGATGATGG
TGGCTGACACAGTTCCCATCAGCAAAGGTAGCCGCCCCATTGACACCTCACGACTACCAAGATACCAAGCCTG
GCTCCATCGATTCTAACAACCAGCTCTTTGCACCTGGAGGGCGACTGAGCTGGGGCAAGGGCAGCAGCGGAGGGT
CAGGAGCCCAGCCCTCAGACGCAGCATCAGAAGCTGCTCGCCAGCTACTAGTACTTTGATTGCTTCTCAGCCC
TTCAACAAGCGGTACCCACAGAAAGCACAGATAATAGACGTGTGGTGCAGAGGAGTAGCTTGAGCCGAGAACGAG
GCGAGAAAGCTGGAGACCGAGGAGACCGCCTAGAGCGAGTGAACGGGGAGGGGACCGTGGGGACCGGCTTGATCG
TGTGCGGGACACCTGCTACCAAGCGGACGTTAGCAAGGAAGTGGAGGAGCGGAGTAGAGAACGGCCCTCCAGC
CTGAGGGGGCTGCGCAAGGCAGTAGCCTCACGGAGGATCGGGACCGTGGGCGGGATGCCGTGAAGCGAGAAGCTG
CCCTACCCCCAGTGAGCCCCCTGAAGGCGGCTCTCTCTGAGGAGGAGTTAGAGAAGAAATCCAAGGCTATCATTG
AGGAATATCTCCATCTCAATGACATGAAAGAGGCAGTCCAGTGCCTGCAGGAGCTGGCCTCACCCCTCCTTGCTCT

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FIGURE 571B

TCATCTTTGTACGGCATGGTGTGAGTCTACGCTGGAGCGCAGTGCCATTGCTCGTGAGCATATGGGGCAGCTGC
TGCACCAGCTGCTCTGTGCTGGGCATCTGTCTACTGCTCAGTACTACCAAGGGTTGTATGAAATCTTGGAATTGG
CTGAGGACATGGAAATTGACATCCCCACGTGTGGCTCTACCTAGCGGAACTGGTAACACCCATTCTGCAGGAAG
GTGGGGTGCCCATGGGGGAGCTGTTTCAGGGAGATTACAAAGCCTCTGAGACCGTTGGGGCAAAGCTGCTTCCCTGT
TGCTGGAGATCCTGGGCCTCCTGTGCAAAAGCATGGGTCCATAAAAGGTGGGGACGCTGTGGCGAGAAGCCGGGC
TTAGCTGGAAGGAATTTCTACCTGAAGGCCAGGACATTGGTGCATTTCGTCGCTGAACAGAAGGTGGAGTATACCC
TGGGAGAGGAGTCGGAAGCCCCTGGCCAGAGGGCACTCCCTCCGAGGAGCTGAACAGGCAGCTGGAGAAGCTGC
TGAAGGAGGGCAGCAGTAACCAGCGGGTGTTCGACTGGATAGAGGCCAACCTGAGTGAGCAGATAGTATCCAACA
CGTTAGTTCGAGCCCTCATGACGGCTGTCTGCTATTCTGCAATTATTTTTGAGACTCCCTCCGAGTGGACGTTG
CAGTGCTGAAAGGCGACATAGTGCTGCAGAAATACCTGTGTGACGAAGCAGAAGGAGCTACAGGCGCTCTACGCC
TCCAGGCCCTTGTAGTGACCTTAGAACAGCCTCCCAACCTGCTGCGGATGTTCTTTGACGCACTGTATGACGAGG
ACGTGGTGAAGGAGGATGCCTTCTACAGTTGGGAGAGTAGCAAGGACCCCGCTGAGCAGCAGGGCAAGGGTGTGG
CCCTTAAATCTGTACAGCCTTCTTCAAGTGGCTCCGTGAAGTCAGAGGAGGAGTCTTGACCACAACCTGAGGGCTG
GTGGGGCCGGGGACCTGGAGCCCCATGGACACACAGATGGCTCCGGCTAGCCGCCTGGACTGCAGGGGGGCGGCA
GCAGCGGCGGTGGCAGTGGGTGCCTGTAGTGTGATGTGTCTGAACTAATAAAGTGGCTGAAGAGGCAGGATGGCT
TGGGGCTGCCTGGGCCCCCTCCAGGATGCCGCCAGGTGTCCCTCTCCTCCCTGGGGCACAGAGATATATTATA
TATAAAGTCTTGAAAATTTTGAATTTGGTGTGTCTTGGGGTGGGGAGGGGCACCAACGCCTGCCCCTGGGGTCC
TTTTTTTTATTTTCTGAAAATCACTCTCGGACTGCCGTCTCGCTGCTGGGCATATGCCCCAGCCCCTGTACCAC
CCCTGCTGTTGCCTGGGCAGGGGGAAGGGGGGCACGGTGCTGTAATTATTAAACATGAATTCAATT

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FIGURE 572

MSGARTASTPTPPQTGGSLEPQANGETPQVAVIVRPDDRSQGAI IADRPGLPGPEHSPSESQPSSPSPTPSPSPV
LEPGSEPNLAVLSIPGDTMTTIQMSVEESTPI SRETGEPYRLSPEPTPLAEP ILEVEVTL SKPVPESEFSSSPLQ
APTPLASHTVEIHEPNGMVPSEDLEPEVESSPELAPPPACPSESPV IAPTAQPEELLNGAPSPPAVDLSPVSEP
EEQAKEVTASVAPPTIP SATPATAPSATSPAQEEEMEEEEDEEEGEVGEAGEGESEKRGEELLPPPESTPI PANLS
QNLEAAAATQVAVSVPKRRRKIKELNKKEAVGDLLDAFKEANPAVPEVENQPPAGSNPGPESESGVPPRPPEEAD
ETWDSKEDIHNAENIQPGEQKYEYKSDQWKPPNLEKKRYDREFLLGFQFIFCQMOKPEGLPHI SDVVLDKANK
TPLRPLDPTRLQGINC GPDFTPSFANLGRITTLSTRGPPRGPGGELARGAQAGLGPRRSQQGPRKEPRKI IATVL
MTEDIKLNKAEKAWKPSSKRTAADKDRGEEDADGSKTQDLFRRWRSILNKLT PQMFQQLMKQVTQLAIDTEDASK
GSLTSFLRRPFQSPTSLWPIQHVPLPHGAESAHYGKPTVTVNFRKLLLNRCQKEFEKDKDDDEVFEKKQKEMDEA
ATAEERERLKEELEEAR DIARRCSLGNIKFIGELFKLKM LTEAMHDCVVKLLKNHDEESLECLCRLLTITIGKDL
DFEKAKPRMDQYFNQMEKIIKEKKTSSRIRFMLQDVLDLRGSNWVPRRGDQGPRPLTRSIRRLRWKTSRAHQSA
AHARAVTSVGAVLQALPSAVDFPLWMMVADTVPI SKGSRPIDTSRLTKITKPGSIDSNNQLFAPGGRLSWGKGSS
GGSGAQPSDAASEAARPATSTLIRFSALQQAVPTTESTDNRRVVQRSSLSRERGEKAGDRGDRLERVNGEGTVGTG
LIVSRTPATKRTFSKEVEERSRERPSQPEGLRKAASLTEDRDRGRDAVKREAAALPPVSPLKAALSEEELEKKSKA
IIEEYLHLNDMKEAVQCQVQELASPSLLFIFVRHGVESTLERSAIAREHMGQLLHQLLCAGHLSTAQYYQGLYEIL
ELAEDMEIDIPHVWLYLAELVTPILQEGGVPMGELFREITKPLRPLGKAASLLLEILGLLCKSMGPKKVGT LWRE
AGLSWKEFLPEGQDIGAFVAEQKVEYTLGEESEAPGQRALPSEELNRQLEKLLKEGSSNQRVFDWIEANLSEQIV
SNTLVRALMTAVCYSAIIFETPLRVDVAVLKGDIVLQKYLCD EAGATGALRLQALVVTLEQPPNLLRMFFDALY
DEDVVKEDAFYSWESSKDPAEQQGKGVALKSVTAFFKWLREVRGGV

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FIGURE 573

GGTAAGAGAAGACTGGAAGCATGTTCGGAGTTTTGGTTAATTTCTGCCCTGGCGATAAGGAAAATTTGCAAGCTC
TGGAGAGGATGAATACTGTAACCTCCAAGTCCAACCTGTCTTATAATACCAAATTCGCTATTCTGACTTCAAGG
TGGGGACCTTGGATTCCCTGGTTGGCCTCTCTGATGAGTTGGGGAAAACCTCGACACCTTTGCTGAAAGCCTCATAA
GGAGAAATGGCTCAGAGCGTGGTGGAAAGTCATGGAGGACTCAAAGGGGAAGGTCCAGGAGCACCTCCTGGCAAACG
GAGTTGACTTAACATCCTTTGTGACCCACTTTGAATGGGACATGGCCAAATATCCTGTCAAGCAGCCGCTCGTGA
GTGTGGTGGACACAATAGCCAAGCAACTGGCGCAGATCGAGATGGACCTGAAGTCCCGAACGGCCGCTACGACA
CTCTGAAGACAAACCTGGGAGAACCTGGAAAAGAAATCCATGGGGAACTCTTCACCCGGACACTGAGTGATATTG
TGAGCAAAGAGGACTTCGTGCTGGATTCTGAATATCTCGTCACACTTCTGGTCATCGTCCCCAAACCAAACACTACT
CACAATGGCAAAAAACCTACGAATCTCTCTCAGACATGGTGGTCCCTCGATCAACCAAACCTCATTACTGAGGACA
AGGAAGGGGGCCTTTTCACTGTGACTCTGTTTCGAAAAGTGATTGAAGATTTCAAACCAAGGCCAAAGAAAACA
AGTTCACTGTTCGTGAATTTTACTATGATGAGAAGGAAATTGAAAGGGAAAGGGAGGAGATGGCCAGATTGCTGT
CTGATAAGAAGCAACAGTATGGCCCCCTGCTGCGCTGGCTCAAGGTGAACCTTCAGTGAAGCCTTCATTGCCTGGA
TCCACATCAAGGCCCTGAGAGTGTTTGTGGAGTCCGTGCTCAGGTATGGACTACCAGTGAACCTTCAGGCAGTGC
TCCTGCAGCCGCATAAGAAGTCATCCACCAAGCGTTTAAAGAGAGGTTCTAAACTCTGTCTTCCGACATCTGGATG
AAGTAGCCGCTACAAGTATACTGGATGCATCTGTGGAGATCCCGGGACTGCAACTCAATAACCAAGACTATTTTC
CTTATGTCTACTTCCATATTGACCTTAGTCTTCTTGACTAGAAAGGCCAGCTGGCACCTCTGTCTCATGTTTCGTG
CAGATTATTACAGACACCTCTTTCCCTTTAGCCAGAGAATGGTTCAAATGTCTTACAGAACTAAGATCTTTTTTCAG
AGAAATTGCTCACAAAAGTTAGTGACAGTTGTATTTATTTTTTAAAGTTACAATAAAATGCTCTCAAGTCCTTTG
AATGTTCCAACAAATTCAAACCTTCATTTTCTGAATGTTTTACATAAAATGCGAACTACCTGTTTCGATTGGTAAC
CTGCTGCTGTATTTTCATGTCTTAACGGCTATTTTGAGGTTTCATTAACAACATAGAAAGCCTTGAAGTGTATAACC
AGCTAGATTCCCTTAATAATTAGTCACTAGAGACAGCCCAAAGACAAATATTGGGCAGGAAATCAGTTCTCACTGA
GCCCCGTTTTCCATGTAAATCTCTGTTGTGGTGGGCATAGGTGGCACCATCTAAAGAAAAGAGGTCTTGTTTTTT
GTTTAAAAAAGTTTGTGGGGAGGAAAGACATCTGTGTATCACTTCAAATATTTGATTTACTGCTAAACATCACTC
TGAATTTATGATGTGGATACTAACTTCATACATTTATCGGCATTGTCCAAATATTTTATTCTTTAATGGAAAA
GCCATTAATATTCAAATGAAGGGATCACATTAAGAAAAAACCCATACATAAGAAACAGCCTCCAAGAACATTCAAG
CAGCAGTCAGAGAGAAAAATGTTTCGACAGCCAAGTTTTCTTCAAATATTTATGTGACAGAATACGACTCAATTC
ACCGGCTACAACAATTTCATAGAATTTTTCAATGTTTTCTTGAGATGCAAAAGTTCACTGTTGCAGTGTTTTCAA
TGACCAATCAAGTACTACTTCTTGTTAAAAGGCCACTGGTAGAGTCATCTGAGTGTAGAGAATGTCCCTTCACT
GCTGGAAAAATCCACTGGCTCCCAAGAAAAGAAAATGGTCTGAAGCCTCTGTTGTGGCTCTCACAACCTCATCTTT
CCCTAAGTCATCAAGCTCCACATCACTGAGGTCAATGTATCTCCACGGGAAGCTGGGAGACGACAGAAAGCCA
CTGTTAGATCTGCAGAAGGGGACACCCTGGAAGGTCAACATCTCATTTTATGGAAGAGCGACTCTCTGGAGCTAC
TCCTGCTACAATCCAGGTTCTCTCAGTCTGACTCCTACCCTGACCTTCGTACCTATGATTATACGGATGGAAAA
GCTCAGAACTCAGGTGAAACATTTCAACATCACATCACTCACCATTTTAACTGGAAGCCACTTGAACGTGTCC
TTTTGAGGAGGGTGGGACACAACAGTACAGAAATAAGTGCTAATTTCAAAGCTATCATTTTTCTATTTTTCTAAGA
TAAAGTAAATGAATTCAGGTTAAATGTTCACTTTAAGGTAATAATCAGGAAAGCAACCTTACTACTGAAATGTA
TCTTGGCTGTCAAGAGTATCAAATGCCATGCAGCACTTAAACTTGTGATAAGGAAGATGAAGGTCTTCAGAGAA
GAACCTCTTAAAAGGCCCACGGGTGCACCAGGGCTGAGGTCTGATGGGAAGGACTTGACTCCAGGTGCAGAGATG
CACAGGCTCAAGAGAGTAAACCAGGACTGCTGCCCGCACAGCTTCCCTCCCGGGCACTCACCTCGCCATCCCTGC
CGTCCCAAGGCTCTCTCTCAACGATGGTAGGGAAAGCCCCGCTCCTACAGGTGCCGTGGAGCCACGCCCAAAAG
AGAGCTCCCTTAGGGAAAAATGACCAAAACACACACACATTTACAATGGACTGCTGGTGCAGAAGAATAAACA
ACTTTAAAAATAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 574

MSEFWLISAPGDKENLQALERMNTVTSKSNLSYNTKFAIPDFKVGTLDSLVLGSLDELGKLDTFAESLIRRMAQSV
VEVMEDSKGKVQEHL LANGVDLTSFVTHFEWDMAKYPVKQPLVSVVD TIAKQLAQIEMDLKSRTAAYDTLKTNLE
NLEKKSMGNLFTRTLSDIVSKEDFVLDSEYLVTL LVIVPKPNYSQWQKTYESLSDMVVPRSTKLITEDKEGGFLT
VTLFRKVIEDFKTKAKENKFTVREFYYDEKEIEREREREEMARLLSDKKQYGPLLRLWKVNFSEAFIAWIIHICALR
VFVESVRLRYGLPVNFQAVLLQPHKKSSTKRLREVLNSVFRHLDEVAATSILDASVEIPGLQLNNQDYFPYVYFHI
DLSLLD

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FIGURE 575

AGATCTGAATCCAGAGGCTCTCGGAGGAAGAGCTCAGGCCACTGAGGCGGCTCCCAGCTGCGTTGGCGACATGGC
CGACACCCCCAGAGATGCCGGGCTCAAGCAGGCGCCTGCATCACGGAACGAGAAGGCCCGGTGGACTTCGGCTA
CGTGGGGATTGACTCCATCCTGGAGCAGATGCGCCGGAAGGCCATGAAGCAGGGCTTCGAGTTCAACATCATGGT
GGTCGGGCAGAGCGGCTTGGGTAAATCCACCTTAATCAACACCCTCTCAAATCCAAAATCAGCCGGAAGTCGGT
GCAGCCCACCTCAGAGGAGCGCATCCCCAAGACCATCGAGATCAAGTCCATCACGCACGATATTGAGGAGAAAGG
CGTCCGGATGAAGCTGACAGTGATTGACACACCAGGGTTCGGGGACCACATCAACAACGAGAACTGCTGGCAGCC
CATCATGAAGTTCATCAATGACCAGTACGAGAAATACCTGCAGGAGGAGGTCAACATCAACCGCAAGAAGCGCAT
CCCGGACACCCGCGTCCACTGCTGCCTCTACTTCATCCCCGCCACCGGCCACTCCCTCAGGCCCTGGAGCAGAA
AGTGCCTTTATCTCAGCCATCCGCAGACTGCTCGGCCAGATGCGGGGACAGGCTGGAATGAGGGAGGCGTCTTCA
TCTCCCTGCCATCCCCCTCTCACGCCACCCCCGCCCCACCGGGCTGCAGGTGCTGCTGATGCGCTGGGATCTGA
TTGAGGATAAAAAGGAAGGAGAGATGACCCCTACCCCTCATCCCCAGTTTTGAAAAGGTCTAAGCAAGTGAGT
CTGGTGGAGGAGCTGAGGGAGGGAGCCATGGAAGGTGCCAGAAGGAAGGTTGGCGGGGGCACGTGTGGGCCGTGG
CTTGGGCTGGTCAGAGTGGCGTGAGCTGCCCGGCGCCTGCCCTGCCCAAGTGACCAGGGAAGTGTGTGTGTGCC
ATGTGTATGCGTGTCCGTCTGTCTGTCTAGTGTCTGGGTTTGGCCCAAGACTGGGCTGTAGTTACATTAATGCCC
AGCCAGCCACCCCTGCCACTCACCCCTCCTGGCCCCAGGCCTTGCTGACTCTCTGAGCTGGGGAGGTGGGAGGCCA
GGCGAGCCTGACTCTGTTGATCTACCCGTGCCTGGGCCCCCTCCCTCAGAGCCCATGGTAACGAACCCCTAGAAA
GGAGAGAACGGGCGTCAGGGGTGCACAGTCCACAGCTGAAGAGCAAGGTTTCGTGGCAGCACGGCCCCGGCCCCCTC
ACCCTCTGTCCCCACGAGGGGACCCATGGGGGCTGTCTTTGCAGGGCACAGATGACCAAAGTCCCTTCCTGCTTC
CTGTTACCTGTCTTGCTCCTGGGGAGAAAGAGGGGCTGATGAGACTCCACTCAGGTGCACACATCACCAGGTGC
ATCTGCAGGCACCGGGCTGGCTGCTTGAGCCAGGAGAAGGTCAGCGAGAAGGAGTGTATGAGTGTGAGTGTGTG
TGCATGGAAGTTGGGGCACTGGGCGTCTGACTCCCTCCCCACCCAAGAGAGGAAGGACCCCTCACCACCCCCACT
GGCGAGACAGTTTACTTTGCCGACTTGCCATGTTTTTGCCAAAACCAAGATTTTGAAGGAAATGAGTGGCCAGCG
CCAGGGCCCAGGCCATGTGGCCTGCCCAGCCTCAATGTCACTTGTTGGCGGGGTGGGGTGGGGGTGGGCAGCAGC
ATCCCAGCCTTGAGATGCTTCACTTTCTTCTCTGTAAACCAGACTTTGAAAAATTGTTCTGTTTCATCAGGCTCTG
TTCCTCAATGGCCTTTTGCTACGTGCCTCCCGAGAAATTTGTCTTTTGTATAAATGACAAAGTGTTGAAATGT
ATTCCTGAAATAAATGTTTCAAATGC

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FIGURE 576

MADTPRDAGLKQAPASRNEKAPVDFGYVGIDSILEQMRRKAMKQGFEFNIMVVGQSGLGKSTLINTLFKSKISRK
SVQPTSEERIPKTIEIKSITHDIEEKGVRLTVIDTPGFGDHINNENCWQPIIMKFINDQYEKYLQEEVNINRKK
RIPDTRVHCCLYFIPATGHSLRPLEQKVPLSQPSADCSARCGDRLE

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FIGURE 577

GTTCTTGCCCTGGTGTCGGTGGTTAGTTTCTGCGACTTGTGTTGGGACTGCTGATAGGAAGATGTCTTCAGGAAAT
GCTAAAAATTGGGCACCCTGCCCCAACTTCAAAGCCACAGCTGTTATGCCAGATGGTCAGTTTAAAGATATCAGC
CTGTCTGACTACAAAGGAAAATATGTTGTGTTCTTCTTTTACCCCTCTTGACTTCACCTTTGTGTGCCCCACGGAG
ATCATTGCTTTTCAGTGATAGGGCAGAAGAATTTAAGAACTCAACTGCCAAGTGATTGGTGCTTCTGTGGATTCT
CACTTCTGTCACTAGCATGGGTCAATACACCTAAGAAACAAGGAGGACTGGGACCCATGAACATTCCCTTTGGTA
TCAGACCCGAAGCGCACCATTGCTCAGGATTATGGGGTCTTAAAGGCTGATGAAGGCATCTCGTTCAGGGGCCTT
TTATCATTGATGATAAGGGTATTCTTCGGCAGATCACTGTAAATGACCTCCCTGTTGGCCGCTCTGTGGATGAG
ACTTTGAGACTAGTTCAGGCCTTCCAGTTCCTGACAAACATGGGGAAGTGTGCCCAGCTGGCTGGAAACCTGGC
AGTGATACCATCAAGCCTGATGTCCAAAAGAGCAAAGAATATTTCTCCAAGCAGAAGTGAGCGCTGGGCTGTTTT
AGTGCCAGGCTGCGGTGGGCAGCCATGAGAACAAAACCTCTTCTGTATTTTTTTTTTCCATTAGTAAAACACAAG
ACTTCAGATTAGCCGAATTGTGGTGTCTTACAAGGCAGGCCTTTCTACAGGGGGTGGAGAGACCAGCCTTTCT
TCCTTTGGTAGGAATGGCCTGAGTTGGCGTTGTGGGCAGGCTACTGGTTTGTATGATGTATTAGTAGAGCAACCC
ATTAATCTTTGTAGTTTGTATTAACTTGAAC TGAG

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FIGURE 578

MSSGNAKIGH PAPNFKATAVMPDGQFKDISLSDYKGKYVVFFFYPLDFTFVCPTEIIAFSDRAEEFKKLNCQVIG
ASVDSHFCHLAWVNTPKKQGGLGPMNIPLVSDPKRTIAQDYGVLKADEGISFRGLFIIDDKGILRQITVNDLPVG
RSVDETLRLVQAFQFTDKHGEVCPAGWKPGSDTIKPDVQKSKEYFSKQK

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FIGURE 579

GTCAC TCGTATAAAAAACCTATGCTTTGAAGGTTCTCGTGTGTCTCGGCCTGCAGGTCTCGCTCAGAGCTGTGTCC
CTGAACATCCACCCTGCTGGGGTGGCTTGACGCACTTCTGTGCAAATCTGTTTCGCTCGCAACCCTACCTACCTCT
CTCCCGAACCGGAGAAAAACCTTCGGCGGGGTCCTTCCGGGTTTTGTGTGCAATCTGCGGCGGCGACCCGGCGCCG
CGTCACGCGGTGGTGAATGTGCGGCAGTACGCGCGCCGCGTCTGTTTACGCGGCGATTTTCATCATGCTCCGAGCCG
GCGGCGCGCGCCGCTTCCGTCGCCACCTCTCTGGACAGCCAGGGCCGCGAGGCTCATGCCCTCTCCGCGTCCAG
TGCTGCTTAGAGGTGCTCGCGCCGCTCTGCTGCTGCTGCTGCCGCCCGGCTCTTAGCCCGACCTCGCTCCTCC
TCCGCCGGTCCCTCAGCGCGGCCCTCCTGCGCCCCGATCTCCTTGCCCGCCGCGCCCTCCCGGAGCAGCATGGACG
GCGCGGGGGCTGAGGAGGTGCTGGCACCTCTGAGGCTAGCAGTGCGCCAGCAGGGAGATCTTGTGCGAAAACCTCA
AAGAAGATAAAGCACCCCAAGTAGACGTAGACAAAGCAGTGGCTGAGCTCAAAGCCCGCAAGAGGGTTCTGGAAG
CAAAGGAGCTGGCGTTACAGCCCAAAGATGATATTGTAGACCGAGCAAAAATGGAAGATACCCTGAAGAGGAGGT
TTTTCTATGATCAAGCTTTTGTATTATGGAGGTGTTAGTGGTCTGTATGACTTTGGGCCAGTTGGCTGTGCTT
TGAAGAACAATATTATTACAGACCTGGAGGCAGCACTTTATCCAAGAGGAACAGATCCTGGAGATCGATTGCACCA
TGCTCACCCCTGAGCCAGTTTAAAGACCTCTGGCCATGTAGACAAATTTGCTGACTTCATGGTGAAAGACGTAA
AAAATGGAGAATGTTTTCGTGCTGACCATCTATTAAAAGCTCATTTACAGAAATTGATGTCTGATAAGAAGTGTT
CTGTGCGAAAAGAAATCAGAAATGGAAAGTGTTTTGGCCAGCTTGATAACTATGGACAGCAAGAACTTGGCGATC
TTTTTGTGAATAATAATGTAATAATCTCCATTACTGGAATGATCTATCCCTCCAGTGTCTTTTAACTTAATGT
TCAAGACTTTTCATTGGGCTGGAGGAAACATGCCTGGGTACTTGAGACCAGAACTGCACAGGGGATTTTCTTGA
ATTTCAAACGACTTTTGGAGTTCAACCAAGGAAAGTTGCCTTTTGCTGCTGCCAGATTGGAAATTTCTTTTAGAA
ATGAGATCTCCCTCGATCTGGACTGATCAGAGTCAGAGAATTCACAATGGCAGAAATTGAGCACTTTGTAGATC
CCAGTGAGAAAGACCACCCCAAGTTCCAGAATGTGGCAGACCTTACCTTTATTTGTATTTCAGCAAAAGCCCAGG
TCAGCGGACAGTCCGCTCGGAAAAATGCGCCTGGGAGATGCTGTTGAACAGGGTGTGATTAATAACACAGTATTAG
GCTATTTTCATTGGCCGCATCTACCTCTACCTCACGAAGGTTGGAATATCTCCAGATAAACTCCGCTTCCGGCAGC
ACATGGAGAATGAGATGGCCCATATGCCTGTGACTGTTGGGATGCAGAATCCAAAACATCCTACGGTTGGATTG
AGATTGTTGGATGTGCTGATCGTTCTGTTATGACCTCTCCTGTGATGCACGAGCCACCAAAGTCCCACTTGTAG
CTGAGAAACCTCTGAAAGAACCCAAAACAGTCAATGTTGTTTCAGTTTGAACCCAGTAAGGGAGCAATTGGTAAGG
CATATAAGAAGGATGCAAAACTGGTGATGGAGTATCTTGCCATTTGTGATGAGTGCTACATTACAGAAATGGAGA
TGCTGCTGAATGAGAAAAGGGGAATTCACAATTGAACTGAAGGGAAAAACATTTTCAGTTAACAAAAGACATGATCA
ATGTGAAGAGATTCCAGAAAACACTATATGTGGAAGAAGTTGTTCCGAATGTAATTGAACCTTCTTCGGCCTGG
GTAGGATCATGTATACGGTATTTGAACATACATTCCATGTACGAGAAGGAGATGAACAGAGAACATTCTTCAGTT
TCCCTGCTGTAGTTGCTCCATTCAAATGTTCCGTCTCCCACTGAGCCAAAACCAGGAGTTTCATGCCATTTGTCA
AGGAATTATCGGAAGCCCTGACCAGGCATGGAGTATCTCACAAAGTAGACGATTCCTCTGGGTCAATCGGAAGGC
GCTATGCCAGGACTGATGAGATTGGCGTGGCTTTTGGTGTACCACTTGACTTTGACACAGTGAACAAGACCCCC
ACACTGCAACTCTGAGGGACCGTGACTCAATGCGGCAGATAAGAGCAGAGATCTCTGAGCTGCCCAGCATAGTCC
AAGACCTAGCCAATGGCAACATCACATGGGCTGATGTGGAGGCCAGGTATCCTCTGTTTGAAGGGCAAGAGACTG
GTAAAAAAGAGACAATCGAGGAATGAGGACAATTTTGACAACCTTTGACCACTTGCGCTAATAAAAAAAAAAAAA
CTACTCTTATGTCCACTTTACAAAAGAAAACAGCATTGTGATTACTCCCAGGGACCGTATTTTATCTTCAGTGGC
TGCTGATTTTACCCCCACAATTAAAGTTGAAGGAATCCTGA

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FIGURE 580

MDGAGAEVLAPLRLAVRQQGDLVRKLKEDKAPQVDVDKAVAEKARKRVLEAKELALQPKDDIVDRAKMEDTLK
RRFFYDQAFAIYGGVSGLYDFGPVGCALKNNIIQTRQHF IQEEQILEIDCTMLTPEPVLKTSGHVDKFADFMVK
DVKNGECEFRADHLLKAHLQKLMSDKKCSVEKKSEMESVLAQLDNYGQQELADLFVNYNVKSPITGNDLSPPVSFN
LMFKTFIGPGGNMPGYLRPETAQGIFLNFKRLLFNQGKLPFAAAQIGNSFRNEISPRSGLIRVREFTMAEIEHF
VDPSEKDHPKFQNVADLHLYLSAKAQVSGQSARKMRLGDAVEQGVINNTVLGYFIGRIYLYLTKVGISPDKLRF
RQHMENEMAHYACDCWDAESKTSYGWIEIVGCADRSCYDLSCHARATKVPLVAEKPLKEPKTVNVVQFEPKSGAI
GKAYKKDAKLVMEYLAICDECYITEMEMLLNEKGEFTIETEGKTFQLTKDMINVKRFQKTLYVEEVVNPVIEPSF
GLGRIMYTVFEHTFHVREGDEQRTFFSFPVAVVAPFKCSVLPLSQNQEFMPFVKELSEALTRHGVSHKVDDSSGSI
GRRYARTDEIGVAFGVTIDFDTVNKTPHTATLRDRDSMRQIRAEISELPSIVQDLANGNITWADVEARYPLFEGQ
ETGKKETIEE

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FIGURE 581

GTAGGAGGACCTGAAATTGAGCTGATTGCCATCGCAACAGGAGGGCGGATCGTCCCAGGTTCTCAGAGCTCACA
GCCGAGAAGCTGGGCTTTGCTGGTCTTGTACAGGAGATCTCATTGGGACAACCTAAGGATAAAATGCTGGTCATC
GAGCAGTGTAAGAACTCCAGAGCTGTAACCATTTTATTAGAGGAGGAAATAAGATGATCATTGAGGAGGCGAAA
CGATCCCTTCACGATGCTTTGTGTGTCATCCGGAACCTCATCCGCGATAATCGTGTGGTGTATGGAGGAGGGGCT
GCTGAGATATCCTGTGCCCTGGCAGTTAGCCAAGAGGCGGATAAGTGCCCCACCTTAGAACAGTATGCCATGAGA
GCGTTTGCCGACGCACTGGAGGTCATCCCCATGGCCCTCTCTGAAAACAGTGGCATGAATCCCATCCAGACTATG
ACCGAAGTCCGAGCCAGACAGGTGAAGGAGATGAACCTGCTCTTGGCATCGACTGTTTGCACAAGGGGACAAAT
GATATGAAGCAACAGCATGTCATAGAAACCTTGATTGGCAAAAAGCAACAGATATCTCTTGCAACACAAATGGTT
AGAATGATTTTGAAGATTGATGACATTCGTAAGCCTGGAGAATCTGAAGAATGAAGACATTGAGAAAACCTATGTA
GCAAGATCCACTTCTGTGATTAAGTAAATGGATGTCTCGTGATGCGTCTACAGTTATTTATTGTTACATCCTTTT
CCAGACACTGTAGATGCTATAATAAAAATAGCTGTTTGGTAACCATAGTTTCACTTGTTCAAAGCCGTGTAATCG
TGGGGGTACTATCTCAACTGCTTTTGTATTCAATTGTATTAAAAGAATCTGTTTAAGCAAAAAAAAAAAAAAAAAA
AAAAAA

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FIGURE 582

MLVIEQCKNSRAVTIFIRGGNKMIIEEAKRSLHDALCVIRNLIRDNRVVYGGGAAEISCALAVSQEADKCPTLEQ
YAMRAFADALEVIPMALSENSGMNFIQTMTEVRARQVKEMNPALGIDCLHKGTDNDMKQQHVIETLIGKKQQISLA
TQMVRMILKIDDIRKPGESEE

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FIGURE 583

AATTCGGGGGCCGTGGAGTTTGTGACATACGAGGTGACACCCCTCGAGTCACTTCCCTTCAACTCCAGCTGGAGC
GCCTGCTTGGCTTTGGGTTTCGTTCTGCAGCCTTCGCCCCGCTCCTAGCCTCAGGGCCGGACTCCAGCGCAGAGCC
CAGCCCAGCGCAGCCTGCCAGCAGCCACCCAGCCGCCAGCCGCCAGCCCCGCACGAAACCCGGCCAGAGCTTC
CTAGCAGCCCCGAGCCATGAACACCGAAATGTATCAGACCCCCATGGAGGTGGCGGTCTACCAGCTGCACAATTC
TCCATCTCCTTCTTCTCTCTCTGCTTGGAGGGGATGTGGTTTCCGTTAAGCTGGACAACAGTGCCTCCGGAGCC
AGCGTGGTGGCCATAGACAACAAGATCGAACAGGCCATGGATCTGGTGAAGAATCATCTGATGTATGCTGTGAGA
GAGGAGGTGGAGATCCTGAAGGAGCAGATCCGAGAGCTGGTGGAGAAGAACTCCCAGCTAGAGCGTGAGAACACC
CTGTTGAAGACCCTGGCAAGCCCAGAGCAGCTGGAGAAGTTCCAGTCTGTCTGAGCCCTGAAGAGCCAGCTCCC
GAATCCCCACAAGTGCCCGAGGCCCCCTGGTGGTTCTGCGGTGTAAGTGGCTCTGTCTCAGGGTGGGCAGAGCCA
CTAACTTGTTTTACCTAGTTCTTTCCAGTTTGTTTTTGGCTCCCCAAGCATCATCTCACGAGGAGAAGCTTTACA
CCTAGCACAGCTGGTGCCAAGAGATGTCCTAAGGACATGGCCACCTGGGTCCACTCCAGCGACAGACCCCTGACA
AGAGCAGGTCTCTGGAGGCTGAGTTGCATGGGGCCTAGTAACACCAAGCCAGTGAGCCTCTAATGCTACTGCGCC
CTGGGGGCTCCCAGGGCCTGGGCAACTTAGCTGCAACTGGCAAAGGAGAAGGGTAGTTTGAGGTGTGACACCAGT
TTGCTCCAGAAAGTTTAAAGGGGTCTGTTTCTCATCTCCATGGACATCTTCAACAGCTTCACCTGACAACGACTGT
TCCTATGAAGAAGCCACTTGTTGTTTTAAGCAGAGGCAACCTCTCTCTCTCTCTGTTTCGTGAAGGCAGGGGAC
ACAGATGGGAGAGATTGAGCCAAGTCAGCCTTCTGTTGGTTAATATGGTATAATGCATGGCTTTGTGCACAGCCC
AGTGTGGGATTACAGCTTTGGGATGACCGCTTACAAAGTTCTGTTTGGTTAGTATTGGCATAGTTTTTCTATATA
GCCATAAATGCGTATATATACCCATAGGGCTAGATCTGTATCTTAGTGTAGCGATGTATACATATACACATCCAC
CTACATGTTGAAGGGCCTAACCAGCCTTGGGAGTATTGACTGGTCCCTTACCTCTTATGGCTAAGTCTTTGACTG
TGTTCAATTTACCAAGTTGACCCAGTTTGTCTTTTAGGTTAAGTAAGAACTCGAGAGTAAAGGCAAGGAGGGGGGC
CAGCCTCTGAATGCGGCCACGGATGCCTTGCTGCTGCAACCCTTTCCCCAGCTGTCCACTGAAACGTGAAGTCCT
GTTTTGAATGCCAAACCCACCATTCACTGGTGCTGACTACATAGAATGGGTTGAGAGAAGATCAGTTTGGGCTTC
ACAGTGTCAATTTGAAAAAGCGTTTTTGTGTTTTGTTTTGAATTATTGTGAAAACCTTTCAAGTGAACAGAAGGATGG
TGTCCTACTGTGGATGAGGGATGAACAAGGGGATGGCTTTGATCCAATGGAGCCTGGGAGGTGTGCCAGAAAGC
TTGTCTGTAGCGGGTTTTGTGAGAGTGAACACTTTCCACTTTTTGACACCTTATCCTGATGTATGGTTCCAGGAT
TTGGATTTTGATTTTCCAAATGTAGCTTGAAATTTCAATAAACTTTGCTCTGTTTTTCTAAAAATAAAAA

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FIGURE 584

MNTEMYQTPMEVAVYQLHNFSISFFSSLLGGDVVSVKLDNSASGASVVAIDNKIEQAMD LVKNHLMYAVREEVEI
LKEQIRELVEKNSQLERENTLLKTLASPEQLEKFQSCLSPPEEPAPESPQVPEAPGGS AV

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FIGURE 585

GACGTTTCGCGCCAATTTCCGGTTGGCCGGCCACAGTCCACCGCGCGGAGATTCTCAGCTTCCCCAGGAGCAAGAC
CTCTGAGCCCGCCAAGCGCGGCCGCACGGCCCTCGGCAGCGATGGCACTGAAGGACTACGCGCTAGAGAAGGAAA
AGGTAAAGAAGTTCTTACAAGAGTTCTACCAGGATGATGAACTCGGGAAGAAGCAGTTCAAGTATGGGAACCAGT
TGGTTCGGCTGGCTCATCGGGAACAGGTGGCTCTGTATGTGGACCTGGACGACGTAGCCGAGGATGACCCCGAGT
TGGTGGACTCAATTTGTGAGAAATGCCAGGCGCTACGCGAAGCTCTTTGCTGATGCCGTACAAGAGCTGCTGCCTC
AGTACAAGGAGAGGGAAGTGGTAAATAAAGATGTCCTGGACGTTTACATTGAGCATCGGCTAATGATGGAGCAGC
GGAGTCGGGACCCTGGGATGGTCCGAAGCCCCCAGAACCAGTACCCTGCTGAACTCATGCGCAGATTTGAGCTGT
ATTTTCAAGGCCCTAGCAGCAGCAAGCCTCGTGTGATCCGGGAAGTGCGGGCTGACTCTGTGGGGAAGTTGGTAA
CTGTGCGTGGAATCGTCACTCGTGTCTCTGAAGTCAAACCCAAGATGGTGGTGGCCACTTACACTTGTGACCAGT
GTGGGGCAGAGACCTACCAGCCGATCCAGTCTCCCACTTTTCATGCCTCTGATCATGTGCCAAGCCAGGAGTGCC
AAACCAACCCTCAGGAGGGCGGCTGTATCTGCAGACACGGGGCTCCAGATTCATCAAATTCAGGAGATGAAGA
TGCAAGAACATAGTGATCAGGTGCCTGTGGGAAATATCCCTCGTAGTATCACGGTGCTGGTAGAAGGAGAGAACA
CAAGGATTGCCAGCCTGGAGACCACGTACGCGTCACTGGTATTTTCTTGCCAATCCTGCGCACTGGGTTCCGAC
AGGTGGTACAGGGTTTACTCTCAGAAACCTACCTGGAAGCCCATCGGATTGTGAAGATGAACAAGAGTGAGGATG
ATGAGTCTGGGGCTGGAGAGCTCACCAGGGAGGAGCTGAGGCAAATTGCAGAGGAGGATTTCTACGAAAAGCTGG
CAGCTTCAATCGCCCCAGAAATATACGGGCATGAAGATGTGAAGAAGGCACTGCTGCTCCTGCTAGTCGGGGGTG
TGGACCAGTCTCCTCGAGGCATGAAAATCCGGGGCAACATCAACATCTGTCTGATGGGGGATCCTGGTGTGGCCA
AGTCTCAGCTCCTGTCTACATTGATCGACTGGCGCCTCGCAGCCAGTACACAACAGGCCGGGGCTCCTCAGGAG
TGGGGCTTACGGCAGCTGTGCTGAGAGACTCCGTGAGTGGAGAAGTACCTTAGAGGGTGGGGCCCTGGTGTGCTG
CTGACCAGGGTGTGTGCTGCATTGATGAGTTCGACAAGATGGCTGAGGCCGACCGCACAGCCATCCACGAGGTCA
TGGAGCAGCAGACCATCTCCATTGCCAAGGCCGGCATTCTCACCACACTCAATGCCCGCTGCTCCATCCTGGCTG
CCGCCAACCTGCCTACGGGCGCTACAACCTCGCCGCAGCCTGGAGCAGAACATACAGCTACCTGCTGCACTGC
TCTCCCGTTTGACCTCCTCTGGCTGATTAGGACCGGCCCCGACCGAGACAATGACCTACGGTTGGCCAGCACA
TCACCTATGTGCACCAGCACAGCCGGCAGCCCCCTCCAGTTTGAACCTCTGGACATGAAGCTCATGAGGCGTT
ACATAGCCATGTGCCGCGAGAAGCAGCCCATGGTGCCAGAGTCTCTGGCTGACTACATCACAGCAGCATACGTGG
AGATGAGGCGAGAGGCTTGGGCTAGTAAGGATGCCACCTATACCTTCTGCCCGACCTGCTGGCTATCCTGCGCC
TTTCCACTGCTCTGGCACGTCTGAGAATGGTGGATGTGGTGGAGAAAGAAGATGTGAATGAAGCCATCAGGCTAA
TGGAGATGTCAAAGGACTCTCTTCTAGGAGACAAGGGGCAGACAGCTAGGACTCAGAGACCAGCAGATGTGATAT
TTGCCACCGTCCGTGAACTGGTCTCAGGGGGCCGAAGTGTCCGTTCTCTGAGGCAGAGCAGCGCTGTGTATCTC
GTGGCTTACACCCGCCAGTTCCAGGCGGCTCTGGATGAATATGAGGAGCTCAATGTCTGGCAGGTCAATGCTT
CCCGACACGGATCACTTTTGTCTGATTCCAGCCTGCTTGCAACCCTGGGGTCTCTTGTTCCTGCTGGCCTGC
CCCTTGGGAAGGGGCAGTGATGCCTTTGAGGGGAAGGAGGAGCCCCTCTTCTCCCATGCTGCACTTACTCCTTT
TGCTAATAAAAGTGTTTGTAGATTGTC

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FIGURE 586

MALKDYALEKEKVKKFLQEFYQDDELGKKQFKYGNQLVRLAHREQVALYVDLDDVAEDDPELVDS ICENARRYAK
LFADAVQELLPOYKEREVVNKDVLVDVYIEHRLMMEQRSRDPGMVRSPQNQYPaelmRRFELYFQGPSSSKPRVIR
EVRADSVGKLVTVRGIVTRVSEVKPKMVVATYTCDCQCGAETYQPIQSPTFMPLIMCPSQECQTNRSGGRLYLQTR
GSRFIKFQEMKMQEHSQVPVGNIPRSITVLVEGENTRIAQP GDHVSVTGIFLPILRTGFRQVVQGLLSETYLEA
HRIVKMNKSEDDSGAGELTREELRQIAEEDFYEKLAASIAPEIYGHEDVKKALLLLLVGGVDQSPRGMKIRGNI
NICLMGDPGVAKSQLLSYIDRLAPRSQYTTGRGSSGVGLTAAVLRDSVSGELTLEGGALVLADQGVCCIDEFDKM
AEADRTAIHEVMEQQTISIAGILTTLNARCSILAAANPAYGRYNPRRSLEQNIQLPAALLSRFDLLWLIQDRP
DRDNDLRLAQHITYVHQHSRQPPSQFEPLDMKLMRRYIAMCREKQPMVPESLADYITAAVEMRREAWASKDATY
TSARTLLAILRLSTALARLRMVDVVEKEDVNEAIRLMEMSKDSLLGDKGQTARTQRPADVIFATVRELVS GGRSV
RFSEAEQRCVSRGFTPAQFQAALDEYEELNVWQVNASRTRITFV

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FIGURE 587

CTTTCTGCCCACACTAGACATGGCGCTTGCCAGCGTGTTGGAGAGACCGCTACCGGTGAACCAGCGCGGGTTTTT
CGGACTTGGGGGTCGTGCAGATCTGCTGGATCTAGGTCCAGGGAGTCTCAGTGATGGTCTGAGCCTGGCCGCGCC
AGGCTGGGGTGTCCAGAAAGAGCCAGGAATCGAAATGCTTCATGGAACAACCACCCTGGCCTTCAAGTTCCGCCA
TGGAGTCATAGTTGCAGCTGACTCCAGGGCTACAGCGGGTGCTTACATTGCCTCCCAGACGGTGAAGAAGGTGAT
AGAGATCAACCCATACCTGCTAGGCACCATGGCTGGGGGCGCAGCGGATTGCAGCTTCTGGGAACGGCTGTTGGC
TCGGCAATGTCGAATCTATGAGCTTCGAAATAAGGAACGCATCTCTGTAGCAGCTGCCTCCAACTGCTTGCCAA
CATGGTGTATCAGTACAAAGGCATGGGGCTGTCCATGGGCACCATGATCTGTGGCTGGGATAAGAGAGGCCCTGG
CCTCTACTACGTGGACAGTGAAGGGAACCGGATTTTCAGGGGCCACCTTCTCTGTAGGTTCTGGCTCTGTGTATGC
ATATGGGGTCATGGATCGGGGCTATTCCCTATGACCTGGAAGTGGAGCAGGCCTATGATCTGGCCCGTCGAGCCAT
CTACCAAGCCACCTACAGAGATGCCTACTCAGGAGGTGCAGTCAACCTCTACCACGTGCGGGAGGATGGCTGGAT
CCGAGTCTCCAGTGACAATGTGGCTGATCTACATGAGAAGTATAGTGGCTCTACCCCTTGAAAGAGGGGTGGATGC
AGCTGCTTGTGTTTCTTGGGGTGAAGTGTGCTTGGTAATACGGACACAGTGACCCATCCTCCATCCTATTTATAGT
GGAAGGGCCTTCAATTGTATCAGTACTTTTTTTTAAGCTCTGGCACATTGACCTCTATGTGTTACCAGTCATTAA
TGAGCTGCTGCAGAGGTGACTATTTGTTTTACTTTCTTGGATGTTAAACATTACACTACTCACTACTCAATCTCA

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FIGURE 588

MALASVLERPLPVNQRGFFGLGGRADLLDLGPGSLSDGLSLAAPGWGVPEEPGIEMLHGTTTLAFKFRHGVIVAA
DSRATAGAYIASQTVKKVIEINPYLLGTMAGGAADCSFWERLLARQCRIYELRNKERISVAAASKLLANMVYQYK
GMGLSMGTMICGWDKRGPGLYYVDSEGNRISGATFSVGSGSVYAYGVMDRGYSYDLEVEQAYDLARRAIYQATYR
DAYSGGAVNLYHVREDGWIRVSSDNVADLHEKYSGSTP

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FIGURE 589

TCTCTTGATTCCCTAGTCTCTCGATATGGCACCTCCGTCAGTCTTTGCCGAGGTTCCGCAGGCCCCAGCCTGTCCTG
GTCTTCAAGCTCACTGCCGACTTCAGGGAGGATCCGGACCCCCGCAAGGTCAACCTGGGAGTGGGAGCATATCGC
ACGGATGACTGCCATCCCTGGGTTTTGCCAGTAGTGAAGAAAGTGGAGCAGAAGATTGCTAATGACAATAGCCTA
AATCACGAGTATCTGCCAATCCTGGGCCTGGCTGAGTTCCGGAGCTGTGCTTCTCGTCTTGCCCTTGGGGATGAC
AGCCCAGCACTCAAGGAGAAGCGGGTAGGAGGTGTGCAATCTTTGGGGGGAACAGGTGCACCTTCGAATTGGAGCT
GATTTCTTAGCGCGTTGGTACAATGGAACAAACAAGAACACACCTGTCTATGTGTCTCACCACCTGGGAG
AATCACAATGCTGTGTTTTCCGCTGCTGGTTTTAAAGACATTCGGTCCTATCGCTACTGGGATGCAGAGAAGAGA
GGATTGGACCTCCAGGGCTTCCTGAATGATCTGGAGAATGCTCCTGAGTTCTCCATTGTTGTCTCCACGCCTGT
GCACACAACCCAACTGGGATTGACCCAACTCCGGAGCAGTGAAGCAGATTGCTTCTGTCTATGAAGCACCGGTTT
CTGTTCCCCCTTCTTTGACTCAGCCTATCAGGGCTTCGCATCTGGAAACCTGGAGAGAGATGCCTGGGCCATTGCG
TATTTTGTGTCTGAAGGCTTCGAGTTCTTCTGTGCCCAGTCTTCTCCAAGAACTTCGGGCTCTACAATGAGAGA
GTCGGGAATCTGACTGTGGTTGGAAAAGAACCTGAGAGCATCCTGCAAGTCCTTTCCCAGATGGAGAAGATCGTG
CGGATTACTTGGTCCAATCCCCCGCCAGGGAGCACGAATTGTGGCCAGCACCCCTCTCTAACCTGAGCTCTTT
GAGGAATGGACAGGTAATGTGAAGACAATGGCTGACCGGATTCTGACCATGAGATCTGAACTCAGGGCAGGACTA
GAAGCCCTCAAAACCCCTGGGACCTGGAACCACATCACTGATCAAATTGGCATGTTTCAGCTTCAGTGGGTTGAAC
CCCAAGCAGGTTGAGTATCTGGTCAATGAAAAGCACATCTACCTGCTGCCAAGTGGTCAATCAACGTGAGTGGC
TTAACCACCAAAAATCTAGATTACGTGGCCACCTCCATCCATGAAGCAGTCACCAAAATCCAGTGAAGAAACACC
ACCCGTCCAGTACCACCAAAAGTAGTTCTCTGTCAATGTGTGTTCCCTGCCTGCACAAACCTACATGTACATACCAT
GGATTAGAGACACTTGCAGGACTGAAAGCTGCTCTGGTGAGGCAGCCTCTGTTTTAAACCGGCCCCACATGAAGAG
AACATCCCTTGAGACGAATTTGGGAGACTGGGATTAGAGCCTTTGGAGGTCAAAGCAAATTAAGATTTTTATTAA
GAATAAAAGAGTACTTTGATCATGAGACATAGGTATCTTGTCCCTCTCACTAAAAAGGAGTGTGTGTGTGGCGG
CCACGTGCTTCTATGTGGTGTGTTGACTCTGTACAAATTCTAGTCCCAAAGATCAAGTTGTCTGAAGGAGCCAAAG
TGTGAATGTGGGTGTGGGCTGCGGCATTAAATTCATCATCTCAACCCAGAGTGTCTGGTCTCCCTGCTCTTTCTG
CATGGTTGTGTCCCTAGTCCTAAGCTTTGGTTCTTTAGGGTGACTGTGGTAAGAAGGATATTTAATCATGACATG
CACGGACACGTACATATTTAACTGAAACAAGTTTTACCAAACAGTATTTACTCGTGATGTGCGTAGTGCATTCTG
ATATTTTTGAGCCATTCTATTGTGTTCTACTTCACCTAAAAAATAAAATAAAATGTTGATCAAG

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FIGURE 590

MAPPSVFAEVPQAQPVLVFKLTADFREDPDPRKVN LGVGAYRTDDCHPWVLPVVKKVEQKIANDNSLNHEYLPIL
GLAEFRSCASRLALGDDSPALKEKRVGGVQSLGGTGALRIGADFLARWYNGTNNKNTPVYVSSPTWENHNAVFS
AGFKDIRSYRYWDAEKRGDLQGF LNDLENAPEFSIVVLHACAHNPTGIDPTPEQWKQIASVMKHRFLFPFFDSA
YQGFASGNLERDAWAIRYFVSEGFEFFCAQSFSKNFGLYNERVGNLTVVGKEPESILQVLSQMEKIVRITWSNPP
AQGARIVASTLSNPELFEEWTGNVKT MADRILTMRSELRARLEALKTPGTWNHITDQIGMFSFTGLNPKQVEYLV
NEKHIYLLPSGRINVSGLT TKNLDYVATSIHEAVTKIQ

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FIGURE 591

GAATTCGCTTTGGATCCATTTCCATCGGTCCTTACAGCCGCTCGTCAGACTCCAGCAGCCAAGATGGTGAAGCAG
ATCGAGAGCAAGACTGCTTTTCAGGAAGCCTTGGACGCTGCAGGTGATAAACTTGTAGTAGTTGACTTCTCAGCC
ACGTGGTGTGGGCCTTGCAAAATGATCAACCCTTTCTTTCATTCCCTCTCTGAAAAGTATTCCAACGTGATATTC
CTTGAAGTAGATGTGGATGACTGTCAGGATGTTGCTTCAGAGTGTGAAGTCAAATGCACGCCAACATTCCAGTTT
TTTAAGAAGGGACAAAAGGTGGGTGAATTTTCTGGAGCCAATAAGGAAAAGCTTGAAGCCACCATTGAATTA
GTCTAATCATGTTTTCTGAAAACATAACCAGCCATTGGCTATTTAAACTTGTATTTTTTTATTTACAAAATATAA
ATATGAAGACATAACCAGTTGCCATCTGCGTGACAATAAACATTATGCTAA

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FIGURE 592

MVKQIESKTAFQEALDAAGDKLVVVDFSATWCGPCKMINPFFHSLSEKYSNVIFLEVDVDDCQDVASECEVKCTP
TFQFFKKGQKVGEFSGANKEKLEATINELV

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FIGURE 593

CTTGGAGGGAGGGATTAGAAGCCGCTAGACTTTTTTCTCCCTCTCAGTAGCACGGAGTCCGAATTAATTGGA
TTTCATTCACTGGGGAGGAACAAAACTATCTGGGCAGCTTCATTGAGAGAGATTCAATTGACACTAAGAGCCAGC
GGCTGCAGCTGGGTGCAGAGAGAACCTCCGGCTTTACTTCTGTCTCGTCTGCCCCAACCGCTAGCCTCGGCTTGG
GTAAGGCGAGGCGGAATTAACCCCGCTCCGAGAGCGGCAGCTTCGCGCGCGGTGCGCTCGGCCTATGCCTGCCC
CGAGGGGCGTCTGGTAGGCACCCCGCCCTCTCCCGCAGCTCGACCCCCATGATAGATACGCTCAGACCCGTGCCC
TTCGCGTCGGAAATGGCGATCAGCAAGACGGTGGCGTGGCTCAACGAGCAGCTGGAGCTGGGCAACGAGCGGCTG
CTGCTGATGGACTGCCGGCCGACAGGAGCTATACGAGTCGTCGCACATCGAGTCGGCCATCAACGTGGCCATCCCG
GGCATCATGCTGCGGCGCCTGCAGAAGGGTAACCTGCCGGTGC CGCGCTCTTCACGCGCGGCGAGGACCGGGAC
CGCTTACCCGGCGCTGTGGCACCGACACAGTGGTGCTCTACGACGAGAGCAGCAGCGACTGGAACGAGAATACG
GGCGGCGAGTCGTTGCTCGGGCTGCTGCTCAAGAAGCTCAAGGACGAGGGCTGCCGGGCGTTTCTACCTGGAAGGT
GGCTTCAGTAAGTTCCAAGCCGAGTTCTCCCTGCATTGCGAGACCAATCTAGACGGCTCGTGTAGCAGCAGCTCG
CCGCCGTTGCCAGTGCTGGGGCTCGGGGGCCTGCGGATCAGCTCTGACTCTTCCCTCGGACATCGAGTCTGACCTT
GACCGAGACCCCAATAGTGCAACAGACTCGGATGGTAGTCCGCTGTCCAACAGCCAGCCTTCCCTCCAGTGGAG
ATCTTGCCCTTCCCTCTACTTGGGCTGTGCCAAAGACTCCACCAACTTGGACGTGTTGGAGGAATTCGGCATCAAG
TACATCTTGAACGTACCCCCAATTTGCCGAATCTCTTTGAGAACGCAGGAGAGTTTAAATACAAGCAAATCCCC
ATCTCGGATCACTGGAGCCAAAACCTGTCCAGTTTTTCCCTGAGGCCATTTCTTTTCATAGATGAAGCCCGGGGC
AAGAACTGTGGTGTCTTGGTACATTGCTTGGCTGGCATTAGCCGCTCAGTCACTGTGACTGTGGCTTACCTTATG
CAGAAGCTCAATCTGTGATGAACGATGCCTATGACATTGTCAAATGAAAAATCCAACATATCCCCTAACTTC
AACTTCATGGGTGAGCTGCTGGACTTCGAGAGGACGCTGGGACTCAGCAGCCCATGTGACAACAGGGTTCAGCA
CAGCAGCTGTATTTTACCACCCCTTCCAACCAGAATGTATACCAGGTGGACTCTCTGCAATCTACGTGAAGACC
CCACATCCCTCCTTGCTGGAATGTGTCTGGCCCTTCAGCAGTTTCTCTTGGCAGCATCAGCTGGGCTGCTTTCTT
TGTTGTGGCCCCAGGTGTCAAATGACACCAGCTGTCTGTACTAGACAAGGTTACCAAGTGCGGAATTGGTTAA
TACTAACAGAGAGATTTGCTCCATTCTCTTTGGAATAACAGGACATGCTGTATAGATACAGGCAGTAGGTTTGCT
CTGTACCCATGTGTACAGCCTACCCATGCAGGGACTGGGATTGAGGACTTCCAGGCGCATAGGGTAGAACCAAA
TGATAGGGTAGGAGCATGTGTTCTTTAGGGCCTTGTAAGGCTGTTTCTTTTGCATCTGGAAGTACTATATAAT
TGTCTTCAATGAAGACTAATTCAATTTTGCAATATAGAGGAGCCAAAGAGAGATTTAGCTCTGTATTTGTGGTAT
CAGTTTGGAAAAAAAATCTGATACTCCATTTGATTATTGTAAATATTTGATCTTGAATCACTTGACAGTGTTTG
TTTGAATTGTGTTTGTCTTTTCTTTGATGGGCTTAAAGAAATTATCCAAAGGGAGAAAGAGCAGTATGCCACT
TCTTAAACAGAACAAAACAAAAAAGAAAATTGTGCTCTTTTCTAATCCAAAGGGTATATTTGCAGCATGCTTG
ACTTTACCAATTCTGATGACATCTTTACGGACACTATTATCACTAAGACCTTGTTATGGCGAAGTCTTTAGTCTT
TTTCATGTATTTTCTCATGATTTTTTCTCTTTATGTAGTTTGACTATGCCTTACCTTTGTAAATATTTTTGCTT
GTGTTGTCGCAAAGGGGATAATCTGGGAAAGACACCAATCATGGGCTCACTTTAAAAAAGAAAGAATAAAAAA
ACCTTCAGCTGTGCTAAACAGTATATTACCTCTGTATAAAATCTTCAGGGAGTGTCACCTCAAATGCAATACTT
TGGGTTGGTTTCTTTCTTTAAAAAATTTGTATAAACTGGAAGTGTGTGTGTGTGAGCATGGGTACCCATTG
ATAAGAGAAATGCATTTGATTGTGAAGAAGGGAGAGTTAAATCTCCATTATGTTTCGTGGTGTAAAGTTTAGAGC
TGGAAATTTATTATAAGAATGTAAACCTTAAATTATTAATAAATACTATTTTGGCTATTGAAAAAAAAAAAAA
AAAAAAAAA

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FIGURE 594

MIDTLRPVPPFASEMAISKTVAWLNEQLELGNERLLLMDCRPQELYESSHIESAINVAIPGIMLRRLQKGNLPVRA
LFTRGEDRDRFTRRCGTDTVVLYDESSSDWNENTGGESLLGLLLKKLKDEGCRAFYLEGGFSKFQAEFSLHCETN
LDGSCSSSSPPLPVLGLGGLRISSDSSSDIESDLDRDPNSATDSDGSPLSNSQPSFPVEILPFLYLGCARDSTNL
DVLEEFGIKYILNVTPLNLPNLFENAGEFKYKQIPISDHWSQNLQFFPEAISFIDEARGKNCGLVHCLAGISRS
VTVTVAYLMQKLNLSMNDAYDIVKMKKSNI SPNFNFMGQLLDFERTLGLSSPCDNRVPAQQLYFTTPSNQNVYQV
DSLQST

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FIGURE 595

CCAGCCTCGGAGGGAGGGATTAGAAGCCGCTAGACTTTTTTTCCTCCCCTCTCAGTAGCACGGAGTCCGAATTAA
TTGGATTTCACTTCACTGAGGAGGAACAAAACTATCTGGGCAGCTTCATTGAGAGAGATTCACTGACACTAAGAG
CCAGCGCTGCAGCTGGTGCAGAGAGAACCTCCGGCTTTGACTTCTGTCTCGTCTGCCCCAAGGCCGCTAGCCTCG
GCTTGGGAAGGCGAGGCGGAATTAAACCCCGCTCCGAGAGCGCACGTTTCGCGCGCGGTGCGTTCGGCCATTGCGCTG
CCCCGAGGGGCGTCTGGTAGGCACCCCGCCCTCTCCCGCAGCTCGACCCCCATGATAGATACGCTCAGACCCGTG
CCCTTCGCGTCGGAATGGCGATCAGCAAGACGGTGGCGTGGCTCAACGAGCAGCTGGAGCTGGGCAACGAGCGG
CTGCTGCTGATGGACTGCCGGCCGAGGAGCTATACGAGTCGTTCGCACATCGAGTCGGCCATCAACGTGGCCATC
CCGGGCATCATGCTGCGGCGCCTGCAGAAAGGGTAACCTGCCGGTGCAGCGCGCTCTTCACGCGCGGCGAGGACCGG
GACCGCTTCACCCGGCGCTGTGGCACCGACACAGTGGTGTCTACGACGAGAGCAGCAGCGACTGGAACGAGAAT
ACGGGCGGCGAGTCGTTGCTCGGGCTGCTGCTCAAGAAGCTCAAGGACGAGGGCTGCCGGGCGTTCTACCTGGAA
GGTGGCTTCAGTAAGTTCCAAGCCGAGTTCTCCCTGCATTGCGAGACCAATCTAGACGGCTCGTGTAGCAGCAGC
TCGCCGCCGTTGCCAGTGCTGGGGCTCGGGGGCCTGCGGATCAGCTCTGACTCTTCTCGGACATCGAGTCTGAC
CTTGACCGAGACCCCAATAGTGCAACAGACTCGGATGGTAGTCCGCTGTCCAACAGCCAGCCTTCTTCCCAGTG
GAGATCTTGCCCTTCTCTACTTGGGCTGTGCCAAAGACTCCACCAACTTGGACGTGTTGGAGGAATTTCGGCATC
AAGTACATCTTGAACGTCACCCCCAATTTGCCGAATCTCTTTGAGAACGCAGGAGAGTTTAAATACAAGCAAATC
CCCATCTCGGATCACTGGAGCCAAAACCTGTCCAGTTTTTCCCTGAGGCCATTTCTTTTATAGATGAAGCCCGG
GGCAAGAAGCTGTGGTGTCTTGGTACATTGCTTGGCTGGCATTAGCCGCTCAGTCACTGTGACTGTGGCTTACCTT
ATGCAGAAGCTCAATCTGTTCGATGAACGATGCCTATGACATTGTCAAATGAAAAATCCAACATATCCCCTAAC
TTCAACTTCATGGGTGAGCTGTGGACTTCGAGAGGACGCTGGGACTCAGCAGCCCATGTGACAACAGGGTTCCA
GCACAGCAGCTGTATTTTACCACCCCTTCCAACCAGAATGTATACCAGGTGGACTCTCTGCAATCTACGTGAAAG
ACCCACACCCCTCCTTGCTGGAATGTGTCTGGCCCTTCAGCAGTTTCTCTTGGCAGCATCAGCTGGGCTGCTTT
CTTTGTGTGTGGCCCCAGGTGTCAAATGACACCAGCTGTCTGTACTAGACAAGGTTACCAAGTGCAGGAATTGGT
TAATACTAACAGAGAGATTTGCTCCATTCTCTTTGGAATAACAGGACATGCTGTATAGATACAGGCAGTAGGTTT
GCTCTGTACCCATGTGTACAGCCTACCCATGCAGGGACTGGGATTCGAGGACTTCAGGCGCATAGGGTAGAACC
AAATGATAGGGTAGGAGCATGTGTTCTTTAGGGCCTTGTAAGGCTGTTTCTTTTGCATCTGGAAGTACTATAT
AATTGTCTTCAAGTGAAGACTAATTCAATTTTGCATATAGAGGAGCCAAAGAGAGATTTAGCTCTGTATTTGTG
GTATCAGTGTGGAAAAGAGAAATCTGATACTCCATTTGGATTATTGTAAATATTTGATCTTGAATCACTTGACA
GTGTTTGTGTTGAATTGTGTTTGTGTTTTTCTTTGATGGGCTTAAAAGAAATTATCCAAAGGGAGAAAAGAGCAGTA
TGCCACTTCTTAAACAGAACAAAACAAAAAAGAAAATTGTGCTCTGTTGTAATCCAAAGGGGAGATTTCAGC
ATGCTTGACTTTACCAATTCTGATGACATCTTTACGGACACTATTATCACTAAGACCTTGTTATGGCGAAGTCTT
TAGTCTTTTTTATGATATTTTCTCATGATTTTTTCTCTTTATGTAGTTTGAGTATGCCTTACCTTTGTAAATATT
TTTGCTTGTGTTGTGCAAGGGGATAATCTGGGAAAGACACCAATCATGGGCTCACTTTAAAA

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FIGURE 596

MIDTLRPVPFASEMAISKTVAWLNEQLELGNERLLLMDCRPQELYESSHIESAINVAIPGIMLRRLQKGNLPVRA
LFTRGEDRDRFTRRCGTDTVVLYDESSDWNENTGGESLLGLLLKKLKDEGCRAFYLEDEARGKNCGVLVHCLAG
ISRSVTVTVAYLMQKLNLSMNDAYDIVKMKKSNI SPNFNFMGQLLDFERTLGLSSPCDNRVPAQQLYFTTPSNQN
VYQVDSLQST

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FIGURE 597

GCTGAGTCCAAGAGATAGCAAATCGAGTCTTAAATAATCCGGGGAGAAAGACGCCCGGGTAGATTGAGGTGCAG
CCTTGGAGGGAGGGATTAGAAGCCGCTAGACTTTTTTTCCTCCCTCTCAGTAGCACGGAGTCCGAATTAATTGG
ATTTTCATTCACTGGGGAGGAACAAAACTATCTGGGCAGCTTCATTGAGAGAGATTTCATTGACACTAAGAGCCAG
CGGCTGCAGCTGGGTGCAGAGAGAACCCTCCGGCTTTACTTCTGTCTCGTCTGCCCCAACCGCTAGCCTCGGCTTG
GGTAAGGCGAGGCGGAATTAAACCCCGCTCCGAGAGCGGCAGCTTCGCGCGCGGTGCGCTCGGCCTATGCCTGCC
CCGAGGGGCGTCTGGTAGGCACCCCGCCCTCTCCCGCAGCTCGACCCCCATGATAGATACGCTCAGACCCGTGCC
CTTCGCGTCGGAAATGGCGATCAGCAAGACGGTGGCGTGGCTCAACGAGCAGCTGGAGCTGGGCAACGAGCGGCT
GCTGCTGATGGACTGCCGGCCGAGGAGCTATACGAGTCGTGCGACATCGAGTCGGCCATCAACGTGGCCATCCC
GGGCATCATGCTGCGGCGCCTGCAGAAGGGTAACCTGCCGGTGC GCGCGCTCTTCACGCGCGGCGAGGACCGGGA
CCGCTTCACCCGGCGCTGTGGCACCAGACACAGTGGTGTCTACGACGAGAGCAGCAGCGACTGGAACGAGAATAC
GGGCGGCGAGTCGGTGCTCGGGCTGTGCTCAAGAAGCTCAAGGACGAGGGCTGCCGGGCGTTCTACCTGGAAGG
TGGCTTCAGTAAGTTCCAAGCCGAGTTCTCCCTGCATTGCGAGACCAATCTAGACGGCTCGTGTAGCAGCAGCTC
GCCGCCGTTGCCAGTGCTGGGGCTCGGGGGCCTGCGGATCAGCTCTGACTCTTCCTCGGACATCGAGTCTGACCT
TGACCGAGACCCCAATAGTGCAACAGACTCGGATGGTAGTCCGCTGTCCAACAGCCAGCCTTCCTTCCCAGTGGA
GATCTTGCCCTTCTCTACTTGGGCTGTGCCAAAGACTCCACCAACTTGGACGTGTTGGAGGAATTCGGCATCAA
GTACATCTTGAACGTCACCCCCAATTTGCCGAATCTCTTTGAGAACGCAGGAGAGTTTAAATACAAGCAAATCCC
CATCTCGGATCACTGGAGCCAAAACCTGTCCAGTTTTTCCCTGAGGCCATTTCTTTTCATAGATGAAGCCGGGG
CAAGAACTGTGGTGTCTTGGTACATTGCTTGGCTGGCATTAGCCGCTCAGTCACTGTGACTGTGGCTTACCTTAT
GCAGAAGCTCAATCTGTGATGAACGATGCCTATGACATTGTCAAATGAAAAATCCAACATATCCCCTAACTT
CAACTTCATGGGTGAGCTGCTGGACTTCGAGAGGACGCTGGGACTCAGCAGCCCATGTGACAACAGGGTTCCAGC
ACAGCAGCTGTATTTTACCACCCCTTCCAACCAGAATGTATACCAGGTGGACTCTCTGCAATCTACGTGAAGAC
CCCACACCCCTCCTTGCTGGAATGTGTCTGGCCCTTCAGCAGTTTCTCTTGGCAGCATCAGCTGGGCTGCTTTCT
TTGTGTGTGGCCCCAGGTGTCAAATGACACCAGCTGTCTGTACTAGACAAGGTTACCAAGTGCGGAATTGGTTA
ATACTAACAGAGAGATTTGCTCCATTCTCTTTGGAATAACAGGACATGCTGTATAGATACAGGCAGTAGGTTTGC
TCTGTACCCATGTGTACAGCCTACCCATGCAGGGACTGGGATTCGAGGACTTCAGGCGCATAGGGTAGAACC
ATGATAGGGTAGGAGCATGTGTTCTTTAGGGCCTTGTAAGGCTGTTTCTTTTGCATCTGGAAGTACTATATAA
TTGTCTTCAATGAAGACTAATTCAATTTGTCATATAGAGGAGCCAAAGAGAGATTTAGCTCTGTATTTGTGGTA
TCAGTTTGGAAAAAATCTGATACTCCATTGATTATTGTAAATATTTGATCTTGAATCACTTGACAGTGTG
TTTGAATTGTGTTTGTGTTTTTCTTTGATGGGCTTAAAGAAATTATCCAAAGGGAGAAAGAGCAGTATGCCACT
TCTTAAACAGAACAAAACAAAAA

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FIGURE 598

MIDTLRPVPFASEMAISKTVAWLNEQLELGNERLLLMDCRPQELYESSHIESAINVAIPGIMLRRLQKGNLPVRA
LFTRGEDRDRFTRRCGTDTVVLYDESSSDWNENTGGESVLGLLLKKLKDEGCRAFYLEGGFSKFQAEFSLHCETN
LDGSCSSSSPPLPVLGLGGLRISSDSSSDIESDLDRDPNSATDSGSPLSNSQPSFPVEILPFLYLGCARDSTNL
DVLEEFGIKYILNVTPLNLPNLFENAGEFKYKQIPISDHWSQNLSQFFPEAISFIDEARGKNCVVLVHCLAGISRS
VTVTVAYLMQKLNLNMNDAYDIVKMKKSNI SPNFNFMGQLLDFERTLGLSSPCDNRVPAQQLYFTTPSNQNVYQV
DSLQST

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FIGURE 599

CCGGCGGCGCCTCAGGTCGCGGGGCGCCTAGGCCTGGGTTGTCCTTTGCATCTGCACGTGTTTCGCAGTCGTTTCC
GCGATGCTGCCCTCTGCTGCGCTGCGTGCCCCGTGTGCTGGGCTCCTCCGTCGCCGGCCTCCGCGCTGCCGCGCCC
GCCTCGCCTTTCCGGCAGCTCCTGCAGCCGGCACCCCGGCTGTGCACCCGGCCCTTCGGGCTGCTCAGCGTGCGC
GCAGGTTCCGAGCGGCGGGCCGGGCTCCTGCGGCCTCGCGGACCTGCGCCTGTGGCTGTGGCTGCGGCTCGCTG
CACACCGACGGAGACAAAGCTTTTGTGATTTCTGAGTGATGAAATTAAGGAGGAAAGAAAAATTCAGAAGCAT
AAAACCTCCCTAAGATGTCTGGAGGTTGGGAGCTGGAATGATGGGACAGAAGCGAAATTAGTGCGGAAAGTT
GCCGGGGAAAAATCACGGTCACTTTCAACATTAAACAACAGCATCCCAACACATTTGATGGTGAGGAGGAACCC
TCGCAAGGGCAGAAGGTTGAAGAACAGGAGCCTGAACTGACATCAACTCCCAATTTCTGTTGAGTTATAAAG
AATGATGATGGCAAGAAGGCCCTTGTGTTGGACTGTCATTATCCAGAGGATGAGGTTGGACAAGAAGACGAGGCT
GAGAGTGACATCTTCTCTATCAGGGAAGTTAGCTTTTCACTGAGTCCACTGGCGAGTCTGAATGGAAGGATACTAATTAT
ACACTCAACACAGATTCCTTGGACTGGGCCTTATATGACCACCTAATGGATTTCCTTGCCGACCGAGGGGTGGAC
AACACTTTTGCAGATGAGCTGGTGGAGCTCAGCACAGCCCTGGAGCACCAGGAGTACATTACTTTTCTTGAAGAC
CTCAAGAGTTTTGTCAAGAGCCAGTAGAGCAGACAGATGCTGAAAGCCATAGTTTCATGGCAGGCTTTGGCCAGT
GAACAAATCCTACTCTGAAGCTAGACATGTGCTTTGAAATGATTATCATCCTAATATCATGGGGGAAAAATACC
AAATTTAAATTATATGTTTTGTGTTCTCATTATATTATCATTTTTTTCTGTACAAATCTATTATTTCTAGATTTTT
GTATAACATGATAGACATAAAATTGGTTTATCTCCTCCGCTGAGTCTTCTAGAAAGTACCTGCTGGGTTCTCAGT
TCCAGTTCCCATCCTTTGATTGATCACTCTCCCTGACATCCACCTGTATGACTTTGTACCAAATGCTGTCTTCT
CTTTCTCCAATCAAGAAATAATAATCCCTCGAGTTTACAAAACAAAAA

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FIGURE 600

MLPILLRCVPRVLGSSVAGLRAAAPASPFRLQLQPAPRLCTRPFGLLSVRAGSERRPGLLRPRGPCACGCGCGLH
TDGDKAFVDFLSDEIKEERKIQKHKTLPKMSGGWELEINGTEAKLVRKVAGEKITVTFNINNSIPPTFDGEEEPS
QGQKVEEQEPILTSTPNFVVEVIKNDDGKKALVLDCHYPEDEVGQEDAESEDFSIREVSFQSTGESEWKDTNYT
LNTDSLWDALYDHLMDFLADRGVDNTFADELVELSTALEHQEYITFLEDLKSFVKSQ

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FIGURE 601

GTAACCGCTACTCCCGGACACCAGACCACCGCCTTCCGTACACAGGGGCCCGCATCCCACCCTCCCGGACCTAAG
AGCCTGGGTCCCCTGTTTCCGGAGGTCCGCTTCCCGGCCCCAGATTCTGGCATCCCAGCCCTCAGTGTCCAAGA
CCCAGGCAGCCCGGGTCCCCGCCTCCCGGATCCAGGCGTCCGGGATCTGCGCCACCAGAACCTAGCCTCCTGCAG
ACCTCCGCCATCTGGGGGCACTCAACCTCCTGGAGCCAAGGGCCCCACGTCCCACCCAGAGAACTCTCGTATTCT
CCAGCTCCTAGGGCCAAGGAACCCGGGCGCTCCGAACCTCCAGCTTTCGGACATCTGGCACACGGGGCAGAGCAG
AGAAGCTCAGCGCCAGCCTGGGGAATTTAAACACTCCAGCTTCCAAGAGCCAAGGAACCTTCAGTGTGTGAAC
CACAACTCTAAGGAGCCCTCCAAAGTTCCAGTCTCCAGGTGCTGTTACTCAACTCAGTCTTAGGAACGTGGGGTCT
CTGGGAAGGAGCCCAAGCGCTCCCAGCCAGCTTCCAGGCGCTAAGAAACCCCGGTGCTTCCCATCATGGTGGCCG
ATCCTCCTCGAGACTCCAAGGGGCTCGCAGCGGCGGAGCCACCGCCAACGGGGGCGCTGGCGCTGGCCTCCATCG
AGGACCAAGGCGCGCAGCAGGCGGCTACTGCGGTTCCTGGGACCAGGTGCGCCGCTGCCTTCGAGCCAACTGCT
TTGTGCTGCTGACAGTGGTGGCCGTGGTGGCCGGCGTGGCGCTGGGACTGGGGGTGCTGGGGGGCCGGGGGTGCGC
TGGCGTTGGGGCCCGAGCGCTTGAGCGCCTTCGTCTTCCCGGGCGAGCTGCTGCTGCGTCTGCTGCGGATGATCA
TCTTGCCGCTGGTGGTGTGACGCTTGATCGGCGGCGCCGCGCAGCCTGGACCCCGGCGCGCTCGGCCGTCTGGGCG
CCTGGGCGCTGCTCTTTTTCTGGTACCCACGCTGCTGGCGTGGCGCTCGGAGTGGGCTTGGCGCTGGCTCTGC
AGCCGGGCGCGCCTCCGCGGCCATCAACGCTCCGTGGGAGCCGCGGGCAGTGCCGAAAATGCCCCCAGCAAGG
AGGTGCTCGATTCTGTTCTGGATCTTGCGAGAAATATCTTCCCTTCCAACCTGGTGTGACGAGCCTTTCGCTCAT
ACTCTACCACCTATGAAGAGAGGAATATCACCGGAACCAGGGTGAAGGTGCCCGTGGGGCAGGAGGTGGAGGGGA
TGAACATCCTGGGCTTGGTAGTGTGTTGCCATCGTCTTTGGTGTGGCGCTGCGGAAGCTGGGGCCTGAAGGGGAGC
TGCTTATCCGCTTCTTCAACTCCTTCAATGAGGCCACCATGGTTCTGGTCTCCTGGATCATGTGGTACGCCCTG
TGGGCATCATGTTCTGGTGGCTGGCAAGATCGTGGAGATGGAGGATGTGGGTTTACTCTTTGCCCGCCTTGGCA
AGTACATTCTGTGCTGCTGCTGGGTACGCCATCCATGGGCTCCTGGTACTGCCCCCTCATCTACTTCTCTTCA
CCCGCAAAAACCCCTACCGCTTCTGTGGGGCATCGTGACCGCGTGGCCACTGCCTTTGGGACCTCTTCCAGTT
CCGCCACGCTGCCGCTGATGATGAAGTGCCTGGAGGAGAATAATGGCGTGGCCAAGCACATCAGCCGTTTCATCC
TGCCCATCGGCGCCACCGTCAACATGGACGGTGCCGCGCTCTTCCAGTGCCTGGCCGAGTGTTCATTGCACAGC
TCAGCCAGCAGTCTTGGACTTCGTAAAGATCATCACCATCCTGGTCACGGCCACAGCGTCCAGCGTGGGGGCAG
CGGGCATCCCTGCTGGAGGTGTCTCACTCTGGCCATCATCCTCGAAGCAGTCAACCTCCCGGTGACCATATCT
CCTTGATCCTGGCTGTGGACTGGCTAGTCGACCGGTCTGTACCGTCTCAATGTAGAAGGTGACGCTCTGGGGG
CAGGACTCCTCCAAAATTATGTGGACCGTACGGAGTCGAGAAGCACAGAGCCTGAGTTGATACAAGTGAAGAGTG
AGCTGCCCTGGATCCGCTGCCAGTCCCCACTGAGGAAGGAAACCCCTCCTCAAACACTATCGGGGGCCCCGAG
GGGATGCCACGGTCGCCTCTGAGAAGGAATCAGTCATGTAAACCCCGGGAGGGACCTTCCCTGCCCTGCTGGGGG
TGCTCTTTGGACACTGGATTATGAGGAATGGATAAATGGATGAGCTAGGGCTCTGGGGGTCTGCCTGCACACTCT
GGGGAGCCAGGGGCCCCAGCACCTCCAGGACAGGAGATCTGGGATGCCTGGCTGCTGGAGTACATGTGTTTACA
AGGGTTACTCCTCAAACCCCCAGTTCTCACTCATGTCCCCAACTCAAGGCTAGAAAACAGCAAGATGGAGAAAT
AATGTTCTGCTGCGTCCCCACCGTGACCTGCCTGGCCTCCCCGTCTCAGGGAGCAGGTACAGGTCACCATGGG
GAATTCTAGCCCCCACTGGGGGGATGTTACAACACCATGCTGGTTATTTTGGCGGCTGTAGTTGTGGGGGGATGT
GTGTGTGCACGT
CCACCCTGTCCCCAGATCCCCTATTCCCTCCACAATAACAGAAACACTCCCAGGGACTCTGGGGAGAGGCTGAGG
ACAAATACCTGCTGTCACTCCAGAGGACATTTTTTTTAGCAATAAAATTGAGTGTCAACTATTTAAAAA
AAAAAA

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FIGURE 602

MVADPPRDSKGLAAAEPTANGGLALASIEDQGAAAGGYCGSRDQVRRCLRANLLVLLTVVAVVAGVALGLGVSGA
GGALALGPERLSAFVFPGELLRLLRMIILPLVVCSLIGGAASLDPGALGRLGAWALLFFLVTTLLASALGVGLA
LALQPGAASAAINASVGAAGSAENAPSKEVLDSFLDLARNIFPSNLVSAAFRSYSTTYEERNITGTRVKVPVGQE
VEGMNILGLVVFAIVFGVALRKLGPGEGLLIRFFNSFNEATMVLVSWIMWYAPVGIMFLVAGKIVEMEDVGLLFA
RLGKYILCCLLGHAIHGLLVLPLIYFLFTRKNPYRFLWGIVTPLATAFGTSSSSATLPLMMKCVEENNGVAKHIS
RFILPIGATVNMDGAALFQCVAAVFIAQLSQQSLDFVKIITILVTATASSVGAAGIPAGGVLTLLAIILEAVNLPV
DHISLILAVDWLVDRSCTVLNVEGDALGAGLLQNYVDRTESRSTEPELIQVKSELPLDPLPVPTEEGNPLLKHVR
GPAGDATVASEKESVM

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FIGURE 603

GGGATTTTTAAAAAATCAAAATACAAATCCAACTTTTTGAGTTTTCGTTGTCATTGCTCTTATCTTTCCTGAGTC
ACTTCCCATTTTCCAAACTCAGCAACCCAGTTTGCGAGTCTGGTTTCATGAACCTTTGTAAGGTGTTTGGTGCG
GTCACRGTGTATACTTGCCGTGTAGTATTTGACTCAGCGCATCTGCCTTGAGTCATTTTACCGCGGCCATTTAC
TACTGCCGTTGAGCCCTGTCCACGCCCTGGGAGTGTTGATATGTTGAGAGTTTTCTGTCTGGCTGRGGAGGGATC
ATTTAGTTTTTGCGGACGTATGTTGCACTGAGGATTTAGGGAGAGAGCAAGATTTCTGTTGAGGAGGTTTCAAGA
TATAAGGAATCGGGAGAGTAGATAGGAGTGAAGCATTTGGCAGCGTAAAGAAGCTTGGCTTAGCTTTAATGGATT
AGGGAGAGATTGCTATCTAGCATTATTACATGTTATTGTTTCTCTTTGCTATTTTATACACCTAGAACAACTTTT
CCTCGGGGTTAACAAACATCTTCAACTCTGTTTTCTGTATGGCTCCTGACTCTTACCTTTGTTTTAGGAGGCTTC
CCTCTTCAGAGGAACTGGGAGAAGCCAATTTCCACTGCTTCTTTTTCTGTGCTTTTTTAACACTCAAACCCAG
AACACTTAATCCTCTGCAGCTCGTGCAAAAATTCAGTCTGTAATTTAAAATGTGTGCACGGTACACTGCTGACCA
TGGGCATGTCTATTGTTTGTATCTGTAATGTGTATGTCCATTTCAGTGTTGTCTGTTTTAGTATGCAGGTGATAG
ACTAGAGAACAAGACCTCTGTCTCCGTAGCATCCTGGAGCAGTCTGAATGCCAGAAATGGATAACCGTTTTGCTAC
AGCATTTGTAATTGCTTGTGTGCTTAGCCTCATTTCACCATCTACATGGCAGCCTCCATTGGCACAGACTTCTG
GTATGAATATCGAAGTCCAGTTCAAGAAAATTCAGTGATTTGAATAAAAGCATCTGGGATGAATTCATTAGTGA
TGAGGCAGATGAAAAGACTTATAATGATGCACTTTTTTCGATACAATGGCACAGTGGGATTGTGGAGACGGTGTAT
CACCATACCCCAAAACATGCATTGGTATAGCCCACCAGAAAGGACAGAGTCATTTGATGTGGTCACAAAATGTGT
GAGTTTCACACTAACTGAGCAGTTCATGGAGAAATTTGTTGATCCCGAAACCACAATAGCGGGATTGATCTCCT
TAGGACCTATCTTTGGCGTTGCCAGTTCCTTTTACCTTTTGTGAGTTTAGGTTTGATGTGCTTTGGGGCTTTGAT
CGGACTTTGTGCTTGCATTTGCCGAAGCTTATATCCCACCATTTGCCACGGGCATTCTCCATCTCCTTGCCAGGTCT
GTGTACACTGGGCTCAGTAAGTTGTTATGTTGCTGGAATTGAACTACTCCACCAGAACTAGAGCTCCCTGACAA
TGTATCCGGTGAATTTGGATGGTCCTTCTGCCTGGCTTGTGTCTCTGCTCCCTTACAGTTTCATGGCTTCTGCTCT
CTTCATCTGGGCTGCTCACACCAACCGGAAAGAGTACACCTTAATGAAGGCATATCGTGTGGCATGAGCAAGAAA
CTGCCTGCTTTACAATTGCCATTTTATTTTTTTTAAAATAATACTGATATTTTCCCCACCTCTCAATTGTTTTTA
ATTTTTATTTGTGGATATACCATTTTATTATGAAAATCTATTTTATTTATACACATTCCACCTAAATACACACT
TAATACCACTAAAATTTATGTGGTTTACTTTAAGCGATGCCATCTTTCAAATAAACTAATCTAGGTCTAGACAGA
AAGAAATGGATAGAGACTTGACACAAATTTATGAAAGAAAATTTGGGAGTAGGAATGTGACCGAAAACAAGTTGTG
CTAATGTCTGTAGACTTTTTCAGTAAAACTAAAGTAACTGTATCTGTTCAACTAAAACTCTATATTAGTTTCTT
TGGGAAACCTCTCATCGTCAAAACTTTATGTTCACTTTGCTGTTGTAGATAGCCAGTCAACCAGCAGTATTAGTG
CTGTTTTCAAAGATTTAAGCTCTATAAAATTTGGGAAATTTATCTAAGATCATTTTCCCTAAGCATTGACACATAGC
TTCATCTGAGGTGAGATATGGCAGCTGTTTGTATCTGCAGTGTGTCTGTCTACAAAAAGTGAAAAATACAGTGTT
TACTTGAAATTTTAACTTTGTAAGTGAAGAAATTCAGTTTCAGCCGGCGAGGATTAGTATTATTTTAACTCTC
CGTAAGATTTTTCAGTACCACCAAAATGTTTTGGATTTTTTTTCTTTCTCTTCACATACCAGGGTTATTTAAAGT
GTGCTTTCTTTTTACATTATATTACAGTTACAAGGTAAAATTCCTCAACTGCTATTTATTTATTCAGCCCAGTA
CTATAAAGAACGTTTTCACCATAATGACCTCCAGAGCTGGGAAACCTACCACAAGATCTAAAGTTCTGGCTGTCC
ATTAACCTCCAACATATGGTCTTTATTTCTTGTGGTAATATGATGTGCCTTTCTTTGCCTAAATCCCTTCCTGGTG
TGTATCAACATTATTTAATGTCTTCTAATTCAGTCATTTTTTATAAGTATGTCTATAAACATTGAACCTTTAAAA
AACCTTATTTATTTTCCACTACTGTAGCAATTGACAGATTAATAAATGTAACCTTCATAATTTCTTACCATAAC
CTCAATGTCTTTTTTAAAAAATAAAATTAATAAATGAAAAGAGAAA

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FIGURE 604

MDNRFATAFVIACVLSLISTIYMAASIGTDFWYEYRSPVQENSSDLNKS IWDEFISDEADEKTYNDALFRYNGTV
GLWRRCTITIPKNMHWYSPPERTESFDVVTKCVSFTLTEQFMEKFVDPGNHNSGIDLLR TYLWRCQFLLPFVSLGL
MCFGALIGLCACICRSLYPTIATGILHLLAGLCTLG SVSCYVAGIELLHQKLELPDNVSGEFGWSFCLACVSAPL
QFMASALFIWAAHTNRKEYTLMKAYRVA

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FIGURE 605

GGCACGAGGCTGCTGTTTGTCTACTTCCTCCTGCTTCCCCGCCGCCGCCGCCGCCATC**ATC**AGGGGAAATCGTGCA
CTTGCAGGCCCGGCAGTGCGGCAACCAAATCGGCGCCAAGTTTTGGGAGGTGATCAGCGATGAGCACGGCATCGA
CCCCACGGGCACCTACCACGGGGACAGCGACCTGCAGCTGGAACGCATCAACGTGTACTACAATGAGGCCACCGG
CGGCAAGTACGTGCCCCGCCCGTGCTCGTGGATCTGGAGCCCGGCACCATGGACTCCGTGCGCTCGGGGGCCCTT
CGGGCAGATCTTCCGGCCGGACAACCTTCGTTTTCCGGTCAGAGTGGTGCTGGGAACAACCTGGGGCCAAGGGGCACTA
CACAGAAGGCGCGGAGCTGGTGGACTCGGTGCTGGATGTTGTGAGAAAGGAGGCTGAGAGCTGTGACTGCCTGCA
GGGTTTCCAGCTGACCCACTCCCTGGGTGGGGGGACTGGGTCTGGGATGGGTACCCCTCCTCATCAGCAAGATCCG
GGAGGAGTACCCAGACAGGATCATGAACACGTTTAGTGTGGTGCCTTCGCCCAAAGTGTGAGACACAGTGGTGGA
GCCCTACAACGCCACCCTCTCAGTCCACCAGCTCGTAGAAAACACAGACGAGACCTACTGCATTGATAACGAAGC
TCTCTACGACATTTGCTTCAGAACCCCTAAAGCTGACCACGCCCACCTATGGTGACCTGAACCACCTGGTGTCTGC
TACCATGAGTGGGGTACCACCTGCCTGCGCTTCCCAGGCCAGCTCAATGCTGACCTGCGGAAGCTGGCTGTGAA
CATGGTCCCGTTTTCCCGGCTGCACTTCTTCATGCCCGGCTTTGCCCCACTGACCAGCCGGGGCAGCCAGCAGTA
CCGGGCGCTGACCGTGCCCGAGCTCACCCAGCAGATGTTTGATGCCAAGAACATGATGGCTGCCTGCGACCCCCG
CCATGGCCGCTACCTGACGGTTGCCGCCGTGTTCAGGGGCCGATGTCCATGAAGGAGGTGGATGAGCAAATGCT
TAATGTCCAAAACAAAACAGCAGCTATTTTGTGAGTGGATCCCCAACAAATGTGAAAACGGCTGTCTGTGACAT
CCCACCTCGGGGGCTAAAAATGTCCGCCACCTTCATTGGCAACAGCACGGCCATCCAGGAGCTGTTCAAGCGCAT
CTCCGAGCAGTTCACGGCCATGTTCCGGCGCAAGGCCTTCCTGCACTGGTACACGGGCGAGGGCATGGACGAGAT
GGAGTTCACCGAGGCCGAGAGCAACATGAATGACCTGGTGTCCGAGTACCAGCAGTACCAGGATGCCACAGCCGA
GGAGGAGGGCGAGTTCGAGGAGGAGGCTGAGGAGGAGGTGGCC**TAG**AGCCTTCAGTCACTGGGGAAAGCAGGGAA
GCAGTGTGAACCTTTATTCACTCCCAGCCTGTCTGTGGCCTGTCCCACTGTGTGCACTTGCTGTTTTCCCTGT
CCACATCCATGCTGTACAGACACCACCATTAAAGCATTTTCATAGTAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AA

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FIGURE 606

MREIVHLQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGDSDLQLERINVYYNEATGGKYVPRAVLVDLEPGTMDS
VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDSVLDVVRKEAESCDCLQGFQLTHSLGGGTGSGMGTL
LISKIREEYPDRIMNTFSVVPSPKVSDTVVEPYNATLSVHQLVENTDETYCIDNEALYDICFRTLKLTTPTYGDL
NHLVSATMSGVTTCLRFPQQLNADLRKLAVNMVFPRLHFFMPGFAPLTSRGSQQYRALTVPELTQQMFDAKNMM
AACDPRHGRYLTVAAVFRGRMSMKEVDEQMLNVQKNSSYFVEWIPNNVKTAVCDIPPRGLKMSATFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVSEYQQYQDATAEEEGEFEEEEEEVA

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FIGURE 607

CTATCAATCTCCAGAGCTTTTTCTTTTAAAGTGTGAGCGAGTTTATTAGAGAAGTAAAGAGACCCAAGAGTGCCT
ACTCCATAGACAGAGCAGCCACTGTGACACTGTACCCATTAAACACTAACTCTCCATTGCCCCCTCCAGCAACCCC
TAGCACCCACTGTCTACTTTCTGTCTCTATGTGGTTGTCTATTTGAGGGACATCACATAAGTGGAGTCATATATT
TGTCCTTTCATGTCTCCCTTATTTTCAATTTAGCATAACGTTTTCAAGGGTTTCTGTGTTGTGAATATATCAGAAT
TTCATTCTCTTTTTAAGGTAGAATCATATCATTTTTAAACATTTTCAAGTTGGACCATCTAAGTTCAGTCCTTCATT
TTCAACAATTAACCAAGTTGCCCTTTCTTCTTCTGTGGGTAAAGTGGGGCACCCTTGGGACGCTGTGCTGGGCGTACATG
GGTGCTTGATGAAGTTACTTGGTGGACTGATGTGATTGATGTCCAACATGTATGCAGGGACAGAGGCTATGGTCC
CTACAGAGCAGGCATGGAGAGAAGGAGAAATACATACGGGCAGGAGCCAGGAGAGGGAGGGTGTAGTGAGCAGAG
ACCGCGCCACTGCACTCCAGCCTGAGTGACAGAGTGAGAATCCATCTAAAAAATTGCTTACTAAAGAAGTGGTCT
CCTGAGGTCTTAAGACGTTCCCTGGCAATGTCTTGAGTGGGTGGGAGAGAGCCTCCAGTCATTGAGCTGTGGAATT
TCAGAGGTGAGAACCACACCTAACCCCAATTACTTTCCCTGTTTGCCCTCAGTGACACAGCTGCAGGAACCCCTG
GTGGGTGTTGTATTAAGTAAATTTGACCTTTATTCTTTGCAGATCTGTGAAATGTTGTCTTCTGAGGGGCCACGT
GTATCTGTAGTGCTGAGGACTCCTTGGGGCCTCTGAAGTCACAGAGAGAACCTGCAGGGTGGGGGACCAGTGTGT
GACAGCCCTGCTTTGCATTTTCTTTGAGAAGTGCTGTCAATTTGCATTTCTCTCCACCAGGGGAATCTTCAATCT
TGAGAGGTGTGATCATAACTTGCCTTGTTTCTTGTCGCTACAGAGAACGGAAGGCTCCCTTGATGGAACCTTAGAC
AGCAAGGCCAGATGCACATCCCTGGAAGGACATCCATGTTCCGAGAAGAACAGATGATCCCTGTATTTCAAGACC
TCTGTGCACTTATTTATGAACCTGCCCTGCTCCACAGAACACAGCAATTCCTCAGGCTAAGCTGCCGGTTCTTA
AATCCATCCTGCTAAGTTAATGTTGGGTAGAAAGAGATACAGAGGGGCTGTTGAATTTCCACATACCCTCCTTC
CACCAAGTTGGAACATCCTTGGAATTTGGGAAGAGCACAAAGAGGAGATCCAGGGCAAGGCCATTGGGATATTCTG
AAACTTGAATATTTTGTGTTTGTGTCAGAGATAAAGACCTTTTCCATGCACCCTCATACACAGAAACCAATTTTCTT
TTTTATACTCAATCATTTCTAGCGCATGGCCTGGTTAGAGGCTGGTTTTTCTCTTTTCTTTTGGTCCTTCAAAG
GCTTGTAGTTTGGGTAGTCCTTGTTCTTTGGAAATACACAGTGCTGACCAGACAGCCTCCCCCTGTCCCCTCTA
TGACCTCGCCCTCCACAAATGGGAAAACAGACTACTTGGGAGCACCGCCTGTGAAATACCAACCTGAAGACACG
GTTTATTGAGGCAACGCACAAAACAGAAAATGAAGGTGGAACAAGCACATATGTTCTTCAACTGTTTTTGTCTAC
ACTCTTTCTCTTTTCTCTACATGCTGAAGGCTGAAAGACAGGAAAGATGGTGCCATCAGCAAATATTATTCTTA
ATTGAAAACCTGAAATGTGTATGTTTCTTACTAATTTTTAAAAATGTATTCCTTGCCAGGGCAGGCAAGGTCGTC
ACGCCTGTAATCCCAGCACTTCAGGAGGCTGAGGTGGGCGGATC

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FIGURE 608

ATCTCACGTTAGCTAGAGACAGAACTGGAGCTAGCAGTCAGATCTCTTACAAAGTTGCCTTTCTTCTTCTGTGGG
TAAGTGGGGCACCCTTGGGACGCTGTGCTGGGCGTACATGGGTGCTTGATGAAGTTACTTGGTGGACTGATGTGA
TTGATGTCCAACATGTATGCAGGGACAGAGGCTATGGTCCCTACAGAGCAGGCATGGAGAGAAGGAGAAATACAT
ACGGNN
NNNNNNNNNNNNNNNNNNNNNTTGCTTGCTAAAGAAGTGGTCTCCTGAGGTCTTAAGACGTTTCCTGACAATGTCTT
GAGTGGGTGGGAGAGAGGCTGCAGTCATTGTGCTGTGGAATTTAGAGGTGAGAACCACACCTAACCAAAATTAC
TTTCCCTGTTTGCTCAGTGACACAGCTGCAGGAACCCTGGTGGGTGTTGTATTAAAGTAAATTTGACCTTTATTCT
TTTGAGATCTGTGAAATGTTGTCTTCTGAGGGGCCAGTGTATCTGTAGTGTGCTGAGGACTCCTTGGGCCCTCTGA
AGTCACAGAGAGAACCCTGCAGGGTGGGGGACCAGTGTGTGACAGCCCTGCTTTGCATTTTCTTTGAGAAGTGCT
GTCATTTTGCATTTCTCTCCACCAGGGCAATCTTCAATCTTGAGAGGTGTGATCATAACTTGCCTTGTTTCTTGT
CGCTACAGAGAACGGAAGGCTCCCTTGATGGAACCTTAGACAGCAAGGCCAGATGCACATCCCTGGAAGGACATCC
ATGTTCCGAGAAGAACAGATGATCCCTGTATTTCAAGACCTCTGTGCACTTATTTATGAACCTGCCCTGCTCCCA
CAGAACACAGCAATTCCTCAGGCTAAGCTGCCGGTTCTTAAATCCATCCTGCTAAGTTAATGTTGGGTAGAAAGA
GATACAGAGGGGCTGTTGAATTTCCACATAACCCTCCTTCCACCAAGTTGGAACATCCTTGGAATTTGGAAGAGC
ACAAGAGGAGATCCAGGGCAAGGCCATTGGGATATTCTGAAACTTGAATATTTTGTGTTTGTGTCAGAGATAAAGAC
CTTTTCCATGCACCCTCATAACAGAAACCAATTTTCTTTTTTATACTCAATCATTTCTAGCGCATGGCCTGGTT
AGAGGCTGGTTTTTTCTCTTTTCTTTTGGTCCTTCAAAGGCTTGTAGTTTTGGGTAGTCCTTGTTCTTTGGAAAT
ACACAGTGCTGACCAGACAGCCTCCCCCTGTCCCTCTATGACCTCGCCCTCCACAAATGGGAAAACAGACTAC
TTGGGAGCACCGCCTGTGAAATACCAACCTGAAGACACCGTTTCAATTCAGGCAACGCACAAAACAGAAAATGAAGG
TGGAACAAGCACAGATGTTCTCAACTGTTTTTGTCTACACTCTTCTCTTTTCTCTACCATGCTGAAGGCTGA
AAGACAGGAAGATGGTGCCATCAGCAAATATTATTCTTAATTGAAAACCTTGAATGTGTATGTTTCTTACTAATT
TTTAAAAATGTATTCCTTGCCAGGCCTAGACAAGGATCGCTCACGCCTGTATATCCAGCACTTCAGGTAGAGCT
GAGGTGGGCGGTATCGACCTGAGGTGAGGTAGCTTTGAGACCAGCCTGATGAAACNNNNNNNNNNNNNNNNNNNN
NN
NNNNNNNNNNNNNNNNNNNNNTAGGTTGTAGTGTAGCGGACCTCGCGCCACTGGCACTCCTAGCTCTGAGTGACTA
GAGTGAGAATCCATCTCAAAAAACAAATAAAACAAATTTGCTTGCTAAAGAAGTGGTCTCCTGAGGTCTTAAGAC
ATTCCTGACAGTGTCTTGAGTGGGTGGGAGAGAGGCTGCTGTGCTGCTGCTGGAATTTACAGATGAGAACCA
CGCCTAGCCAAAATCACTTTTCTGTTTGCCTCAGTGACACAGCTGCAGGGACCCTCGTGGATGTTGTATTAAAT
AAATTTGACCTTTGCTCTTTGAGATCTGTGAAATGTTGTCTTCTGAGGGGCCACATGCATCTATAGTGCTGAGG
ACTCCTTGGGCCCTCTGAAGTCACAGAGAGAACCGAGCAGGTCTATGTTTTTGT

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FIGURE 609

LTLARDRTGASSQISYKVAFLLLWVSGAPLGRCAGRTWVLDEVTWWTVIDVQHVC DRDGYGPYRAGME RRRNTY
GXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXLLAKEVVS

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FIGURE 610

AGTGCGCATCCGGACGTAGGAGGTGGAGGTTGTGGAATTCGCCGTTGAAAGCAGGGACTAAAAGCCCCACTTCG
TCTTACGTTCCGAAAGGAAGGCGTCTGTTGAGCCTTTCTCTCAGTCGTGAGGGAGGCGTCGACGGCGTGCGGAAG
TCCTGAGTTGAGGCTTGCGGGATCCTTTCCGGAGAAAGCGCAGGCTAAAGCCGCAGGTGAAGATGTCCAACTACG
TGAACGACATGTGGCCGGGCTCGCCGCAGGAGAAGGATTCGCCCTCGACCTCGCGGTGCGGCGGGTCCAGCCGGC
TGTCGTGCGGGTCTAGGAGCCGCTCTTTTCCAGAAGCTCTCGGTCCCATTCCCAGCTCTCGAGCCGGTTTTTCGT
CCAGGAGTCGGAGGAGCAAGTCCAGGTCCCGTTCCCGAAGGCGCCACCAGCGGAAGTACAGGCGCTACTCGCGGT
CATACTCGCGGAGCCGGTTCGCGATCCCGCAGCCGCGTTACCGAGAGAGGCGCTACGGGTTACACAGGAGATACT
ACCGGTCTCCTTCGCGGTACCGGTCCCGGTCCCGTAGCAGGTGCGGCTCTCGGGGAAGGTGCTACTGCGGAAGGG
CGTACGCGATCGCGCGGGGACAGCGCTACTACGGCTTTGGTCGCACAGTGTACCCGGAGGAGCACAGCAGATGGA
GGGACAGATCCAGGACGAGGTGCGGGAGCAGAACCCCTTTTCGCTTAAGTGAAAAAGATCGAATGGAGCTGTTAG
AAATAGCAAAAACCAATGCAGCGAAAGCTCTAGGAACAACCAACATTGACTTGCCAGCTAGTCTCAGAACTGTTT
CTTCAGCCAAAGAAACAAGCCGTGGAATAGGTGTATCAAGTAATGGTGCAAAGCCTGAAGTAAGTATTCTAGGTT
TGTCGGAACAAAACCTTTCAGAAAGCCAACTGTCAAATCTGATTAGCCACTTATATCTTAGACTATACTTTTTGGG
AAGTCTAGAGATGTATATAATGTGCTAAATTCAAAGTAGCAAATCTGAAGATAGGCAATGTCAAACCCATGAAAA
TGGGAGATTAATGAGCTTTATTTGGCCGTGCATGGTGCCCTCATGCCTGTAATGAGGCAGATGGCTTGAGTCCAGG
AGTTCAAGACTAGCCTGGGCAATGTGGCAAAACCGCGTGTTTACAAAAATACAAAAATTAGCCAGGCATGGTGG
TGCATGCCGTGTAGTCCCAGCTGTTTGGGAGGCTGAGGCAGGAGGATCTTTGAGCCTAGGATGCTAAGGTTGCAGT
GAGCCAAGATGGCACCATTGCACTCTAGCCTGGGCAGCAGAGCGAGACCCTGTCTCAAAAAATACATTTATTTTT
TTCATTTTTCAGTTAACAGTGTACTCTTATAACACCGTTATTAGCTGGTACTTTGGTGATTCTATTACTAGTTTT
TCTAAGCTATTTACAGAGTGTGTTGTAGCTTTTATTGTCAGCATTATGTTCCACAAAATTCTGTACTCAGCATATA
CAGTATAGTTTTATCTGCTCTATTTCTGTCTTATAGAAATCATGAATGTGGTCTGCAGACATTGATGAAGAAAATC
TGTTGGTAATTGATACATGGGCTAAAGCATCAGAGGTTTAATTTGAAGTTTATGTTTACACACTGAAAACCTTAGT
TTTTTTGTTGGTAGATCCATGTGCATGCTAGAATTTGGGACAGGCACTATTTGCATAAAGTATTAAAGTCAATTT
TTAAACTAAGCAAAGGTACACGTTGTAACGGTGGGGCATCTGTGAAAAAGATGTCCCTTTTCATAATATATGCAAT
ATATTCCAGATGTTTTGAGAGATTACAGAAGAGGAGGCCTGCTTCACTTGCAGATAAGTTTATTATAATTCTCCA
GAAATGTGCAGGATGTGCATTAGCAAATTGCACTGTACTTTTCACTCCAGCCTGGGTGACAGAGCAAGACTCCCG
TCTCGGGGGCTT

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FIGURE 611

MSNYVNDMWPGSPQEKDSPSTSRSGGSSRLSSRSRSRSFSRSSRSRSHSRVSSRFSSRSRRSKSRSRSRRRHQRYR
RYSRSYSRSRSRSRSRYRERRYGFTRRYRSPSRYSRSRSRSRSRGRSYCGRAYAIARGQRYYGFGRTVYPEE
HSRWRDRSRTRSRSTPFRLSEKDRMELLEIAKTNAAKALGTTNIDLPA SLRTVPSAKETSRGIGVSSNGAKPEV
SILGLSEQNFQKANCQI

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FIGURE 612

GGACGTAGGAGGTGGAGGTTGTGGAATTCGCCGTTTCGAAAGCAGGGACTAAAAGCCCCACTTCGTCTTACGTTCC
GAAAGGAAGGCGTCTGTTGAGCCTTTCTCTCAGTCGTGAGGGAGGCGTCGACGGCGTGCGGAAGTCTTGAGTTGA
GGCTTGCGGGATCCTTTCCGGAGAAAAGCGCAGGCTAAAGCCGCAGGTGAAGATGTCCAACCTACGTGAACGACATG
TGGCCGGGCTCGCCGCAGGAGAAGGATTTCGCCCTCGACCTCGCGGTTCGGGCGGGTCCAGCCGGCTGTCGTGCGGG
TCTAGGAGCCGCTCTTTTTCCAGAACTCTCGGTCCCATTCGCCGCTCTCGAGCCGGTTTTTCGTCCAGGAGTCGG
AGGAGCAAGTCCAGGTCCCGTTCCCGAAGGCGCCACCAGCGGAAGTACAGGCGCTACTCGCGGTCATACTCGCGG
AGCCGGTCGCGATCCCGCAGCCGCCGTTACCGAGAGAGGCGCTACGGGTTACCAGGAGATACTACCGGTCTCCT
TCGCGGTACCGGTCCCGGTCCCGTAGCAGGTGCGGCTCTCGGGGAAGGTCTGACTGCGGAAGGGCGTACGCGATC
GCGCGGGGACAGCGCTACTACGGCTTTGGTCGCACAGTGTACCCGGAGGAGCACAGCAGATGGAGGGACAGATCC
AGGACGAGGTGCGGGAGCAGAACCCCTTTTCGCTTAAGTGAAAAAGATCGAATGGAGCTGTTAGAAATAGCAAAA
ACCAATGCAGCGAAAGCTCTAGGAACAACCAACATTGACTTGCCAGCTAGTCTCAGAACTGTTCTTCAGCCAAA
GAAACAAGCCGTGGAATAGGTGTATCAAGTAATGGTGCAAAGCCTGAACTGTCGGAAAAGGTAACAGAAGATGGA
ACTCGAAATCCCAATGGAACCTACCCAGCAAAGAAGCATAGCTTTTAGCTCTAATAATTCTGTAGCAAAGCCA
ATACAAAAATCAGCTAAAGCTGCCACAGAAGAGGCATCTTCAAGATCACCAAAAATAGATCAGAAAAAAGTCCA
TATGGACTGTGGATACCTATCTAAAAGAAGAAAAGTATGGCTAAGTTTGCATGAAAAGTCACTTTATTGCAAG
TTAGTGTCTTAGCATTATCCCATCCCTTTGAGCCATTACAGGGGTACTTGTGCATTTAAAAACCAACAAAAAG
ATGTAAATACCTAACACTCAAATATTAACATTTTAGGTTTCTCTTGCAGATATGAGAGATAGCACAGATGGACCA
AAGGTTATGCACAGGTGGGAGTCTTTTGTATATAGTTGTAAATATTGTCTTGGTTATGTAAAAATGAAATTTTTT
AGACACAGTAATTGAACTGTATTCCTGTTTTGTATATTTAATAAATTTCTTGTTTTATTCTTAAAAA
AAAAAA

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FIGURE 613

CTTTTCTCCATCTCAGAACCTTCCTGCCGTCGCGTTTGCACCTCGCTGCTCCAGCCTCTGGGGCGCATTCCAAC
CTTCCAGCCTGCGACCTGCGGAGAAAAAAATTACTTATTTTCTTGCCCCATACATACCTTGAGGCGAGCAAAAA
AATTAAATTTTAACCATGAGGGAAATCGTGACATCCAGGCTGGTCAGTGTGGCAACCAGATCGGTGCCAAGTTC
TGGGAGGTGATCAGTGATGAACATGGCATCGACCCACCGGCACCTACCACGGGGACAGCGACCTGCAGCTGGAC
CGCATCTCTGTGTACTACAATGAAGCCACAGGTGGCAAATATGTTCCCTCGTGCCATCCTGGTGGATCTAGAACCT
GGGACCATGGACTCTGTTCGCTCAGGTCCTTTTGGCCAGATCTTTAGACCAGACAACCTTTGTATTTGGTCAGTCT
GGGGCAGGTAACAACCTGGGCCAAAGGCCACTACACAGAGGGCGCCGAGCTGGTTGATTCTGTCTCGGATGTGGTA
CGGAAGGAGGCAGAGAGCTGTGACTGCCTGCAGGGCTTCCAGCTGACCCACTCACTGGGCGGGGGCACAGGCTCT
GGAATGGGCACTCTCCTTATCAGCAAGATCCGAGAAGAATACCCTGATCGCATCATGAATACCTTCAGTGTGGTG
CCTTCACCCAAAGTGCTGACACCGTGGTCGAGCCCTACAATGCCACCCCTCTCCGTCCATCAGTTGGTAGAGAAT
ACTGATGAGACCTATTGCATTGACAACGAGGCCCTCTATGATATCTGCTTCCGCACTCTGAAGCTGACCACACCA
ACCTACGGGGATCTGAACCACCTTGTCTCAGCCACCATGAGTGGTGTCACCACCTGCCTCCGTTTCCCTGGCCAG
CTCAATGCTGACCTCCGCAAGTTGGCAGTCAACATGGTCCCCTTCCCACGTCTCCATTTCTTTATGCCTGGCTTT
GCCCCCTCTCACCAGCCGTGGAAGCCAGCAGTATCGAGCTCTCAGAGTGCAGGAACTCACCAGCAGGTCTTCGAT
GCCAAGGACATGATGGCTGCCTGTGACCCCGCCACGGCCGATACCTCACCCTGGCTGCTGTCTTCCGTGGTCCG
ATGTCCATGAAGGAGGTCGATGAGCAGATGCTTAACGTGCAGAACAAGAACAGCAGCTACTTTGTGGAATGGATC
CCCAACAATGTCAAGACAGCCGTCTGTGACATCCCACCTCGTGGCCTCAAGATGGCAGTCACCTTCATTGGCAAT
AGCACAGCCATCCAGGAGCTCTTCAAGCGCATCTCGGAGCAGTTCACTGCCATGTTCCGCCGGAAGGCCTTCCTC
CACTGGTACACAGGCGAGGGCATGGACGAGATGGAGTTCACCGAGGCTGAGAGCAACATGAACGACCTCGTCTCT
GAGTATCAGCAGTACCAGGATGCCACCGCAGAAGAGGAGGAGGATTCGGTGAGGAGGCCGAAGAGGAGGCCTAA

GGCAGAGCCCCCATCACCTCAGGCTTCTCAGTTCCCTTAGCCGTCTTACTCAACTGCCCCCTTTCCTCTCCCTCAG
AATTTGTGTTTGCTGCCTCTATCTTGTTTTTTGTTTTTCTTCTGGGGGGGGTCTAGAACAGTGCCTGGCACAT
AGTAGGCGCTCAATAAAATACTTGTTTGTGAAAAAAAAAAAAAAAAA

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FIGURE 614

MREIVHIQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGSDSLQLDRISVYYNEATGGKYVPRAILVDLEPGTMDS
VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDSVLDVVRKEAESDCLOGFQLTHSLGGGTGSGMGTL
LISKIREEYPDRIMNTFSVVPSPKVSDTVVEPYNATLSVHQLVENTDETYCIDNEALYDICFRTLKLTTPTYGDL
NHLVSATMSGVTTCLRFPQQLNADLRKLAVNMVPFRLHFFMPGFAPLTSRGSQQYRALTVPELTQQVFDAKDMM
AACDPRHGRYLTVAAVFRGRMSMKEVDEQMLNVQKNSSYFVEWIPNNVKTAVCDIPPRGLKMAVTFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVSEYQQYQDATAEEEEEDFGEEAEEEE

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FIGURE 615

TGTTCCGCGATCTTCTCAGGCTCTCCTAGCAGCATCCATCGCCGCCACCCCTATCTTCACTGGCTTCACCTTCTCC
TTCTCTCTTCGTTGCTGAGCGACAAGCTTCCTAGCGCTATGACTGTCTCGTCTCCGTCCCGCAGCGGGAGCCGCTCG
TCCTGGGTGGCCGCTTGCGCCGCTTGGCTTTTCTCCCGAGGTTACTTTGGGGCCCTCCCGATGGTGACCACGG
CTCCGCTCCTTTACCCCGGATCCCGGACCCCGGGCACTGCCCCGACCCCTCTTCTCCTCATTTCCTAGGGG
GAGATGGCCCGTGTCTGACCCCCAGCCTCGCGCTCCAGCAGCTCTGCCCCAACCGCAGCCTCGCCGTGGCGGGAG
GCACTCCTCGGGCAGCGCCGAAGAAGCGGCGAAAGAAGAAGGTGCGGGCCAGCCCCGAGGGCAGCTGCCCAGCC
GCTTCCACCAGTACCAGCAGCACCGGCCGAGTCTGGAGGGCGGCCGGAGCCCCGCGACCGGCCCGAGCGGAGCGC
AGGAGGTCCCGGGCCCGGCCGCCGCTTGGCCCCGAGTCTGCGAGCCGACCGCGCACGGAGGGAGCCAGCCCCG
ACCTTGCCCCGCTGCGGCCCGCGGCTCCCGGCCAAACCCCCCTCAGGAAAGAGGTTTTAAATCAAAGATGGGAA
AATCGGAGAAAATTGCCCTTCCCATGGCCAGCTTGTTCATGGTATACACTTGTATGAGCAACCAAAGATAAACA
GACAGAAAAGCAAATATAACTTGCCACTAACCAAGATCACCTCTGCAAAAAGAAATGAAAACAACCTTTGGCAGG
ATTCTGTTTCATCTGACAGAATTCAGAAGCAGGAAAAAAGCCTTTAAAAATACCGAGAACATTAAAAATTTCG
ATTTGAAGAAATCAGCATTTCTAAGTGAAGTGAGCCAAAAGGAAAATTATGCTGGGGCAAAGTTTAGTGATCCAC
CTTCTCCTAGTGTTCTTCCAAAGCCTCCTAGTCACTGGATGGGAAGCACTGTTGAAAATTCCAACCAAAACAGGG
AGCTGATGGCAGTACACTTAAAAACCCCTCCTCAAAGTTCAAACCTTAGATTTCAGATTTTCACTATGTGTGTAAC
ATAATTTTTCCCATATCCCTGGACTCTTGAGAAAATTGGTACAGAAATGGAAATTTGCCTTGTTGCAACATACAA
TTGCAAAAGATGAGTTTAAAAAATTACATACAAACAGCTTGTATTATATTTTATATTTTGTAAATACTGTATACC
ATGTATTATGTGTATATTGTTTCACTTGAGAGGTATATTATAGTTTTGTTATGAAAGTATGTATTTTGCCCTGC
CCACATTGCAGGTGTTTTGTATATATACAATGGATAAATTTTAAAGTGTGTGCTAAGGCACATGGAAGACCGATTT
TATTTGCACAAGGTACTGAGATTTTTTTCAAGAAACAGCTGTCAAATCTCAAGGTGAAGATCTAAATGTGAACAG
TTTACTAATGCACTACTGAAGTTTAAATCTGTGGCACAATCAATGTAAGCATGGGGTTTTGTTTCTCTAAATTGAT
TTGTAATCTGAAATTAAGTGAACAACTCCTATTCCCATTTTTGCTAAACTCAATTTCTGGTTTTGGTATATATCCA
TTCCAGCTTAATGCCTCTAATTTTAAATGCCAACAAAATTGGTTGTAATCAAATTTTAAATAATAATAATTGGC
CCCCCTTTTAAAAATAGTCTTGACTCTTTGTGTGTGACTGTTTCTCATGTTTGAATGTGTGACTAGGAGATGATT
TTGTGTGGTTGGATTTTTTTGACTTCTACTTTTACTGGCTGAGTGTGAGCCGCCATGCCTGGCCATAATCTACATT
TTCTTACCAGGAGCAGCATTGAGGTTTTTTGAGCATAGTACTTGACTACTCTAGAGGCTGAGACGGGAGCATCTCT
TGAGCCTGAGAAAGTGGAGATTGCAATTGAGCTAGGATCAGGCCACTGCACTCCAGCCTGGGTAACAGACGCTGTC
TCAAAAAAAGGCCAAGAGAAAGTAAGGGAGACAGA

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FIGURE 616

MTVVSVPQREPLVLGGRLAPLGFSSRGYFGALPMVTTAPPPLERIPDPRALPPTLFLPHFLGGDGPCLTPQPRAP
AALENRSLAVAGGTPRAAPKKRRKKKVRASPAGQLPSRFHQYQQHREPLEGGRSPATGPSGAQEVPGPAAALAPS
PAAAAGTEGASPDAPLRPAAPGQTPLRKEVLKSKMGKSEKIALPHGQLVHGIHLYEQPKINRQKSKYNLPLTKI
TSAKRNNENFWQDSVSSDRIQKQEKPFKNTENIKNSHLKKSAPLTVSQKENYAGAKFSDPPSPSVLPKPPSHW
MGSTVENSNNRELMVHLKTLLKVQT

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FIGURE 617A

AGAGATGGGTCTCGCCATCACCATGTTGCCAGTCTGGTCTCCAACCTCCTGGGCTCAAGCGATCCTCCTGCCTTG
GTCTCCCAAAGTGCTGGGATTACAGGTGTGAGCCCCACACCCGGCCTGAGTGAGTGGGTTCTGAATGGTGACTG
TTGTTGTCCATAGCCTTCCCCCTGCTTCTGAGAGTGGAGTCCCTCCCCTCATGTTGGAGACCTCCCAAGGTCCAT
GTGGTCTATAGGGGCTGTTTACGCTCCCTAGCCCCCTTAACGTGTCAGGTAATACTGTATATATTCATGAAATG
TGAATAATTAGTTATATAATTCCTAAGCACTTATTTTAAAAACAGCAATGTGATGCTTAACTCTTCCCACCTCT
GTTCTGTCCCCCTTAGAAAACCACTGATAACTCTTTTTTTTTTTTGGAGACGGAGTCTTGCCCTGTGCCCAGGCT
GGAGTGTAGTGGCCTGATCTCGGCTCGGCTCATTGTAACCTCCGCCTCGGGTTTGAGCGATTCTCCTGCCTCAGC
CTCCTGAGTAGCTGGGATTATAGGCGTGACCACCACGCCTGGCTAATTTTTTGTATCTTTAGTAGGGACGGGTT
TCACCATGTTGGCCAGAGTGGTCTTGAACCTCTGACCTTGTGATCCGCTCGCCTCAGCCTCCCAAAGTGTGGGA
TTACAGGCATGAGCCACCGTGCTGTCTAGAACCACTGGTAACCTCTTAACTGXXXAGTGTTCTAAGAACGGAAG
CATCTGGGCTGGATCGAATTTAGCATCAAGCAGAGTCCCCCTTTCTGTTTCAAGAGTGTGTAAAGTGCATAAAGATG
AAGCAGGCACCAGAAATCCTCGGCAGTGCCAACGGGAAGACTCCGAGCTGCGAGGTGAACCGCGAGTGTCTGTG
TTCCTCAGCAAAGCCCAGCTCTCCAGTAGCCTGCAGGAGGGGTCATGCAGAAGTTTAAACGGCCACGACGCCCTG
CCCTTTATTCCAGCCGACAAGCTGAAAGATCTTACTTCCGGGTGTTTAAATGGAGAACCCGGCGCACACGATGCC
AAACTGCGTTTTGAGTCCCAGGAAATGAAAGGGATTGGGACACCCCTAACACTACCCCTATCAAAAATGGCTCT
CCAGAAATTAAGCTGAAATACCAAAACATACATGAATGGGAAGCCTCTCTTTGAATCTTCCATTGTGGTGAC
AGTGCTGCTGATGTGTCTCAGTCAGAAGAAAATGGACAAAAACCAGAAAACAAGGCGAGAAGGAACAGGAAGAGG
AGCATAAAATATGACTCCTTGCTGGAGCAGGGCCTTGTGCAAGCAGCTCTTGTGTCTAAGATCTCAAGTCTTCA
GATAAAAAGATTCCAGCTAAGAAAGAGTCTTGTCCAAACACTGGAAGAGACAAAGACCACCTGTTGAAATACAAC
GTTGGTGATTGGTGTTGGTCCAAAGTGTGCGGTTACCCTTGGTGGCCTTGCATGGTTTCTGCAGATCCACTCCTT
CACAGCTATACCAAACCTTAAAGGTGAGAAAAGAGTGCACGCCAGTATCACGTACAGTTCTTTGGTGACGCCCA
GAAAGAGCTTGGATATTTGAGAAGAGCCTCGTAGCTTTTGAAGGAGAAGGACAGTTTGAAAAATTATGCCAGGAA
AGTGCCAAGCAGGCACCCACGAAAGCTGAGAAAATTAAGCTATTGAAACCAATTTACAGGAAATTGAGGGCCAG
TGGGAAATGGGCATTGTTCAAGCAGAAGAAGCTGCAAGCATGTGAGTGGAGGAGCGGAAAGCCAAGTTCACCTTT
CTCTATGIGGGGGACCAGCTTCATCTCAACCCCTCAAGTAGCCAAGGAGGCTGGCATTGCTGCAGAGTCTTTGGGA
GAAATGGCAGAATCCTCAGGAGTCAGTGAAGAAGCTGCTGAAAACCCCAAGTCTGTGAGAGAAGAGTGCATTCCC
ATGAAGAGAAGGCGGAGGGCCAACTGTGTAGCTCTGCAGAGACCCTGGAGAGTACCCCCGACATAGGGAAGAGT
ACTCCTCAAAAGACGGCAGAGGCTGACCCAGAAAGAGGAGTAGGGTCTCCTCCTGGGAGGAAGAAGACCACAGTC
TCCATGCCACGAAGCAGGAAGGGAGATGCAGCATCCCAGTTTTTGGTCTTCTGTCAAAAACACAGGGATGAGGTG
GTAGCTGAGCACCCAGATGCTTCAGGTGAGGAGATTGAAGAGCTGCTCAGGTACAGTGGAGTCTGCTGAGTGAG
AAGCAGAGAGCACGCTACAACACCAAGTTTGCCTGGTGGCCCCCTGTCCAGGCTGAAGAAGACTCTGGTAATGTA
AATGGGAAAAAAGAAACCACACAAAGAGGATACAGGACCCCTACAGAAGATGCTGAAGCTGAGGACACACCCAGG
AAAAGACTCAGGACGGACAAGCACAGTCTTCGGAAGAGAGACACAATCACTGACAAAACGGCCAGAACAAAGCTCT
TACAAGGCCATGGAGGCAGCCTCCTCGCTCAAGAGCCAGGCAGCAACGAAAAATCTGTCTGATGCATGTAAACCA
CTGAAGAAGCGAAATCGGGCTTCCACGGCAGCATCTTCAGCTCTTGGGTTTAGCAAAAGTTTCTCTCTCTGCA
TCCTTAACTGAGAATGAGGTCTCGGACAGCCCGGAGACGAGCCCTCGGAGTCCCCATACGAAAGTGCAGACGAA
ACACAACTGAAGTATCTGTCTCATCAAAAAGTCTGAGCGAGGAGTGAAGTGCACAAAAGGAGTATGTGTGCCAG
CTGTGTGAGAAGCCGGGCAGCCTCCTGCTCTGTGAAGGACCCTGCTGCGGAGCTTTCCACCTCGCCTGCCTTGGG
CTTTCCCGGAGGCCAGAAGGGAGGTTTACCTGCAGCGAGTGTGCTCAGGGATTCACTCATGTTTCTGTGTGTA
GAGAGCAAGACAGATGTTAAGCGCTGTGTGGTAACTCAGTGTGGAATTTTACCATGAGGCTTGTGTGAAAAA
TACCCTCTGACTGTATTTGAGAGCCGAGGTTTCCGCTGCCCCCTCCACAGCTGTGTGAGCTGCCATGCTTCCAAC
CCTTCAAACCAAGGCCGTCAAAGGTAATAATGATGCGGTGTGTCCGCTGCCCCGTTGCCTATCACAGCGGGAT
GCTTGTCTGGCAGCAGGATGCTCAGTGATCGCCTCCAACAGCATCATCTGCACTGCCACTTCACTGCTCGGAAG
GGGAAGCGACACCACGCCACGTCAACGTGAGCTGGTGTCTGTGTGCTCCAAAGGGGGGAGCCTTCTGTGTGT
GAGTCTGCCCAGCGCCTTCCACCCTGACTGCCTGAACATCGAGATGCCTGACGGCAGCTGGTTCTGCAATGAC
TGCAGGGCTGGGAAGAAGCTGCACTTCCAGGATATCATTTGGGTGAACTTGGGAACCTACAGATGGTGGCCGGCA
GAAGTTTGCCATCCCAAAAATGTTCCCCCAAATATTAGAAAATGAAGCACGAGATTGGAGAATTCCCTGTGTTT
TTCTTTGGGTCTAAAGATTATTACTGGACGCATCAGGCGGAGTGTTCCCGTACATGGAGGGGGACCGGGGCAGC

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FIGURE 617B

CGCTACCAGGGGGTCAGAGGGATCGGAAGAGTCTTCAAAAACGCACTGCAAGAAGCTGAAGCTCGTTTTTCGTGAA
ATTAAGCTTCAGAGGGAAGCCCGAGAAACACAGGAGAGCGAGCGCAAGCCCCACCATAACAAGCACATCAAGGTG
AATAAGCCTTACGGGAAAGTCCAGATCTACACAGCGGATATTTTCAGAAATCCCTAAGTGCAACTGCAAGCCCACA
GATGAGAATCCTTGTGGCTTTGATTTCGGAGTGTCTGAACAGGATGCTGATGTTTGAGTGCCACCCCGCAGGTGTGT
CCCGCGGGCGAGTTCTGCCAGAACCAGTGCTTCACCAAGCGCCAGTACCCAGAGACCAAGATCATCAAGACAGAT
GGCAAAGGGTGGGGCCTGGTCGCCAAGAGGGACATCAGAAAGGGAGAATTTGTAAACGAGTACGTTGGGGAGCTG
ATCGACGAGGAGGAGTGCATGGCGAGAATCAAGCACGCACACGAGAACGACATCACCCACTTCTACATGCTCACT
ATAGACAAGGACCGTATAATAGACGCTGGCCCCAAAGGAACTACTCTCGATTTATGAATCACAGCTGCCAGCCC
AACTGTGAGACCCTCAAGTGGACAGTGAATGGGGACACTCGTGTGGGGCCTGTTTGCCGTCTGTGACATTCTGCA
GGGACGGAGCTGACTTTTAACTACAACCTCGATTGTCTGGGCAATGAAAAACGGTCTGCCGGTGTGGAGCCTCC
AATTGCAGTGGATTCTCGGGGATAGACCAAAGACCTCGACGACCCTTTCATCAGAGGAAAAGGGCAAAAAGACC
AAGAAGAAAACGAGGCGGCGCAGAGCAAAAGGGGAAGGGAAGAGGCAGTCAGAGGACGAGTGCTTCCGCTGCGGT
GATGGCGGGCAGCTGGTGTGTGTGACCGCAAGTTCTGCACCAAGGCCTACCACCTGTCTGCTGCGCTGGGCCTTGGC
AAGCGGCCCTTCGGGAAGTGGGAATGTCTTGGCATCATTGTGACGTGTGTGGCAAACCTTCGACTTCATTTTGC
CACCTCTGCCCCAATTCGTTCTGTAAGGAGCACCAGGACGGGACAGCCTTCAGCTGCACCCCGGACGGGCGGTCC
TACTGCTGTGAGCATGACTTAGGGGCGGCATCGGTGAGAAGCACCAAGACTGAGAAGCCCCCCCCAGAGCCAGGG
AAGCCGAAGGGGAAGAGGCGGCGGCGGAGGGGCTGGCGGAGAGTACAGAGGGCAAAATAGCGCCAGGCGGCGCT
TGCCCGGATCCAGGGGCGGTGCAGGGCGGCGGCGCCCTGCCTGCGGGAGAGGGCGAGCATGAACTGGCCCGGAGGA
CCCAGCTCGAGCCGCCAGGACACAGACGTACAGGCCTCCTCGGGAGGGAGCGCCTCCCCACCACTGAGCCATCCT
CAGCAGCGTCCGCTGCGTCTGCACTGATGACCGTCTGAGCCAGCTCAGCGTCTCTGGACAAACAGCCTCACTCC
TCAGCGTTACCGCCACACTTGAATTTCTCCGAATGTCAAGGTTCCCTCCCACTCTATTTTTTTAGGTTAAAGTTA
ATTGGCATATGGAATGTTTAACTCTCTCTGAAATGTGTAGCGTAGGCTTTTCCCAAGGGTCGCTAGAAACTCGT
CTTCGCGTTGCCCCCTTCTGCGTCTCAGCGCCGTCGCCACTCGGGAGAGGCTGGGTGAGGCCCCTGTGAGGACT
GACCCTGGATTCTCGAAACTGCCATTGTGATCATTACTCTGCTCTTTGGTGGCTGTATCATTTTTTTGTACTAA
TGTGAATTGTTCTCAGAAACGCTTCTTTTCCATCCTAGTGAGAAGCTGGCCCTGCAGGTGGTGGCAGCAATGGT
GTTGTAAGATTTCTCCCGTAGTTTTTCTCCTCATGGATTTGAATGAAATGCCAATAACACGTCCACTTTCAAC
GTGTAGTTTACGCGGAGCACTTTCGAGGCCTGGCCGGGTGGGCTTACTTCTCACCTGGGCCTATCTTCTGAAC
CGCTAGGTTCTTATCAACATTTGGGGGATAACTTTGTATATTTTTTTTCAATTTGGCTTTTCTTTACCAGTTTCTGA
TTTTTATTCTCAATATATTTTTTGTAAACCTATTTCAAAATCACCACCGACTGAAGTGTGTGTTTACTGATGCG
GCCCTGAGCTCCATGGCGAAAGGAGTGACTTTGCAGGGCGTGAGACCGCAGTCTGCTTAGAGCACAGGAAGTGAC
AACTTAGGGAGCCCCGTAGGGCGCTGCAGGCCCCGGGGACCCAGCACGTGGGTCTAAAGAGAGACGGAGTCTAG
CTCTCCTGCCACCCAGAGTGGCTTCCATCTCAGCACTCTGTGGGTCTGGTGATGGAAGATGCAGTCTCTGCTGAT
CACATGTGCCCTCTGCCAGGGCACCTACTGAGAGGTGCGGTCTGGGGGTGGAGGCCTGCCTGGCAGGTGTGCGT
GCCCTCGTACGIGTGTATGGGCACTGGTCTAGGCCAGGTATGACACCCACTCTCCTGTGAGATTTCACTTTAGTT
TTTAAAAGGTCCAGTTCTACAGAGTGAGACCTATCTATCTGAGTACTACATATGTTTTTAAGACTTGGTTCTTTTT
TTGAGGGATCCTTGACCCTGGGAAGTCTGGAGCACCTTGAGAAGGGGGCACCATGTGTGCCCTTTGCCACGTGTC
CTGAGGGGCTGCTTGTCTGGGAGGGAGGGAGAGAACATTACGACGAGGTGCTTTTTTTATGGCCTTTTCTTAAAA
TAACCTAAGGGGGACACATCCATCTTGACAGAGAAGTTTACAGAACTCCCCCTGAAAACCTGCTGCTGAGGCTCCTG
TTAAATTTTCTGTGGCATCTTTTATGCCTTGGTAAAAACTGCAGTGTCTTTGGACCTGAGAGTGGCTACTCCGTG
GTTTTGTGACCTGTAAGCGTGGGGTTCAGGGGTGTGTGGCCCTGCAGGTCCCACGCCTCCCTGAGCACTGACTG
GAAGTTTCACTGGCTGGTGGCTGTCCCTTCTCCCATCAGGGTCCCCAGCAAAGTTAACTACACAGAGGACCCAGG
GGAACGAGCTGTGTAGCCACTGACTTGCTCGCGCGGCCGTGGCCCTCTGAGGGGCACTCGCCGTTAAGACAGGG
TGGGAGTAGTGCTTTCCAGTTACAGACTCTAACTTCTCCCAAAGTGTCTAAGAAAATACTGGATCGGCTCATAGA
TTTATGCTCCTTATGATGCCCTAACTTGGAAAGGTTGTTCTAGGGACAGGCCGGGCAGTGTCCACACACACCTT
AGAGTCGAAGGCCCCAGGGCCCCGCTGTCACTTGCCCAAAGATCCCTTCCGGCAGGTAAGGGACTACCAATGCT
TACGTCAAAACAGCAGAATCGGCTTTGCAGTGCACCTTGGGGAGCAGATATTAACCTTATTTTTGTGTTGGACAGT
AGTGAAAATCTTGTGATTTTTTAACTCGCTTTGATAATACTTCCAAATTTTATGATTTTTCTGAAGGAAATAATGCA
ACATTTTAAATATGTTTCTCCCCCTTTCCAAAACCTGTAAACTAATGAGCAAGTAACACTAATTTGAATGTCT

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FIGURE 617C

CTACAATACCCGTTGATAACTCAGTGGAGCCAGGCTTTGGGGTAGCGGCCCTGAGCTTGCAGGGTTTCTCGCCAC
TGGGGCTGACCACGCCCCAGCTGTGACCGTGGGTGTGGCTGGCTCTCGGCCCTGCCCAGCTTTGTTCTGAGGAC
GTGGTGACTTCCTGAACATCAGCTTCAATCCTCCATCATTAAATGTGAAGCAAAACACAAAAACCGCCCCAATCCC
TCAGGATTTCCTTGGCATCCGAAACCAGCATCTGCACCTAAACCCATACCCACCCGTGTGCGCCACAGGGGGATG
TGTCCGAATGGGCAGCTTAAAATGTGGTCACCTGTGGGGGAAACTCTTCAGGCACCTGAAGTGAGAACCCAGCTG
TCCGTCTCAGGCCGGCCCTTTCTTCCGGCGACACCCGTCCATGGCTGGCTGGGTCCCCTTCGCAGTGTTTGTCTG
TCTTGACATCTAAACCCCGGCGTGTGCAGTGCCCATCTTCCAGGACTACCTTATTTTCCAGAATTAAACCTGTTT
TATAATTCAAGTTAATGCAAATGACTGTCAGTTGCCAAATATCTTGATCCTGTGAGTGTAGTTGATGACTGTTT
TTCAGTCAGTAGAGTAAAATGCTGTGTCCACGGGGTGTACAGCCTCACCATACCCTGTTGAGGTGTGAAATGCC
CGTCAGAAATTAAATACAACTTAAATGTGCCTATTGGTGTCTAACTTCATACAATGTAAGGTCAGATTCCTTT
TAGGAATACTGGGTGCTGTCACCAGGTTTGATAGTTAGACTTAAAACTTGAAATTCACTTTTTGGGGGGAGGGA
TATACTGAAATAGAGAGTTGAGACTTGCCAGTTGGGGGAAAATAGCATTTAAATGAAAGCTGTGTTTGGAAAA
TTGTGTATGAGTATTTTTGTATTAAAAACATTTTAAA

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FIGURE 618

MEFSIKQSPLSVQSVVKCIKMKQAPEILGSANGKTPSCEVNRECSVFLSKAQLSSSLQEGVMQKFNGHDALPFI
ADKLDLTSRVFNGEPGAHDALRFESQEMKGIGTPPNTTPIKNGSPEIKLKITKTYMNGKPLFESSICGDSAAD
VSQSEENGQKPENKARRNRKRSIKYDSLLEQGLVEAALVSKISSPSDKKIPAKKESCPNTGRDKDHLKYNVGDL
VWSKVSGYPWWPCMVADPLLHSYTKLKGQKKSARQYHVQFFGDAPERAWIFEKSLVAFEGEGQFEKLCQESAKQ
APTKAEKIKLLKPI SGKLRAQWEMGIVQAEAAASMSVEERKAKFTFLYVGDQLHLNPQVAKEAGIAAESLGEMAE
SSGVSEEAENPKSVREECIPMKRRRRRAKLCSSAETLESHPDIGKSTPQKTAEADPRRGVGSPPGRKKTTVSMFR
SRKGDAAQFLVFCQKHRDEVVAEHPDASGEEIEELLRSQWSLLSEKQRARYNTKFALVAPVQAEEDSGNVNGKK
RNHTKRIQDPTEDAEADTPRKRLRTDKHSLRKRDTITDKTARTSSYKAMEAASSLKSQAATKNLSDACKPLKKR
NRATAASSALGFSSSSPSASLTENEVS DSPGDEPSES PYESADETQTEVSVSSKKSERGV TAKKEYVCQLCEK
PGSLLCEGPCCGAFHLACLGLSRRPEGRFTCECAGSIHSCFVCKESKTDVKRCVVTQCGKFYHEACVKKYPLT
VFESRGFRCP LHSCV SCHASNPSNPRPSKGKMMRCVRCPVAYHSGDACLAAGCSVIASNSI ICTAHFTARKGKRH
HAHVNVSWCFVCSKGGSLCCESC PAAFHPDCLNIEMPDGSWFCNDCRAGKKLHFQDI IWVKLGNYRWPAEVCH
PKNVPPNIQMKHEIGFPPVFFFGSKDYWTHQARVFPYMEGDRGSR YQGV RGIGRVFKNALQEA EARFREIKLQ
REARETQESERKPPPYKH I KVN KPYGKVQIYTADISEIPKCNCKPTDENPCGFDSECLNRMLMFEC HPQVCPAGE
FCQNQCFTKRQYPETKIIKTDGKGWGLVAKRDIRKGEFVNEYVGELIDEEECMARIKHAHENDITHFYMLTIDKD
RIIDAGPKGNYSRFMNHSCQPN CETLKWTVNGDTRVGLFAVCDIPAGTELT FNYNLDCLGNEKTVCRCGASNC SG
FLGDRPKTSTTLSSEEKGKTKKKTRRRRAKGEGRQSEDECFCRGDGGQLVLC DRKFCTKAYHLSCLGLGKRPF
GKWECPWHHCDVCGKPSTSFCHLCPNSFCKEHQDGTAFSCTPDGRSYCCEHDLGAASVRSTKTEKPPPEPGKPKG
KRRRRRGWRRVTEGK

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FIGURE 619

AGGCTGTCTGCAGAGATTTGAAAAATGGCAACAAATGAAAGTGTGAGCATCTTTAGTTCAGCATCCTTGGCTGTG
GAATATGTAGATTCACTTTTACCTGAGAATCCTCTGCAAGAACCATTTAAAAATGCTTGGAACATATGTTGAAT
AATTATACAAAAGTTCCAGATTGCAACATGGGGATCCCTTATAGTTCATGAAGCCCTTTATTTCTTATTCTGTTTA
CCTGGATTTTTTATTTCAATTTATACCTTATATGAAAAAATACAAAATTCAAAAAGGATAAGCCAGAGACATGGGAA
AACCAATGGAAAGTGTTCAAAGTTCTTCTCTTTAATCACTTCTGTATCCAGCTGCCTTTGATTTGTGGAACCTAT
TATTTTACAGAGTATTTCAATATTCTTATGATTGGGAAAGAATGCCAAGATGGTATTTTCTTTTGGCAAGATGC
TTTGGTTGTGTCAGTCATTGAAGATACTTGGCACTATTTTCTGTCATAGACTCTTACACCACAAAAGAATATACAAG
TATATTCAATAAGTTTCATCATGAGTTTCAGGCTCCATTTGGAATGGAAGCTGAATATGCACATCCTTTGGAGACT
CTAATTCCTTGGAACGGATTTTTTCATTGGAATCGTGCTTTTGTGTGATCATGTAATTCCTTTTGGGCATGGGTG
ACCATTCGTTTATTAGAACTATTGATGTCCATAGTGTTATGATATTCTCTCAACCCTTTAAATCTGATCCCT
TTCTATGCTGGTTCTCGGCATCATGATTTCCACCACATGAACCTTCATTGGAACTATGCTTCAACATTTACATGG
TGGGATCGAATTTTTGGAACAGACTCTCAGTATAATGCCTATAATGAAAAGAGGAAGAAGTTTGAGAAAAAGACT
GAATAAATATCTCACGTAAACCTTCCTGAAAGATAAACGTTTTCTGAAATTCAGAACTAGTAGCTAACATTGCT
TCTGGAGAGCAGAAATAAGCATGTCTTCTGGCTACTAAGTGATAAAAAAGAACATTAACAACCTTTAATTACCTTC
CTAGTGGGAACTTTTTCTACTTTACCTACAAGTTCTATATATGTAGAAATGAATAAATATATATTTAAGTACAGT
TTTCATGAGGAAGTTTTAAAAGACCATGTTTCTTAAGCTTCCAAGAAGGTTTTGGATACTAGAAGTATTAATCTAT
GGCTTTTCTCCCAGTAAAACCATAGGCCTGAAGTTCACATTGGGTCTTTAAATCTTTTAGATATATACTGGTCAT
TTCAGAAAATTCTTCATAGTGGTATTGGCCTTATATTTAACTTTTTTTTTTATTTTTTTTTTGAGACAAAGCCACA
CTCTGTCTCCTTGGCTGGAGTGTGGTGGCACAGTCTCAGCTCACTGCAACCTCTGCCTCCCAGTTCAAGCAATTC
TTCTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGGCACCCGCCACCACGCCAGCTAATTTTTGTATTTTTGT
GAGATGGGGTTTTACGATGTTGGCCAGGCTGGTCTCAAACTTCTGACCTCAAGTGATCTGCCACCTTGGCCTCC
CAAAGTGCTGGGATTACAGGTGTAAGCCACTGCGCCCGGCTTTTTAACTTTAAACATGTTTTAGAATTCACCTA
AAGATCAAAATATCATGGATTGAACCTCATCAATTGATAGCAGTGAGTGACTGAAGCTTCCAATCAAGAAAAGC
CGGCACCAAGAACTTCCATTCTAATCTAGAGCTGACCAGTTTGAGCTGATTCTCTCTTTGAAGAGTCCTTCTTGA
TTGCAGTGCAGTACTGGCATTCTGAATGGATGTAAGTGAGATTTTTAGTCTAAAGGCTTTTCAAATTACTTGA
ATTTTTTTAAAAATGAGGAGCTTTATTTCTATTTACCCTTCCATTTTTGTGTGAAAAAAAAAAAAAAAAA

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FIGURE 620

MATNESVSIFSSASLAVEYVDSLLENPLQEPFKNAWNYMLNNYTKFQIATWGSLIVHEALYFLFCLPGFLFQFI
PVMKKYKIQKDKPETWENQWKCFKVLLFNHFCIQLPLICGTYYFTEYFNIPYDWERMPRWYFLLARCFGCAVIED
TWHYFLHRLHHKRIYKYIHKVHHEFQAPFGMEAEYAHPLETLILGTGFFIGIVLLCDHVILLWAWVTIRLLETI
DVHSGYDIPLNPLNLIPFYAGSRHHDFFHMFIGNYASTFTWWDRIFGTDSQYNAYNEKRKKFEKKTE

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FIGURE 621A

GCGGGGACCGCGACGAGCCCGGGTCGCCGTTGGCAGCAGCAGCAGCAACACCAGCAGCAGCAGCAGCCCCGGCGG
CGGCGCGGAACCCCGAGCGCCCGGGCGCACCCGGCTTCCCGGAGCGCGACGCGGGCGGAGCAGCCCCGGTGCGG
CCGCGCGCGCCTTAGGCTCGGCCCCGCGGCTCGGGGACCCCGACTCCCGGCCAGCGAGCGCGTCCCCGGCGCC
GCCCCGAGAGCCCGAGGAGGAGCGGCGCGCAGAGCCCGGGGAGGGGGGCGGCCACCGCCCGCGCCGGGCATCCTC
AGGAGCCCCAGAGCGCGGAGGGCGCGGCGCCGCGAGCGGTGCTGGCCCCCGCGGGCTCCCCGGACCTTCCCCAC
CGCTGGGCCCCGAGGGACGCGTGATCGGGCGGGCGGCCGGGCGCAAGGGTGGGAGGGAGCCGCCCCCGCCGCGC
CCCCTCGCCCCCTCGCCCCAAACCCCTGGGCGCCGGGCCCCGGGCCGCGCGGCTGAAGCGCCCGCGATGGCGAGC
CCGCCGCGGCACGGGCCGCCGGGCGGCGAGCGGAGACGGCCCCAACCTCAACAACAACAACAACAACAACA
AACCACAGCGTGCGCAAGTGCGGCTACCTGCGCAACGAAGAGCATGGCCACAAGCGTTCTTCGTGCTGCGCGGA
CCCGGCGCGGGCGGCGACGAGGCGACGGCGGGCGGGGGGTGCGCGCCGCAACCGCCGCGGCTCGAGTACTACGAG
AGCGAGAAAAAGTGGCGGAGCAAGGCAGGCGCGCCGAAACGGGTGATCGCTCTCGACTGCTGCCTGAACATCAAC
AAGCGCGCCGACGCCAAGCACAAAGTACCTGATCGCCCTCTACACCAAGGACGAGTACTTCGCCGTGGCCGCCGAG
AACGAGCAGGAGCAGGAGGGCTGGTACCGCGCGCTCACCGACCTGGTCAGCGAGGGCCGCGCGGCCGCCGAGAC
GCGCCCCCGCCGCCGCGCCCGCGCGTCTGACGCGCCTCCCTGCCCGCGCCCTGGGCGGCTCTGCCGGCGCC
GCCGGGGCCGAGGACAGCTACGGGCTGGTGGCTCCCGCCACGGCCGCTACCGTGAGGTGTGGCAGGTGAACCTG
AAGCCCAAGGGTCTGGGCCAGAGCAAGAACCTGACGGGGGTGTACCGTCTGTGCCTGTCTGCGCGCACCATCGGC
TTCGTGAAGCTCAACTGCGAGCAGCCGTGGTGACGCTGACGCTCATGAACATCCGCCGTGCGGCCACTCGGAC
AGCTTCTTCTCATCGAGGTGGGCCGCTCGGCCGTACAGGCCCCGCGGAGCTGTGGATGACGGCGGACGACTCG
GTGGTGGCGCAGAACATCCACGAGACCATCTGGAGGCCATGAAGGCGCTCAAGGAGCTCTTCGAGTTCCGGCCG
CGCAGTAAGAGCCAATCGTCGGGGTCTGTCGGCCACGACCCCATCAGCGTCCCCGGCGCGCGCCGCCACCACCAC
CTGGTCAACCTGCCCCCAGCCAGACGGGCTGGTGCGCCGCTCGCGCACCGACAGCCTGGCCGCCACCCGCCG
GCGGCCAAGTGACGCTCGTGCCGGGTGCGCACCGCCAGCGAGGGCGACGGCGGCCGGGCTGCGGGAGCGGCGGCC
GCGGCGCAGAGGCTGGTGTGCGTGGTGGGAGCCCCCTGAGCCCCGGGCCGGTGC GCGCGCCCCCTGAGCCGCTCG
CACACCCTGAGCGGCGGCTGCGGCGGCCGCGGGAGCAAGGTGGCGCTGCTGCCGGCAGGGGGCGCGCTGCAACAC
AGCCGCTCCATGTCCATGCCCGTGGCGCACTCGCCGCCCGCCGCCACCAGCCCCGGCTCCCTGTCTCGTCCAGCAGC
GGCCACGGCTCGGGCTCCTACCCGCCGCCGCCCGGCCCGCACCCGCTCTGCCGCATCCGCTGCACCACGGCCCC
GGCCAGCGGCCCTCCAGCGGCAGCGCCTCCGCTCGGGCTCCCCCAGCGACCCCGGCTTCATGTCCCTGGACGAG
TACGGCTCCAGCCCAGGCGACCTGCGCGCCTTCTGACGCCACCGAAGCAACACGCCCGAGTCCATCGCGGAGACG
CCCCCGCCCCGAGACGGCGGGCGGGCGGCTGAGTTCTACGGGTACATGACCATGGACAGGCCCTGAGCCACTGT
GGCCGCTCCTACCGCCGGGTCTCGGGGGACGCGGCCCAGGACCTGGACCGAGGGCTGCGCAAGAGGACCTACTCC
CTGACCACGCCAGCCCGGCGAGCGGCCGCTGCCCCAGCCCTCCTCTGCCTCGCTGGATGAATACACCCTGATGCGG
GCCACCTTCTCGGGCAGCGCGGGCCGCTCTGCCCGTCTGCCCCGCGTCTCTCCCAAGGTGGCTACCACCCC
TACCCAGAGGACTACGGAGACATCGAGATCGGCTCCACAGGAGCTCCAGCAGCAACCTGGGGGCAGACGACGGC
TACATGCCCATGACGCCCCGCGCGGCCCTTCGCGGGCAGTGGGAGCGGCAGCTGCAGGAGCGACACTACATGCCC
ATGAGCCCCGCCAGCGTGTCCGCCCCCAAGCAGATCTTGACGCCAGGGCCGCCGCCGCCGCCGCCCGCTG
CCTTCTGCGGGGCTGCGGGGCCAGCACCCACCTCTGCGGCGGGCAGGACATTCCCGGCGAGCGGGGGCGGCTAC
AAGGCCAGCTCGCCCGCCGAGAGCTCCCCGAGGACAGTGGGTACATGCGCATGTGGTGCGGTTCCAAGCTGTCC
ATGGAGCATGCAGATGGCAAGCTGCTGCCAACGGGACTACCTCAACGTGTCCCCAGCGACGCGGTACCACG
GGCACCCCGCCCCGACTTCTTCTCCGAGCCCTGCACCCCGCGGGGAGCCGCTCAGGGGCGTTCCCGGCTGCTGC
TACAGCTCCTTGCCCCGCTCCTACAAGGCCCCCTACACCTGTGGCGGGGACAGCGACCACTAGCTGCTCATGAGC
TCCCCCGTGGGGCGCATCCTGGAGGAGGAGCGTCTGGAGCCTCAGGCCACGCCAGGGGCCAGCCAGGCGGCCAGC
GCCTTCGGGGCGGCCCCACGACGCCCTCACCCTGTAGTGCCCTTCGCCCCGTGCGGCGTAGCGGCCGCCGGTCA
GGTTTCTTGGGCCAGCGCGGCCGGGCGGTGAGGCCACGCGCCTGTCCCTGGAGGGGCTGCCAGCCTGCCAGC
ATGCACGAGTACCCACTGCCACGGAGCCCAAGAGCCCCGGCGAGTACATCAACATCGACTTTGGCGAGCCCCGGG
GCCCCCTGTGCGCCGCCCGCGCTCCCTGCTGGCGTGGCGGCCCTCGTCCCTCCTCGCTCTTGTCCGCCAGCAGC
CCGGCTCGTCTGGTTCAGGCACCCCGGGCACCAGCAGCGACAGCCGGCAGCGGTCTCCGCTCTCCGACTAC
ATGAACCTCGACTTCAGCTCCCCCAAGTCTCCTAAGCCGGGGCGCCCCGAGCGGCCACCCCGTGGGCTCCTTGGAC
GGCTCCTGTCCCCGAGGCCTCCTCCCGTATCCGCCGTTGCCCCCGCGTCCGTCCGCTCCCGTCTGCTGCTCT

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FIGURE 621B

CTGCAGCCGCCGCCACCGCCGCCGGCCCCGGGGGAGCTGTACCGCCTGCCCCCGCCTCGGCCGTTGCCACCGCC
CAGGGCCCCGGGCGCCGCTCATCGTTGTCTCTCGGACACCGGGGACAATGGTGA CTACACCGAGATGGCTTTTGGT
GTGGCCGCCACCCCGCCGAACCTATCGCGGCCCCCGAAGCCAGAAGCTGCCCCGCTGGCCAGCCCCGACGTCG
GGCGTGAAGAGGCTGAGCCTCATGGAGCAGGTGTGGGAGTCGAGGCCTTCTGCAGGCCAGCCAGCCCCGGAC
CCCCACCGCGGCGCCAAGGTCATCCGCGCAGACCCGACGGGGGGCCGCCGCCGCGCCACAGTTCCGAGACCTTCTCC
TCCACCACGACGGTCACCCCGTGTCCCGTCTCTCGCCACAACCCCAAGCGCCACAACCTCGGCCTCCGTGGAA
AATGTCTCTCTCAGGAAAAGCAGCGAGGGCGGCGTGGGTGTGCGCCCTGGAGGGGGCGACGAGCCGCCCCACCTCC
CCACGACAGTTGCAGCCGGCGCCCCCTTTGGCACCGCAGGGCCGGCCGTGGACCCCGGGTCAGCCCGGGGGGCTTG
GTCGGTTGTCTTGGGAGCGGTGGATCGCCCATGCGCAGAGAGACCTCTGCGGCTTCCAGAATGGTCTCAACTAC
ATCGCCATCGACGTGAGGGAGGAGCCCGGGCTGCCACCCAGCCGCAGCCGCCGCCGCCGCGCTTCTCAGCCG
GGAGACAAGAGCTCCTGGGGCCGGACCCGAAGCCTCGGGGGTCTCATCAGCGCTGTGGGCGTCGGCAGCACCGGC
GCGGGGTGCGGGGGGCCGGGTCCCGGTGCCCTGCCCCCTGCCAACACCTACGCCAGCATTGACTTCTTGTCCAC
CACTTGAAGGAGGCCACCATCGTGAAAGAGTGAAGATCTGTCTGGCTTTATCACCAGGATGTACATGTCAGAGA
ATATCATTAAAAGAAGACGCTCAGCGCTGTTTACGCCGAAGCTGCTTGCAGTTTTCTTTTGGATCTGAGCAATG
ACTGTGTTTGGAAACATCTGTGGACTCTGATAGATGGGGCACAACAAGGCAAGGTCACCTGCCTCTTCCCTTGT
TCCCGGATGGGCATTTCATCATTGTGCTGTTTGCCTTTTGTCTTTGTTTTAACAAAATTAGCTGAAGAAGTT
ATTCTCAAGAAAATTGGATGTTTTTATTGGCCTTCTTAAATTGTGGCCAGTGTCTTTTAATTTCTTCTTTTC
CTTTTGGCAAAGCAGATATAACCCTCAGCATGCTAGGAGAGTGCACCCGTACCTATGGAAGTGGTAAAATCTGGT
ATTTACTGGCTTACACTCAAACGACCACAGTCCTACCTCAGTTCAAGGTAAAGCCGGATTTCCGTGGCGGGGGT
CCACAGGACCTCCTGTAGTAGCCCTGCGCTGTGTGTCTGGAGCGCGTCTCGCCTTATTTAAATGGTCCAGTAG
ACAGCTGCTTGTGGATTCCAGTGCAGGTACCTGCGATGTTTACGTCCACACCGAGCCAGTGTGGGACTGACAT
TTCTCAATGGAAGTGAAATTTGGGATTGGACTTTGAAGACGATTACTAAATAATAATTATTATATGTAAGTGAAG
CAACCTACTTTTGAAGTCAACTGTATTGGGTAGTGGGAGGTGGGAGGGAAGGGCTTTGGGAAGGGGATGAATAT
CTCTTTTACCTTTTAAACAGACTTGTTTAATCTTCTCGATGTAGATGTTTATGTAGGTACTTCACATTGCAACGC
CTTTTATTCTATTTACAAGCTCAGATGTCTCTGCTCTCCTGAATCTTGGGCATGCCTTTCTGTAAACAAAAATCC
CTGTAGGCGTGTAGCAATTCCAGGGTGGTCCGGGTTTGGCAGATTTGATTTTTTAAAAATGTATTATCTTTAAT
AAAAATGTTATTATGTCAACAGTGAGGCTGCCCTGAACAAAAAAGCAAAAAAGAAAAAAGGAAAGA
AAGAAACTGATAAAAAGAGGCATCCAGCCCTATGTTATTGATGGAAAAAGAAAAAGAAAGCAATCTCGCA
GTACATGTTACTTGTGAAAAAATTCCGGACAAGACTACCTTGTTTTATGTTTTTCAGTATTCTGAAAAATACCAG
TGTGTGGCAGTTCTCGCAGATGTTACCTAAAACCTGCTGAACCTTGACCGGCAGAATGTTCTGCCGTTTTCTGCTCC
CTCGACACTTGATTGGAGGGCTGTGACCTCTCCTCCCGTGGGGGCTTCCCCAGTGCCTATCTTCTCTGATAGTC
ATGGAGAGGTTACACTAATTCATTGGAGATGTAAGTTGTTGGTTTTGTTTTGTTTTGTTTTTAGAAAAATATATA
TAAATATATAATAGATATCTATCGCTATAGAATAATGCATTAATAAAATGAGGCTTTTTTAGAGGAAGACCAAAA
AATTCAATGTCTTAAAAATATATTTAATGGCAATGCAAAAGTCTTCTGCTTCCGTGCTGAACCTTTAGAACAGAG
GATTGTATTGCAAGACAAAGTTGAATGTAAAGTGATCTCCCTGAACATTTTAAAGGTTTTACTTTTCTGAAATTA
TACATCACAGCAGTGATAGGCCATATAATGTTAGCTGGAAGGTCAATTCAGTGTATGATATACTTTATTAAGA
TGTATAAACATCCTGAAGTTTTTATTAGTTTTGGGAATAGGCATCAGTGGGTGGTATTTGCTTTGTAACCTCCC
CCCAGGTACGATAGGGACTGAATATGGACCCTGCTGAAAGCAGTGTATTGACGCATATTTAACTCGCCCTCTATC
CGTAGAGTAGTCATGACACTATACAGATGGTTCGTGTTTACTGTCAGCTTAAACAAGCAAAATACACAGATGA
TAATATGCTAAATTTTCTCTATCCTGTACATTTTCAAAAAAGGCATATGCAATATTTACATTTTAAATTTAGTT
TACAGAATGGAACCAAAATGTATAAATGTTATGTTTGCTAAACTTCAATGTATATTGGGTCTTTGTACATTT
TGCTGACTTACCTTAAATTTAAATATTTTTTGTATATAAACTTTAACAGTTATTAAACAGTGTCTTTCTTTT
GGGTACGTATTGTTTCTGGATATCAAGATGTTAAATATATTTCTTGCTATTGTGATATGACAAGAGACTTAACTT
ATCTTGCTCTGTCTTCCACTGTACACGCTGTATATAGGGGTCAATGTGATGCTGCTGGAGACGAGAATAAACTGG
ACTAGAATAGTGCAATTGTATTTAGTCTGTATTGATCATGGATGCCCTCCTTAATAGCCATATGCAATAAAATAAA
GTACATTATTTATGAAATGAA

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FIGURE 622

MASPPRHGPPGPASGDGPNLNNNNNNNNHNSVRKCGYLRNEEHGHRFFVLRGPGAGGDEATAGGGSAPQPPRLE
YYESEKKWRSKAGAPKRVIALDCCLNINKRADAKHKYLIALYTKDEYFAVAAENEQEQEGWYRALTDLVSEGRAA
AGDAPPAAPAAASCSASLPGALGGSAGAAGAEDSYGLVAPATAAYREVWQVNLKPKGLGQSKNLTGVYRLCLSAR
TIGFVKLNCEQPSVTIQLMNIRRCGHSDSFFFIEVGRSAVTGPGELWMQADDSVVAQNIHETILEAMKALKELFE
FRPRSKSQSSGSSATHPI SVPGARRHHHLVNLPPSQTGLVRRSRTDSLAAATPPAAKCSSCRVRTASEGDGGRAAG
AAAAAQRLVSVAGSPLSPGPVRAPLSRSHTLSGGCGGRGSKVALLPAGGALQHSRSMMPVAHSPPAATSPGSL
SSSGHSGSYPPPPGPHPLPHPLHHGPGQRPSSGSASASGSPSDPGFMSLDEYGSSPGDLRAFCSHRSNTPE
AETPPARDGGGGGEFYGYMTMDRPLSHCGRSYRRVSGDAAQDLDRGLRKRTYSLTTPARQRPVQPSSASLDEYT
LMRATFSGSAGRLCPSCPASSPKVAYHPYPEDYGDIEIGSHRSSSNLGADDGYMPMTPGAAGAGSGSGSCRSD
YMPMSPASVSAPKQILQPRAAAAAAAVPSAGPAGPAPTSAAGRTFPASGGGYKASSPAESSPEDSGYMRMWCGS
KLSMEHADGKLLPNGDYLVNPSDAVTTGTPPDFSAALHPGGEPLRGVPGCCYSSLPRSYKAPYTCGGDSQYV
LMSSPVGRILEEERLEPQATPGPSQAASAFGAGPTQPPHPVVPSPVRRSGRRSGFLGQRGRAVRPTRLGLEGLPS
LPSMHEYPLPPEPKSPGEYINIDFGEPGARLSPPAPLLASAASSSSLLSASSPASSLGSCTPGTSSDSRQSRPL
SDYMNLD FSSPKSPKPGAPSGHPVGSGLDGLLSPEASSPYPLPPRPSPSPSSSLQPPPPPPAPGELYRLPPASAV
ATAQGPAAASSLSSDTGDNGDYTEMAFGVAATPPQPIAAPPKPEARVASPTSGVKRLSLMEQVSGVEAFLQASQ
PPDPHRGAKVIRADPQGGRRRHSSETFSSTTTVTPVSPFAHNPKRHNSASVENVSLRKSSEGGVGVPGGGDEP
PTSPRQLQAPAPPLAPQGRPWTPGQPGGLVGCPSGGSPMRRETSAGFQNGLYIAIDVREEPGLPPQPQPPPPPL
PQPGDKSSWGRTRSLGGLISAVGVGSTGGGCGGPGPGALPPANTYASIDFLSHHLKEATIVKE

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FIGURE 623

GTCAACCAGTGAGGCTGCCCTGAACAAAAAAGAAAAAAGAAAAAAGGAAAGAAAGAAACTGATAA
AAAGAGGCATTCCAGCCCTATGTTATTGATGGAAAAAGAAAAAGAAAGCAATCTCGCAGTACATGTTACT
TGTGAAAAAATCCGGACAAGACTACCCTTGTTTTATGTTTTTCAGTATTCTGAAAATACCAGTGTGTGGCAGTTC
TCGCAGATGTTACCTAAACTGCTGAACTTGACCGGCAGAAATGTTCTGCCGTTTTCTGCTCCCTCGACACTTGAT
TGGAGGGCTGTCGACCTCTCCTCCCGTGGGGGCTTCCCCAGTGCCCTATCTTCTCTGATAGTCATGGAGAGGTTAC
ACTAATTCATTGGAGATGTAAGTTGTTGGTTTTGTTTTGTTTTGTTTTTAGAAAAATATATATAAATATATAATA
GATATCTATCGCTATAGAATAATGCATTAATAAAATGAGGCTTTTTTAGAGGAAGACCAAAAAATTCAATGTCTT
AAAAATATATTTAATGGCAATGCAAAAGTCTTCCTGCTTCCGTGCTGAACTTTAGAACAGAGGATTGTATTGCAA
GACAAAGTTGAATGTAAAGTGATCTCCCTGAACATTTTTAAGGTTTTACTTTTCTGAAATTATACATCACAGCAG
TGCATAGGCCATATAATGTTAGCTGGAAGGTCAATTTTCAGTGTATGATATACTTTATTAAGATGTATAAACATC
CTGAAGTTTTTATTTAGTTTTGGGAATAGGCATCAATGGGTGGTATTTGCTTTGTAACCCCCAGGTACGATA
GGGACTGAATATGGACCTGCTGAAAAGCAGTGTATTGACGCATATTTAACTCGCCCTCTATCCGTAGAGTAGTC
ATGACACTATACAGATGGTTCGTGTTTCACTGTCAGCTTAAACAAGCAAAATACACAGATGATAATATGCTAAA
TTTTCTCTATCCTGTACATTTACAAAAAGGCATATGCAATATTTACATTTTTAATTTAGTTTACAGAATGGAA
CCAAAATGTATAAATGTTATGTTTGCTAAACTTCACAATGTATATTGGGTCTTTGTACATTTTGCCCTGACTTA
CCTTAAATTTAAATATTTTTTGCTATATAAACTTTAACAGTTATTAAACAGTGTTCCTTTTTGGGTACGTATT
GTTTCTGGATATCAAGATGTTAAATATATTTCTTGCTATTGTGATATGACAAGAGACTTAACTTATCTTGCTCTG
TCTTCCACTGTACACGCTGTATATAGGGGTCAATGTGATGCTGCTGGAGACGAGAATAAACTGGACTAGAATAGT
GCATTGTATTTAGTCTGTATTGATCATGGATGCCCTCCTTAATAGCCATATGCAATAAAATAAAGTACATTATTT
ATGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 624A

GGGTGATTACGCGCCCGCGAGGCGGAACGGGCCGCAAGAGGAGGAGGGGAGAGCCCGTCCGCGCCTGGGCTCCC
GGGGTGGCACGAGCCCGCGCGGAGTGCGAGGCGGAGGCGAGGAGGCGCGGGGACGGGAGGCGAGGCCGGCCG
GGCCCCGAAGCCATGGAGAACGCGCACACCAAGACGGTGGAGGAGGTGCTGGGCCACTTCGGCGTCAACGAGAG
TACGGGGCTGAGCCTGGAACAGGTCAAGAAGCTTAAGGAGAGATGGGGCTCCAACGAGTTACCGGCTGAAGAAGG
AAAAACCTTGCTGGAACCTTGCTGATTGAGCAGTTTGAAGACTTGCTAGTTAGGATTTTATTACTGGCAGCATGTAT
ATCTTTTGTGGCTTGGTTTGAAGAAGGTGAAGAAACAATTACAGCCTTTGTAGAACCTTTTGTAAATTTACT
CATATTAGTAGCCAATGCAATTGTGGGTGTATGGCAGGAAAGAAATGCTGAAATGCCATCGAAGCCCTTAAGGA
ATATGAGCCTGAAATGGGCAAAGTGTATCGACAGGACAGAAAGAGTGTGCAGCGGATTAAAGCTAAAGACATAGT
TCCTGGTGATATTGTAGAAATTGCTGTTGGTGACAAAGTTCTGCTGATATAAGGTTAACTTCCATCAAATCTAC
CACACTAAGAGTTGACCAGTCAATTCTCACAGGTGAATCTGTCTCTGTCATCAAGCACACTGATCCCGTCCCTGA
CCCACGAGCTGTCAACCAAGATAAAAAGAACATGCTGTTTTCTGGTACAAACATTGCTGCTGGGAAAGCTATGGG
AGTGGTGGTAGCAACTGGAGTTAACACCGAAATTGGCAAGATCCGGGATGAAATGGTGGCAACAGAACAGGAGAG
AACACCCCTTCAGCAAAACTAGATGAATTTGGGGAACAGCTTTCCAAAGTCATCTCCCTTATTTGCATTGCAGT
CTGGATCATAAATATTGGGCACCTTCAATGACCCGGTTCATGGAGGGTCTGGATCAGAGGTGCTATTTACTACTT
TAAATTTGCAGTGGCCCTGGCTGTAGCAGCCATTCTGAAGGTCTGCCTGCAGTCATCACCACCTGCCTGGCTCT
TGGAATCGCAGAATGGCAAAGAAAATGCCATTGTTGGAAGCCTCCCGTCTGTGGAAACCCTTGGTTGTACTTC
TGTTATCTGCTCAGACAAGACTGGTACACTTACAACAAACCAGATGTCAGTCTGCAGGATGTTTATTCTGGACAG
AGTGAAGGTGATACTTGTTCCTTAATGAGTTTACCATAACTGGATCAACTTATGCACCTATTGGAGAAGTGCA
TAAAGATGATAAACAGTGAATTGTCACCAGTATGATGGTCTGGTAGAATTAGCAACAATTTGTGCTCTTTGTAA
TGACTCTGCTTTGGATTACAATGAGGCAAAGGGTGTGTATGAAAAAGTTGGAGAAGCTACAGAGACTGCTCTCAC
TTGCCTAGTAGAGAAGATGAATGTATTTGATACCGAATTGAAGGGTCTTTCTAAAATAGAACGTGCAAATGCCTG
CAACTCAGTCATTAAACAGCTGATGAAAAAGGAATTCACCTAGAGTTTTTACGTGACAGAAAGTCAATGTCGGT
TTACTGTACACCAAATAAACCAAGCAGGACATCAATGAGCAAGATGTTTGTGAAGGGTGTCTCTGAAGGTGTCTAT
TGACAGGTGCACCCACATTCGAGTTGGAAGTACTAAGGTTTCTATGACCTCTGGAGTCAAACAGAAGATCATGTC
TGTCATTGAGAGTGGGGTAGTGGCAGCGACACACTGCGATGCCTGGCCCTGGCCACTCATGACAACCCACTGAG
AAGAGAAGAAATGCACCTTGAGGACTCTGCCAACTTTATTAAATATGAGACCAATCTGACCTTCGTTGGCTGCGT
GGGCATGCTGGATCCTCCGAGAATCGAGGTGGCCTCCTCCGTGAAGCTGTGCCGGCAAGCAGGCATCCGGGTCTAT
CATGATCACTGGGGACAACAAGGGCACTGCTGTGGCCATCTGTGCGCCGATCGGCATCTTCGGGCAGGATGAGGA
CGTGACGTCAAAAAGCTTTTACAGGCCGGGAGTTTGATGAAGTCAACCCCTCCGCCCAGCAGACGCCTGCCTGAA
CGCCCGCTGTTTTGCTCGAGTTGAACCCTCCCAAGTCTAAAATCGTAGAATTTCTTCACTCTTTTGATGAGAT
TACAGCTATGACTGGCGATGGCGTGAACGATGCTCCTGCTCTGAAGAAAGCCGAGATTGGCATTGCTATGGGCTC
TGGCACTGCGGTGGCTAAAACCGCCTCTGAGATGGTCTGGCGGATGACAACTTCTCCACCATTGTGGCTGCCGT
TGAGGAGGGGGCGGGCAATCTACAACAACATGAACAGTTCATCCGCTACCTCATCTCGTCCAACGTCGGGGAAGT
TGCTGTATTTTTCTGACAGCAGCCCTTGGATTTCCCGAGGCTTTGATTCTGTTCACTGCTCTGGGTCAATCT
GGTGACAGATGGCCTGCCCTGCACTGAGGTTCAACCCCTCTGATCTGGACATCATGAATAAACCTCCCGG
GAACCCAAAGGAACCATGATCAGCGGGTGGCTCTTTTTCCGTTACTTGGCTATTGGCTGTTACGTCGGCGCTGC
TACCGTGGGTGCTGCTGCATGGTGGTTCATTGCTGCTGACGGTGGTCCAAGAGTGTCTTCTACCAGCTGAGTCA
TTTCTTACAGTGTAAGAGGACAACCCGGACTTTGAAGGCGTGGATTGTGCAATCTTTGAATCCCCATACCCGAT
GACAATGGCGCTCTCTGTTCTAGTAACATAGAAATGTGTAACGCCCTCAACAGCTTGTCGAAAACAGTCTCT
GCTGAGGATGCCCCCTGGGAGAACATCTGGCTCGTGGGCTCCATCTGCCTGTCCATGTCACTCCACTTCTGAT
CCTCTATGTGCAACCTTGCCACTCATCTCCAGATCACACCGCTGAACGTGACCCAGTGGCTGATGGTGTGCTGAA
AATCTCCTTGCCCGTGATTCTCATGGATGAGACGCTCAAGTTTGTGGCCCGCAACTACCTGGAACCTGGTAAAGA
GTGTGTGCAGCCTGCCACCAATCCTGCTCGTTCTCGGCATGCACCGATGGGATTTCCTGGCCGTTTGTGCTGCT
CATAATGCCCTGGTGATCTGGGTCTATAGCACAGACACTAACTTTAGCGATATGTTCTGGTCTTGACTGACAGT
TTTCCATAAAGAAGATGTTTAACTTAATCAATTAATTTTTTTATTGTTTAAAGCAACTGTCTATTTCTGCTGAAT
TTTACATGAACATACTGGCTGGTGTGATGGAGTTTCATACTCTAGATTTTGTGTTTCTGTTTCTGACTCCAGTGG
GGCAAGATTTTCTTTTTTATACACATAATTAAGTGTCCATTGACATGTACAGAGAACTAACACTATTTTATGC
AAATATTTTTTTGTAGATGAAAAAGCATGTACAGTGTCTGTTTAAATACTCATCCTTGTATAAAAAAATAGTTG

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FIGURE 624B

AGCCAGCAGACATTGTCAGCAAATTAATTGGCAGCAGATTTTAGGAAATGAATGTGTGTGGTTTTTTTTCTAAAA
CTAAATAGCATGTATTGTGTCTTTTGCATGATGATCCGGATTTAATTTGATATCACAGTCTAATTTTTATTTCATA
AGCCAATTTTTCTGCACTGAGCAGAGTCTTGCTACCTCAGTCAGTATTGTTTTGGTTTGCTACTTCCCTCACCCA
CTTTGGCCTCCGTTACCCCCACCCACCCACCTCTCCCCACCTTACCCCCGCCCCGCTTGGCTTCTTCTTTAGG
ATTGTGATGGTTCGTTCTGTTTACATCAGTTTTAACGAGAGGTATGCCTGTACTCGCTTGTGCAGAAAACATTGT
TCCAGATTCAATCGACTGGGTTTATGTCCCTTCACATAGTTTTTAAGGTTATTTATTTAAATGTCTAATGTATTT
TATTGTAACAGACATTGTTTTGCCAACATTGCCTATTTCAGTGGCACGTCATCTAGTTTTAAAAAATAAACAT
TTTAAAAAG

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FIGURE 625

MENAHKTVEEVLGHFGVNESTGLSLEQVKKKLKERWGSNELPAEEGKTLLLELVIEQFEDLLVRILLLAACISFVL
AWFEEGEETITAFVEPFVILLILVANAIVGVWQERNAENAIEALKEYEPEMGKVYRQDRKSVQRIKAKDIVPGDI
VEIAVGDKVPADIRLTSIKSTTLRVDQSILTIGESVSVIKHTDPVPDPRAVNQDKKNMLFSGTNIAAGKAMGVVVA
TGVNTEIGKIRDEMVAEQERTPLQQKLDEFGEQLSKVISLICIAVWIINIGHFNDEPVHGGSWIRGAIYYFKIAV
ALAVAAIPEGLPAVITTCLALGTRMAKKNAIVRSLPSVETLGCTSVICSDKTGTLTTNQMSVCRMFIILDRVEGD
TCSLNEFTITGSTYAPIGEVHKDDKPVNCHQYDGLVELATICALCNDSDALDYNEAKGVYEKVGEEATETALTCLVE
KMNVFDTELKGLSKIERANACNSVIKQLMKKEFTLEFSRDRKSMSVYCTPNKPSRTSMSKMFVKGAPEGVIDRCT
HIRVGSTKVPMTSGVKQKIMSVIREWGS GSDTLRCLALATHDNPLRREEMHLED SANFIKYETNLTFVGCVGMLD
PPRIEVASSVKLCRQAGIRVIMITGDNKGTAVAICRRIGIFGQDEDVTSKAF TGREFDELNPSAQRDA CLNARCF
ARVEPSHKSKIVEFLQSFDEITAMTGDGVNDAPALKKAEIGIAMGSGTAVAKTASEMVLADDNFSTIVA AVEEGR
AIYNNMKQFIRYLISNVGEVVCIFLTAALGFPEALIPVQLLWVNLVTDGLPATALGFNPPDLDIMNKPPRNPKE
PLISGWLFFRYLAIGCYVGAATVGAAAWWFIAADGGPRVSFYQLSHFLQCKEDNPDFEGVDCAIFESPYPMTMAL
SVLVTIEMCNALNSLSENQSLRMPPWENIWLVGSI CLSMLHFLILYVEPLPLIFQITPLNVTQWLMVLKISLP
VILMDETLKFVARNYLEPGKECVQPATKSCSF SACTDGISWPFVLLIMPLVIWVYSTDTNFS DMFWS

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FIGURE 626

GAGGAGGCCCCGAGAGGAGTCGGTGGCAGCGGCGGGCGGGACCGGCAGCAGCAGCAGCAGCAGCAACC
ACTAGCCTCCTGCCCCGCGGCGTTGCGACGAGCCCCACGAGCCGCTCACCCCGCCGTTCTCAGCGCTGCCCCGACC
CCGCTGGCGCGCCTCCCGCCGAGTCCCGGCAGCGCCTCAGTTGTCTCCGACTCGCCCTCGGCCTTCGCGCAGC
GCAGCACAGCCGCACGCACCGCAGCACAGCACAGCACAGCCAGGCATAGCTTCGGCACAGCCCCGGCTCCGGCT
CCTGCGGCAGCTCCTCTGGCACGTCCCTGCGCCGACATTCTGGAGGTTGGATGCTCTTGTCCAAAATCAACTCGC
TTGCCCACCTGCGCGCCGCGCCCTGCAACGACCTGCACGCCACCAAGCTGGCGCCCGGCAAGGAGAAGGAGCCCC
TGGAGTCGCAGTACCAGGTGGGCCCGCTACTGGGCAGCGGCGGCTTCGGCTCGGTCTACTCAGGCATCCGCGTCT
CCGACAACTTGCCGGTGGCCATCAAACACGTGGAGAAGGACCGGATTTCGACTGGGGAGAGCTGCCTAATGGCA
CTCGAGTGCCCATGGAAGTGGTCCTGCTGAAGAAGGTGAGCTCGGGTTTCTCCGGCGTCATTAGGCTCCTGGACT
GGTTCGAGAGGCCCCGACAGTTTCGTCTGATCCTGGAGAGGCCCCGAGCCGGTGCAAGATCTCTTCGACTTCATCA
CGGAAAGGGGAGCCCTGCAAGAGGAGCTGGCCCCGAGCTTCTTCTGGCAGGTGCTGGAGGCCGTGCGGCACTGCC
ACAACTGCGGGGTGCTACACCGCGACATCAAGGACGAAAACATCCTTATCGACCTCAATCGCGGCGAGCTCAAGC
TCATCGACTTCGGGTGCGGGGCGCTGCTCAAGGACACCGTCTACACGGACTTCGATGGGACCCGAGTGTATAGCC
CTCCAGAGTGGATCCGCTACCATCGCTACCATGGCAGGTGCGCGGCAGTCTGGTCCCTGGGGATCCTGCTGTATG
ATATGGTGTGTGGAGATATTCCTTTTCGAGCATGACGAAGAGATCATCAGGGGCCAGGTTTTCTTCAGGCAGAGGG
TCTCTTCAGAATGTCAGCATCTCATTAGATGGTGTCTGGCCCTGAGACCATCAGATAGGCCAACCTTCGAAGAAA
TCCAGAACCATCCATGGATGCAAGATGTTCTCTGCCCCAGGAACTGCTGAGATCCACCTCCACAGCCTGTGCG
CGGGGCCAGCAAATAGCAGCCTTTCTGGCAGGTCTCCCTCTCTTGTGTCAGATGCCCAGGGAGGGGAAGCTTC
TGCTCCAGCTTCCCGAGTACCAGTGACACGTCTCGCCAAGCAGGACAGTGCTTGATACAGGAACAACATTTACA
ACTCATTCCAGATCCCAGGCCCTGGAGGCTGCCTCCCAACAGTGGGGAAGAGTGACTCTCCAGGGGTCTAGGC
CTCAACTCCTCCCATAGATACTCTCTTCTCTCATAGGTGTCCAGCATTGCTGGACTCTGAAATATCCCGGGGT
GGGGGGTGGGGGTGGGCAGAACCCTGCCAATGGAACCTTTCTTCATCATGAGTTCTGCTGAATGCCGCGATGGG
TCAGGTAGGGGGGAAACAGGTTGGGATGGGATAGGACTAGCACATTTTAAGTCCCTGTACCTCTTCCGACTCTT
TCTGAGTGCCTTCTGTGGGGACTCCGGCTGTGCTGGGAGAAATACTTGAACCTGCCTCTTTTACCTGCTGCTTCT
CCAAAAATCTGCCTGGGTTTTGTTCCTATTTTTCTCTCCTGTCTCCCTCACCCCTCCTTCATATGAAAGGTG
CCATGGAAGAGGCTACAGGGCCAAACGCTGAGCCACCTGCCCTTTTTTCTGCCTCCTTTAGTAAAACTCCGAGTG
AACTGGTCTTCTTTTTTGGTTTTTACTTAACTGTTTCAAAGCCAAGACCTCACACACACAAAAAATGCACAAAC
CAAGCAATCAACAGAAAAGCTGTAAATGTGTGTACAGTTGGCATGGTAGTATACAAAAAGATTGTAGTGGATCTA
ATTTTTAAGAAATTTTGCCTTTAAGTTATTTTACCTGTTTTTGTCTTGTGTTTTGAAAGATGCGCATTCTAACCT
GGAGGTCAATGTTATGTATTTATTTATTTATTTATTTGGTTCCCTTCTTCCATTCAGCTGCTGCCC
TAGTTTTCTTTCCTCCTTTCCTCCTCTGACTTGGGGACCTTTTGGGGGAGGGCTGCGACGCTTGCTCTGTTTGTG
GGGTGACGGGACTCAGGCGGGACAGTGCTGCAGCTCCCTGGCTTCTGTGGGGCCCTCACCTACTTACCCAGGTG
GGTCCCGGCTCTGTGGGTGATGGGAGGGGCCATTGCTGACTGTGTATATAGGATAATTATGAAACACAGTTCTGG
ATGGTGTGCCTTCCAGATCCTCTCTGGGGCTGTGTTTTGAGCAGCAGGTAGCCTGCTGGTTTTATCTGAGTGAAA
TACTGTACAGGGGAATAAAAGAGATCTTATTTTTTTTTTATACTTGCGTTTGAATAAAAACCTTTGGCTTT

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FIGURE 627

MLLSKINSLAHLRAAPCNDLHATKLAPGKEKEPLESQYQVGPELLGSGGFGSVYSGIRVSDNLPVAIKHVEKDRI
DWGELPNGTRVPMEVVLLKKVSSGFSGVIRLLDWFERPDSFVLILERPEPVQDLDFITERGALQEELARSFFWQ
VLEAVRHCHNCGVLHRDIKDENILIDLNRGELKLIDFGSGALLKDTVYTDGTRVYSPPEWIRYHRYHGRSAAV
WSLGILLYDMVCGDIPFEHDEEIIIRGQVFFRQRVSSCQHLLRWCLALRPDRPTFEEIQNHPWMQDVLLPQETA
EIHLSLSLSPGPSK

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FIGURE 628

GTTTGTGGCTGCGGCAGCAGGTAGCAAAGTGACGCCGAGGGCCTGAGTGCTCCAGTAGCCACCGCATCTGGAGA
ACCAGCGGTTACCAATGGAGGGGATCAGTATATACACTTCAGATAACTACACCGAGGAAATGGGCTCAGGGGACTA
TGACTCCATGAAGGAACCCCTGTTTCCGTGAAGAAAATGCTAATTTCAATAAAATCTTCCTGCCACCATCTACTC
CATCATCTTCTTAAGTGGCATTGTGGGCAATGGATTGGTCATCCTGGTCATGGGTTACCAGAAGAACTGAGAAG
CATGACGGACAAGTACAGGCTGCACCTGTGAGTGGCCGACCTCCTCTTTGTATCACGCTTCCCTTCTGGGCAGT
TGATGCCGTGGCAAACCTGGTACTTTGGGAACCTCCTATGCAAGGCAGTCCATGTATCTACACAGTCAACCTCTA
CAGCAGTGTCTCATCCTGGCCTTCATCAGTCTGGACCGCTACCTGGCCATCGTCCACGCCACCAACAGTCAGAG
GCCAAGGAAGCTGTTGGCTGAAAAGGTGGTCTATGTTGGCGTCTGGATCCCTGCCCTCCTGCTGACTATTCCCGA
CTTCATCTTTGCCAACGTCAGTGAGGCAGATGACAGATATATCTGTGACCGCTTCTACCCCAATGACTTGTGGGT
GGTTGTGTTCCAGTTTCAGCACATCATGGTTGGCCTTATCCTGCCTGGTATTGTCATCCTGTCTGCTATTGTCAT
TATCATCTCCAAGCTGTACACTCCAAGGGCCACCAGAAGCGCAAGGCCCTCAAGACCACAGTCATCCTCATCCT
GGCTTCTTCGCCCTGTTGGCTGCCTTACTACATTGGGATCAGCATCGACTCCTTCATCCTCCTGGAAATCATCAA
GCAAGGGTGTGAGTTTGAGAACACTGTGCACAAGTGGATTTCATCACCAGGGCCCTAGCTTTTCTTCCACTGTTG
TCTGAACCCCATCCTCTATGCTTTCCTTGGAGCCAAATTTAAACCTCTGCCACGACGCACTCACCTCTGTGAG
CAGAGGGTCCAGCCTCAAGATCCTCTCCAAAGGAAAGCGAGGTGGACATTCATCTGTTTCCACTGAGTCTGAGTC
TTCAAGTTTTCACTCCAGCTAAACACAGATGTAAAAGACTTTTTTTTATACGATAAATAACTTTTTTTTAAGTTAC
ACATTTTTTCAGATATAAAAGACTGACCAATATTGTACAGTTTTTATTGCTTGTGGATTTTTGTCTTGTGTTTCT
TTAGTTTTTGTGAAGTTTAATTGACTTATTTATATAAAATTTTTTTTGTTCATATTGATGTGTGTCTAGGCAGGA
CCTGTGGCCAAGTCTTAGTTGCTGTATGTCTCGTGGTAGGACTGTAGAAAAGGGAAGTGAACATTCCAGAGCGT
GTAGTGAATCACGTAAAGCTAGAAATGATCCCCAGCTGTTTATGCATAGATAATCTCTCCATTCCCGTGAACGT
TTTTCTGTCTCTTAAGACGTGATTTTGTCTGTAGAAGATGGCACTTATAACCAAAGCCCAAAGTGGTATAGAAATG
CTGGTTTTTCAGTTTTTCAGGAGTGGGTGATTTTCAGCACCTACAGTGTACAGTCTTGTATTAAGTTGTTAATAAA
AGTACATGTTAAACTTACTTAGTGTATG

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FIGURE 629

MEGISIYTS DNYTEEMGSGDYDSMKEPCFREENANFNKIFLPTIYSIIFLTGIVGNGLVILVMGYQKKLRSM
YRLHLSVADLLFVITL PFWAVDAVANWYFGNFLCKAVHVIYTVNLYSSVLILAFISLD RYLAIVHATNSQRPRKL
LAEKV VYVGWIPALLLTIPDFIFANVSEADDRYICDRFY PNDLWVVVFQFQHIMVGLILPGIVILSCYCIISK
LSHSKGHQKRKALKTTVILILAFFACWLPYYIGISIDSFILLEI IKQGEFENTVHKWISITEALAFFHCCLNPI
LYAFLGAKFKTSAQHALTSVSRGSSLKILSKGKRGGHSSVSTESESSSFHSS

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FIGURE 630

GAGCTAGCTTTGCAAT**AT**GGCGGCCGAGGCGGACGGACCGCTTAAACGGCTGCTCGTGCCGATTCTTTTACCTGA
GAAATGCTACGACCAACTTTTCGTTCACTGGGACTTGCTTCACGTCCCCTGCCTCAAGATTCTCCTCAGCAAAGG
CCTGGGGCTGGGCATTGTGGCTGGCTCACTTCTAGTAAAGCTGCCCCAGGTGTTTAAAATCCGGGGAGCCAAGAG
TGCTGAAGGGTTGAGTCTCCAGTCTGTAATGCTGGAGCTAGTGGCATTGACTGGGACCATGGTCTACAGCATCAC
TAACAACCTTCCCATTTCAGCTCTTGGGGTGAAGCCTTATTCTGATGCTCCAGACGATCACCATCTGCTTCCTGGT
CATGCACTACAGAGGACAGACTGTGAAAGGTGTGCTTTCTCGCTTGCTACGGCCTGGTCCTGCTGGTGCTTCT
CTCACCTCTGACGCCCTTGACTGTAGTCACCCTGCTCCAGGCCTCCAATGTGCCTGCTGTGGTGGTGGGGAGGCT
TCTCCAGGCAGCCACCAACTACCACAACGGGTACACAGGCCAGCTCTCAGCCATCACAGTCTTCTGCTGTTTGG
GGGCTCCCTGGCCCGAATCTTCACTTCCATTTCAGGAAACCGGAGATCCCCTGATGGCTGGGACCTTTGTGGTCTC
CTCTCTCTGCAACGGCCTCATCGCCGCCAGCTGCTCTTCTACTGGAATGCAAAGCCTCCCCACAAGCAGAAAAA
GGCGCAG**TAG**AGCCAGCTACTGGAGTCATTCCGTTTCCACTCATTACCCAACCTCAGGGTTCTCCCCATCTGAG
CCAGCCTGCTGGTGTGACTTACTCATCCTCCATTCTCTGCACTTGCAGACTTTCTGAGCCAGGGTTTTCTTTTA
GTGGAACAAATGGTTGATGGATCCAGATCCTTAGAAAAGGAGAGGATGGGGGTAGAGTCTCCCAAGCCAAAATT
TTGACATTTGAGTGCTTTTCGTAAGCCCTGTACATGTACTATTAATTCAGTCATTTCAGCCAAGCCTCCTCCTCTAG
CAGCAATTTCCAGCTGTTTAACTATCCTGGGCAAATGTTTTACCCTGTCTCCAGCCTCCCTGCTTCCCTTCT
GGCCCTGGAAGACTGAGTCTGGACGGCAGAGTGGAGGGACTGGGAGGCTGTGGCTGCCTCCCTCCCTCAGCCCGG
CTGGGACTGTCTCCCGGACCCAGTGCTGGGGTGGGGGAAGGGGACGGAGAAAGACTCAGGCAGGGCCCCAGGG
TGGGGTGAGGAGGTTCTTGCTCTGGCAGGTCTAGGCGGAAGGGAGTGGAGATGGGGCTGGTTGCTGCTGCAGTGA
GGGGAACAGATGGGACAATAAAGACTGGAGACTCAGTTGAATAATGCAAAAAAAAAAAAAA

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FIGURE 631

MAAEADGPLKRLLPILLPEKCYDQLFVQWDLLHVPCLKILLSKGLGLGIVAGSLLVKLPQVFKIRGAKSAEGLS
LQSVMLELVALTGTMTVYSITNNFPFSSWGEALFLMLQTITICFLVMHYRGQTVKGVAFACGLVLLVLLSPLTP
LTVVTLLQASNVPVAVVGRLLQAATNYHNGYTGQLSAITVFLFEGGSLARIFTSIQETGDPLMAGTFVVSLLCNG
LIAAQLLFYWNAKPPHKQKKAQ

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FIGURE 632

CGGGAGGTCAGAAAACCGGGCCGCGGGCGGCACCGACAGCTGGGGCCCGGGTCAGGGACACGCGGAGGTCAGGCC
GGTGAAGGCGGCAGGAAGCTGGAGCACGATCCCAGGAGGAACAATCCTGCACC**ATG**ACTCAACAGCCACTTCGAG
GAGTGACCAGCCTGCGTTTCAACCAAGACCAAAGCTGCTTTTGCTGCGCCATGGAGACAGGTGTGCGCATCTACA
ACGTGGAGCCCTTGATGGAGAAGGGGCATCTGGACCACGAGCAGGTGGGCAGCATGGGCTTGGTGGAGATGCTGC
ACCGCTCCAACCTTCTGGCCTTGGTGGGCGGTGGTAGTAGTCCCAAGTTCTCAGAGATCTCAGTGCTGATCTGGG
ACGATGCCCCGGGAGGGCAAGGACTCCAAGGAGAAGCTGGTGCTGGAGTTCACCTTCACCAAGCCAGTGCTTTCTG
TGCGCATGCGCCATGACAAGATCGTGATCGTGCTGAAGAACCGCATCTATGTGTACTCCTTCCCCGACAATCCCC
GAAAGCTGTTTGAGTTTGATACCCGGGACAACCCCAAGGGGCTCTGTGACCTCTGCCCCAGCCTGGAGAAGCAAC
TGCTAGTGTTCCCGGGACACAAGTGTGGGAGTCTGCAACTTGTGGACCTGGCGAGCACAAAGCCTGGCACCTCGT
CTGCTCCATTACGATCAATGCACATCAGAGTGACATAGCCTGTGTGTCTCTAAACCAGCCAGGCACTGTAGTGG
CCTCAGCCTCCCAGAAGGGTACCCCTTATTGCGCTCTTTGACACACAATCCAAGGAGAACTGGTGGAGCTGCGCC
GAGGCACTGACCCTGCCACCCTCTACTGCATTAACCTTCAGCCACGACTCCTCCTTCTCCTCTGCGCTTCCAGTGATA
AGGGTACTGTCCATATCTTTGCTCTCAAGGATACCCGCTCAACCGCGCTCCGCGCTGGCTCGCGTGGGCAAGG
TGGGGCCTATGATTGGGCAGTACGTGGACTCTCAGTGGAGCCTGGCGAGCTTCACTGTGCCTGCTGAGTCAGCTT
GCATCTGCGCCTTCGGTCGCAATACTTCCAAGAACGTCAACTCTGTCAATTGCCATCTGCGTAGATGGGACCTTCC
ACAAATATGTCTTCACTCCTGATGGAACTGCAACAGAGAGGCTTTCGACGTGTACCTTGACATCTGTGATGATG
ATGACTTT**TAA**GGACCCTGGGGGCTGTGCTAGGGACCTGCAGTGGCAGAACTGCAGAGCTGAGCCTTGGCAGTGG
GGCGTGCTTGGAAGCCACCAGCCAGCAAGCATTAAATGGGGCTGGTGGCCACTTTCCACTCAGCAGAGCTATGTCT
AAATAAAGAGCTCACTTCCCCCAGCACTTCTTGATGACTGTGTGCCCCAAGGGCCAGGCCAGAGACCCAGGAAG
GCAGCGACCCCTTGGGATCCCTAACCTGGAGGAAATTGCCAGGGACCCAGAGGGAGTGCCCTAATCCAACCTGGG
GATTTTTTAAAAGCTTCCTAGGAAGAGATGATCTCCGATGTGATGAATACGAATAAAAGGCCCTTAATGGC

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FIGURE 633

MTQQPLRGVTS LR FNQDQSCFCCAMETGVRIYNVEPLMEKGHLDHEQVGS MGLVEM LHR SNLLALVGGGSSPKFS
EISVLIWDDAREGKDSKEKLVLEFTFTKPVLSVRMRHDKIVIVLKNRIYVYSFPDNPRKLFEFDTRDNPKGLCDL
CPSLEKQLLVFPGHKCGLQLVDLASTKPGTSSAPFTINAHQSDIACVSLNQPGTVVASASQKGTILIRLFDTSK
EKLVELRRGTD PATLYCINFSDSSFLCASSDKGTVHIFALKDTRLNRRSALARVGKVGPMIGQYVDSQWSLASF
TVPAESACICAFGRNTSKNVNSVIAICVDGTFHKYVFTPDGNCNREAFDVYLDICDDDDF

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FIGURE 634

ACGCCCTATACAACTTGGCTTCACATACTTTTACACTAACTTTATATGATTTTTAAAACTGGTCTGATCGGACT
TCTCGTCTGGGACACTGTTTACTGGAGTCTGGCCGGCTCTCCGTGCTCCTCTTGGTACCTCATTITGGGGAGAA
CCTTAAACCCACTCGAGCAGATAATCTCCGCCCTTGACCGGTGCCACCAAAGAAGGGTTGGAACC**ATGT**GGACTTT
TCTGGGCATTGCCACTTTACCTATTTTTATAAGAAGTTCGGGGACTTCATCACTTTGGCCAACAGGGAGGTCTCT
GTTGTGCGTGCTGGTGTTCCTCTCGCTGGGCCTGGTGTCTCCTACCGCTGTGCCACCGAAACGGGGGTCTCCT
CGGGCGCCAGCGGAGCGGCTCCAGTTGCCCCCTCTTCTCGGATATTCTCTCAGGCCTGCCTTTTATTGGCTTCTT
CTGGGCCAAATCCCCCCTGAATCAGAAAATAAGGAGCAGCTCGGGGCCAGGAGGCGCAGAAAAGGAACCAATAT
TTCAGAAACAAGCTTAATAGGAACAGCTGCCTGTACATCAACATCTTCTCAGAATGACCCAGAAGTTATCATCGT
GGGAGCTGGCGTGCTTGGCTCTGCTTTGGTAGCTGTGCTTTCCAGAGATGGAAGAAAGGTGACAGTCATTGAGAG
AGACTTAAAGAGCCTGACAGAATAGTTGGAGAATTCCTGCAGCCGGGTGGTTATCATGTTCTCAAAGACCTTGG
TCTTGGAGATACAGTGAAGGTCTTGATGCCAGGTGTAAATGGTTACATGATTGATGATCAGGAAAGCAAATC
AGAGGTTGAGATTCTTACCCTCTGTGAGAAAACAATCAAGTGCAGAGTGAAGAGCTTTCCATCACGGAAGATT
CATCATGAGTCTCCGGAAGCAGCTATGGCAGAGCCCAATGCAAAGTTTATTGAAGGTGTTGTGTTACAGTTATT
AGAGGAAGATGATGTTGTGATGGGAGTTCAGTACAAGGATAAAGAGACTGGAGATATCAAGGAACCTCCATGCTCC
ACTGACTGTTGTTGCAGATGGGCTTTTCTCCAAGTTCAGGAAAAGCCTGGTCTCCAATAAAGTTTCTGTATCATC
TCATTTTGTGGCTTTCTTATGAAGAATGCACCACAGTTTAAAGCAAATCATGCTGAACCTATTTTAGCTAACCC
GAGTCCAGTTCTCATCTACCGGATTTCATCCAGTGAACTCGAGTACTTGTTGACATTAGAGGAGAAATGCCAAG
GAATTTAAGAGAATACATGGTTGAAAAAATTTACCCACAAATACCTGATCACCTGAAAGAACCATTCTTAGAAGC
CACTGACAATTCTCATCTGAGGTCCATGCTAGCAAGCTTCCTTCCTCCTTCATCAGTGAAGAAACGAGGTGTTCT
TCTTTTGGGAGACGCATATAATATGAGGCATCCACTTACTGGTGGAGGAATGACTGTTGCTTTTAAAGATATAAA
ACTATGGAGAAAACCTGCTAAAGGGTATCCCTGACCTTTATGATGATGCAGCTATTTTCGAGGCCAACAAATCATT
TTACTGGGCAAGAAAAACATCTCATTCCCTTGTGCTGAATATCCTTGCTCAGGCTCTTTATGAATTATTTTCTGC
CACAGATGATTCCCTGCATCAACTAAGAAAAGCCTGTTTTCTTTATTTCAAACCTTGGTGGCGAATGTGTTGCGGG
TCCTGTTGGGCTGCTTTCTGTATTGTCTCCTAACCTCTAGCTTTAATTGGACACTTCTTTGCTGTTGCAATCTA
TGCCGIGTATTTTTGCTTTAAGTCAGAACCTTGGATTACAAAACCTCGAGCCCTTCTCAGTAGTAGTGCTGTATT
GTACAAAGCGTGTTCTGTAATATTTCTCTAATTTACTCAGAAATGAAGTATATGGTTTCAT**TAA**GCTTAAAGGGG
AACCATTTGTGAATGAATATTTGGAACCTTACCAAGTCCTAAGAGACTTTTGGAAAGAGGATATATATAGCATAGTA
CCATACCACCTTATAAAGTGGAACCTCTTGACCAAGATTTGGATTAAATTTGTTTTTGAAGTTTTTTGTATATAAA
TATGTAAATACATGCTTTAATTTGCAATTTAAAATGAAGGGTTAAATAAGTTAGACATTTGAAAGAAATGATTG
TTACCATAAATTAGTGCTAATGCTGAGGAGAACTACAGTTTTTCTTTTGAATTTAGTATTTGAGATGAGTTGTTG
GGACATGCAAATAAAATGAAGAATGAC

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FIGURE 635

MWTFGLGIATFTYFYKKFGDFITLANREVLLCVLVFLSLGLVLSYRCRHRNGLLGRQRSGSQFALFSDILSGLPF
IGFFWAKSPPESENKEQLGARRRRRKGTNISESTLIGTAACTSTSSQNDPEVIIVGAGVLGSALVAVLSRDGRKVT
VIERDLKEPDRIVGEFLQPGGYHVLKDLGLGDTVEGLDAQVVGMIHDQESKSEVQIPYPLSENNQVQSGRAFH
HGRFIMSLRKAAMAEPNAKFIEGVVLQLEEDDVVMGVQYKDKETGDIKELHAPLTVVADGLFSKFRKSLVSNKV
SVSSHVVGFLMKNAPOFKANHAELILANPSPVLIYRISSETRVLVDIRGEMPRNLREYMVEKIYPQIPDHLKEP
FLEATDNSHLRSM LASFLPPSSVKKRGVLLLGDAYNMRHPLTGGGMTVAFKDIKLWRKLLKGIPDLYDDAAIFEA
NKSFYWARKTSHSFVVNLAQALYELFSATDDSLHQLRKACFLYFKLGGECEVAGPVGLLSVLSPNPLALIGHFFA
VAIYAVYFCFKSEPWITKPRALLSSSAVLYKACSVIFPLIYSEM KYMVH

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FIGURE 636

GGCACGAGGGCGCGGGCGGAGGCTCCCGTGGCCTCGGACGCTCCTCCTAGCTAGCGGGCCGCCGCCGCCGCCGCT
GCGCCTCCAGCTCCTTCGCCCCGGCGGGCCCCGGCCGCCGCTTCCGGCAGCTCACCTGGGAAGCGCTCACCTGGGA
CGCGCTCACCTGGGACGCGCTACCTGCCTCCGGGCGCCTGGGCTTCAGGATGAAAGGACCGTCTGGAGCAGCTGAA
GGCCAAGCAGCTGACACAGGATGATGATACTGATGCGGTTGAGATTGCTATCGACAACACGGCTTTTATGGACGA
GTTCTTTTCTGAGATTGAGGAAACTCGGCTTAACATTGACAAGATCTCAGAACATGTAGAGGAGGCTAAGAACT
CTACAGTATCATTCTCTCTGCACCGATTCCAGAGCCAAAAACCAAGGATGACCTAGAGCAGCTCACGACTGAGAT
TAAGAAAAGGGCCAACAACGTCCGGAACAACTGAAGAGCATGGAGAAGCATATTGAAGAAGATGAGGTCAGGTC
ATCGGCAGACCTTCGGATTCCGAAATCCCAGCACTCTGTCTTTCTCGGAAGTTTGTGGAGGTGATGACCAAATA
CAATGAAGCTCAAGTGGACTTCCGAGAACGCAGCAAAGGGCGAATCCAGCGGCAGCTCGAAATTACTGGCAAAAA
GACAACCGATGAGGAGCTGGAGGAGATGTTGGAGAGTGGCAACCCGGCCATCTTCACTTCTGGGATCATTGACTC
ACAGATTTCCAAGCAAGCCCTCAGTGAGATTGAGGGACGACACAAGGACATTGTGAGGCTGGAGAGCAGCATCAA
GGAGCTTCACGACATGTTTATGGACATCGCCATGCTGGTGGAGAATCAGGGTGAGATGTTAGATAACATAGAGTT
GAATGTCATGCACACAGTGGACCACGTGGAGAAGGCACGAGATGAAACGAAAAAAGCTGTGAAATACCAGAGTCA
GGCCCGGAAGAAATTGATAATTATCATTGTGCTAGTAGTTGTGTTGCTGGGCATTTTAGCATTGATTATTGGACT
TTCCGTTGGGCTGAATTAAGAGTGGCCTAAGAGGCTGCTGCACTGAAATAAACTGATTTCACTCCAGACTGGTGT
GGCCACCCCTTGCTTTCAGATGAGAATGGAGTCTGAATGGCCTTCCTGAGAGCGAGTGCGACCCGTTCCCTTTGTTT
CCTTGCAACCACCCCTTGACCTGACTCAGCTAACAATCTAGCCCTGGGGGAATGTGATCTACCTGATGCGACCCCT
GAGTTCTCCCCAGAGCCTCCTCCTGCCCCACCAGCTCTCAAGTACCTTTTCTCCTGGACTGTGTGGACCCACCCA
GCTTTCTTCCCTCCCTGTTGTGTGTCAGATTATGCCTTGCACTTGGGAAAGCTCTTGTGAGACTCTCCCAAGGTGC
TGATTTTTTCTACCTCATGGAGTATTCTCCAGAAACTGCAATGTATTTTTTTAGGGGAGTATCTTTAACAAGC
AGAATGATTCTTCTAAGTTTGGCAACAAGAAGGCTTGGATCTGAGTCTTCTACCTGGCAGGATGCCAATCCTGTT
TGTTGTCCGTATGTCTGAAAACATGAGGGACTGGCAGATGTCAATTTTGGTCTAAAGAGCTGACTTGTTTGAAAT
TCAGCCTTAAATTAAGCTCTTAGTTGTTTTCAGCTTGGGGGGCAACTTTGATTTTTCTCTGTGTTGTAGTCTCTCAT
ATTTACTCAAGGAGGGACCAGGATGATACAGTCATCTGAGGTTATGCTTTGCAAAAGGCTGACGGTATGGAATAT
GTTTCCATGTCTGAGTCTTAGAAACTGGCTGCTCATTGTTAGAAAGTGATGCTTTGTGAGACTATTGTCTTGGGG
CCAAAAATAATCAGGGATTTTAAATTGGGCAAGGGACAAGGTGCTAGAATCCTAAGCTCTGGAAATATTTTCATGA
CACTGGTGTATTCACTCATGTGTTCCAGATGTATTCTAATTGTGTATGAAATGTATGTACACATAAGTGTGTGTG
TCTCAGGAAGTAGGAAATAAAAAATGGAAGCTATTATGACCTCAAAAAAAAAAAGCCAACCTTGAGCTAGGATAAA
AATTGGGTAAAGGACATTTGCTTACCTGCAAATGAATCACTGTGGAAATGTGATCTTCCCATATCATCAAGAAAC
TTGTTTTCTGGATGAATACTGGGAGAATAAAATGAGAACTCTGGAGTGAGCTAAATTGATCCCAATTAAGTTTTT
CTGCTTAGCAGACAGAAGGTATAATTTTTTGACACCCCTTCCCACCTGGTGCCATGCTAGGCTTGCTCCTGAGAA
CATCCCTCAGTAACCTTGATATTCACATGACCTACAGGATGTCCCATCTGCAGGGCTGAGTCAGTTGGGGAACACC
AGAGGCTACACAGTAGCTCTTCTGCTACTCGGTTAATGAGCTTGGCAGGTTCTTTGTCTCACTGAATTCTTATC
ATGGAAACAGCAGCAGCAGCCGCTAGGAAATCTTCAAGTGATGTCTGTGCTAACCAGTGGAATCCCTTAG
ATCCCCTGCTGGTCTCTGGCAGTCTCCTTGATTTTGGGTACCATGTATATTTTCCGCTTTGACTTTAACGCTTTC
TAGGATAGGGTAAGCACCCCTTAATTCAGGCACTGTCCATTAGCTTCCCTTGCAAAGGCTACTTATGGCCGGTCA
AATCCAGCACTCAGACAGAGCCAAGGCAATATCCTCTTGCCCATGGCTATGATGTCAGACAGTGGATGGGCTCCA
GCAACAAGAGACAAAATAACTAAAGGCCTTTGCTCTCCTCTGACATTGAGGCCTGGGGCTTACAGTTTGAATAC
AACATGTGAAGGTTTTTGTGTTGTTTGTATTTTTTTAGATGTAAACTTGATTATTTTATTGCTAATTTAAAAATA
AAAAATGACTTTGTATTGATTGTGAAAAA

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FIGURE 637

MKDRLEQLKAKQLTQDDDTDAVEIAIDNTAFMDEFFSEIEETRLNIDKISEHVVEEAKKLYSIILSAPIPEPKTKD
DLEQLTTEIKKRANNVRNKLKSMEKHIEEDEVRSSADLRIRKSQHSVLSRKFFVEVMKYNEAQVDFRERSKGRIQ
RQLEITGKKTDEELEEMLESGNPAIFTSGIIDSQISKQALSEIEGRHKDIVRLESSIKELHDMFMDIAMLVENQ
GEMLDNIELNVMHTVDHVEKARDETKKAVKYQSQARKKLIIIVLVVVLLGILALIIGLSVGLN

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FIGURE 638A

AATAAGAAAAAGCTTTTCATTTTGAAATCTAGAATACCTCCACTTTTGAAAATCTTTGATTTCCTCAAATTTTCTCT
TGCTATGCACTAGTTAAAAGATAAGGTATTATATAATGAGCAATAGCACAGATCTCAAACCTGTTTGAGTTGCATA
TGGGCCATACCTTCTTTTCTGTAACTGCATACCCATGCATTAAACACTTGTGCGCTTTTCCAGATCTGCTCACTT
TAGCACTCTGGCAATTAAACAGAACCCCTTCTGGCAGAAGCTTATTGCAATTTGGGGAATGTGTACAAGGAAAG
AGGGCAGTTGCAGGAGGCAATTGAGCATTATCGACATGCATTGCGTCTCAAACCTGATTTTCATCGATGGTTATAT
TAACGCTGCAGCCGCTTGGTAGCAGCGGGTGACATGGAAGGGGAGTACAAGCTTACGTCTCTGCTCTTCAGTA
CAATCCTGATTTGTACTGTGTTTCGAGTGACCTGGGGAACCTGCTCAAAGCCCTGGGTGCTTGGAGAAGCCAA
GAAGGTTTCAGGTGGGTGAAACCTCCTATTCCATGCGTAAGGTGCCTCGCTGAAGGGAGCTCGAGGCCCTGGATCT
AGGGCAGACACACAACCTCCTCCTCCTTCCAGCAAGGAACGCACCGAAAAGTCACATGATGAGAAATATGGTA
ACGGGTTTGTAACTGCCACAGCAAAACAATTTGCCCTCCATGCCTGAATCTTCTGTCTTGTGGCTTCAGAAACAGC
TTAAATAAATTTTATTTACAAGCAAGTTATGTAAGAGAATGTTTTATACTATAGCCACAATTTCTGTCAAAGATAA
GTAAAGTTAATTGATATTAAAAATTATTAGAGATAATTTACTTAGTAAAGCTTCTAACTCTTCTTGTGTTTCA
TTTTTTTTCTTTTTCTTCTTGTGTTGGATTGCAGCATTTCTGCTCTTCTGATGATGCGCTGTGACCCTGCAGTA
GCGCAAAGGCTGCGCAGCGTTAATGCGCATTGCGTGCGAATGAACCCCTGTGAACGGTTGACTAGATGAGTAATC
TGATTGACTGGCTCCCTCAGTCCTATTCTGTAGCCTTTTTGGATAAAATTGGGTTTTAACAATACCTCGAGTCCAA
CTAATCTCATTAAACAAATATTCTCCATGGGCCCTGTCTAGTAGATTAATGGATCTGGTTGGCCGTTTGCTGCGTC
TAGGGGTGTTCTATGTAGCGCAGCAGTTGCGCAGCGATTGCGCAGTGCGATGCTGTTAGGTTGCGCAAGCGATGTT
TGCGCTCGCATTACAGGGACCTCAACCTAGGTGCAATCCTGTCTATGTGAGGTTTCAGCTTCAGTCCTCCTTGGGA
GACGGGGCATTGTGAGAATGTAACCTAAAGCCTGGCTTTATGATATCCTACTTGGCAGAAAGACATTTTTCTCCT
CAGTAGCATAGTTTTGATGTTAGTGAGGAACATTGTTGAAGAGCAGCATTTCCCAAATGTGTTTCATAGTATTC
TAATAAAATGCCCAATGAAAGAAGAGTTCCATGGTCAACTAAGTTGAGGGAACCCGTGTACACTATTAAAGGCTT
AGGGAAGTCCAGTAAAGAAACCTATTTTTCCGAATTTATTTGATCATGAACCTCTTTTTTTTTTTCAGCCATACCTCT
TAACACCTCATAGAACACACTTTGGGAAACAGTGGGGGTAGGAAACTCGGCCTCAAGTTGCGCCCTCTAGGTAG
CACTTGAAAACATGACAAGGGCCCCGTAGTTGTTTGGATAAGAGAACTCCAGCATAGAGCCTTATAGCAACTGACT
TCCCAGTTAAGTCCCAGTGTAAGGGTTGGTCTTTGGTTGGCAGAACTGAACATGGTGGTTTGCAGTTGGGTTCTG
GTGGCGCAGGCGCAGGAGCAGCCAGCTGTGGCAGCGCATTAGTTTTGGCGCAAGCGAGCCTATGCTGCAGGGTCA
CTTTTGGCTGGTCAGAGAAGGAATAATGATATCACCTTCTTCCCCCTCCCCCAATCTTTTTTTTTTCCCTTT
ACAAATTTTCCCCTTTCCCTTTACCTCCTTCCCTCCCATCTTCTTTTATTAAACCCCTCCTAAGGCATGTTATTT
GAAAGCAATTGAGACGCAACCGAAGCTTTGCAGTAGCTTGGAGTAATCTTGGCTGTGTTTTCAATGCACAAGGGGA
AATTTGGCTTGCAATTCATCACTTTGAAAAGGCTGTCACCCTTGACCCAACTTTCTGGATGCTTATATCAATTT
AGGAAATGTCTTGAAAGAGGCGACGCAATTTTGACAGAGCTGTGGCAGCTTATCTTCGTGCCCTAAGTTTGAGTCC
AATCAGCAGTGGTGCACGGCAACCTGGCTTGTGTATACTATGAGCAAGGCCTGATAGATCTGGCAATAGACAC
CTACAGGCGGGCTATCGAACTACAACCACATTTCCCTGATGCTTACTGCAACCTAGCCAATGCTCTCAAAGAGAA
GGCAGTGTGCTGAAGCAGAAGATTGTTATAATACAGCTCTCCGTCTGTGTCCACCCATGCAGACTCTCTGAA
TAACCTAGCCAATATCAAACGAGAACAGGGAAACATTGAAGAGGCAGTTGCTTGTATCGTAAAGCATTAGAAGT
CTTCCCAGAGTTTGCTGCTGCCATTCAAATTTAGCAAGTGTACTGCAGCAGCAGGGAAAACCTGCAGGAAGCTCT
GATGCATTATAAGGAGGCTATTGCAATCAGTCCTACCTTTGCTGATGCCTACTCTAATATGGGAAACACTCTAAA
GGAGATGCAGGATGTTTCAGGGAGCCTTGCAGTGTTATACGCGTGCCATCCAAATTAATCCTGCATTGTCAGATGC
ACATAGCAATCTGGCTTCCATTATAAGGATTCAGGGAATATTCCAGAAGCCATAGCTTCTTACCGCACGGCTCT
GAAACTTAAGCCTGATTTTCTGATGCTTATTGTAACTTGGCTCATTGCCTGCAGATTGCTGTGATTGGACAGA
CTATGATGAGCGAATGAAGAAGTTGGTCAGTATTGTGGCTGACCAGTTAGAGAAGAATAGGTTGCCTTCTGTGCA
TCCTCATCATAGTATGCTATATCCTCTTTCTCATGGCTTCAGGAAGGCTATTGCTGAGAGGCACGGCAACCTGTG
CTTAGATAAGATTAAATGTTCTTCATAAACCACCATATGAACATCCAAAGACTTGAAGCTCAGTGATGGTGGCT
GCGTGTAGGATATGTGAGTTCCGACTTTGGGAATCATCTACTTCTCACCTTATGCAGTCTATTCCAGGCATGCA
CAATCCTGATAAATTTGAGGTGTTCTGTTATGCCCTGAGCCAGACGATGGCACAAACTTCCGAGTGAAGGTGAT
GGCAGAAGCCAATCATTTTCAATTGATCTTTCTCAGATTCATGCAATGGAAAAGCAGCTGATCGCATCCATCAGGA
TGGAAATTCATATCCTTGTAATATGAATGGCTATACTAAGGGCGCTCGAAATGAGCTTTTTGCTCTCAGGCCAGC
TCCTATTACGGCAATGTGGCTGGGATACCTGGGACGAGTGGTGGCTTTTCATGGATTATATTATCACTGATCA

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FIGURE 638B

GGAAACTTCGCCAGCTGAAGTTGCTGAGCAGTATTCCGAGAAATTGGCTTATATGCCCCACACTTTTTTTTATTGG
TGATCATGCTAATATGTTCCCTCACCTGAAGAAAAAGCAGTCATCGATTTTAAGTCCAATGGGCACATTTATGA
CAATCGGATAGTTCTGAATGGCATCGACCTCAAAGCATTTCCTTGATAGTCTACCAGATGTGAAAATTGTCAAGAT
GAAGTGTCTGATGGAGG² 7ACAATGCAGATAGCAGTAACACAGCTCTTAATATGCCTGTTATTCCCTATGAATAC
TATTGCAGAAGCAGTTATTGAAATGATTAACCGAGGACAGATTCAAATAACAATTAATGGATTTCAGTATTAGCAA
TGGACTGGCAACTACTCAGATCAACAATAAGGCTGCAACTGGAGAGGAGGTTCCCCGTACCATTATTGTAACCAC
CCGTTCTCAGTACGGGTACCAGAAGATGCCATCGTATACTGTAACTTTAATCAGTTGTATAAAATTGACCCCTTC
TACTTTGCAGATGTGGGCAAACATTCTGAAGCGTGTTCCTCAATAGTGTACTCTGGCTGTTGCGTTTTCCAGCAGT
AGGAGAACCTAATATTCAACAGTATGCACAAAACATGGGCCTGCCCCAGAACCGTATCATTTTTTTACCTGTTGC
TCCTAAAGAGGAACACGTCAGGAGAGGCCAGCTGGCTGATGTCTGCTTGGACACTCCACTCTGTAATGGGCACAC
CACAGGGATGGATGTCCTCTGGGCAGGGACCCCCATGGTGACTATGCCAGGAGAGACTCTTGCTTCTCGAGTTGC
AGCATCCCAGCTCACTTGCTTAGGTTGTCTTGAGCTTATTGCTAAAAACAGACAAGAATATGAAGACATAGCTGT
GAAGCTGGGAACTGATCTAGAATACCTGAAGAAAGTTCGTGGCAAAGTCTGGAAGCAAAGAATATCTAGCCCTCT
GTTCAACACCAAACAATACACAATGGAAGTAGAGCGGCTCTATCTACAGATGTGGGAGCATTATGCAGCTGGCAA
CAAACCTGACCACATGATTAAGCCTGTTGAAGTCACTGAGTCAGCAT~~TA~~ATAAAGACTGCACAGGAGAATTACCC
CTATACCTGAGCCTCAACCTTCTGGGGGAAAGGGAAGTAGATAACATACTTCTTACTTGTCTGTACAGTACCTTG
TTGCAGATGGGTGATATATAATGGTAATAGAATAGCACAGCCAGACTTGCTTCCTGCATGGTAGGGAGAGACACA
AAAGATGGGAAACTGCTTTTCCACAAGGAATCTCCGTAGAATTTTGGCGGACCAGATGGTGCATAGGTCTGGAA
GGTCTGATCTCCCTTGGTCTTCCATGGGATGGTTAGTGTGGAGGGGAGATATAGATTGTCCGGCCGCTTTGTGAT
TCCATGGATTGATTTCAGTCTTCTGGATTTTTTTTTTCTTTATATTTGGGTACTGGAGCTTTTAAAAATGTTTGGT
TTCAGGTATTTTTATTTCATGTGAAGTGTATATGATTCTCTTGAGATAAGGTTTTAAGCTAAAATGTTACTCCCTG
TTTTAGTTTCTGAACCTCTGACAGATTGACAGGGACTTTGCTGGTGTAGTCTTTTTATAGGTTTTATAAACCCTT
GAGCCTATATCAGTCGTTTTAGTGTCTGACCTAATATTTGGAGCTATCAGTGCTTTGTGATTTAGATGATGACT
CAAGATTTTTCTGGTCCATTTCCCATTTCTTTCTTCCCTGACCCCCATACCCTCACCCCTAAAATTCTCCTG
TAACTCAACTAACAATAAAGCCTGATTCAAAACATCCTAGGGTGTTTTAAACACACCATCTGGTGCCAAATGA
AGATTTTTTAGGAGTGATTACTAATTATCAAGGGCACAGTTGTGGTACTGTCATTGATAATAATATAGTTTTTTTT
TTTTTCTAATTTTGACCTGTTTACCAGTGTTTTACCCTTGACTGCCCCCTTCTATGCTGCTTCCAAAAGTGATA
GTGTGTGTAAGATTTTTACCTTCCTTTCTAAAGTTTTTTTTTTTTTTTTTTAAGTGAGTCCTGTTCTTCTATTT
CTTTCAGCAGAAATGAAATCCCAGGTAAGTATAAGTATTCAAGTATTTGATCAGTAAGTCACAGTTATCTCCAGT
GCATTAATAACCTTCATCAAGAAATAGGTTATAGGTAAATCTCTGAAGGATCATCTATGTATTCAAGTAATTA
TTTTTTAGATAATAACTGCTTCTGGAAGTTGGTCTTGAAGTCTGTACAGATTTCAGCCTCAGTAGTAGCGAACTGC
ACTGCTGTTTGGTTTGGAGTACAAATTAGACTTATAGTCTCCTGGAAGTTGAGTTATTAATAATCATAGGAATAA
AATTATGGGATCTCAACAAAGGGTCGAGGGTTTGAGGCTTAAACAAGCCAACATATGAATATATGTTTTGTCTCG
CTATACTGCACCTACGCTATCCAGTTGCAGGTAATTTTTGTCTGCTAGTAGTGTCTAGATTATGTCTTTCCAA
AGCGCTGAGGCTGTGCACCTATTCTGTAGTTGCAGCTGATGCCTGAATGTATCCTAGCTGACAAATTATTGATTA
ATAAGAACTTGAATTTCTGGAAGATTCTTACTGTTAACCAAATTTGAGCAAGGAGTCTCAAAGGTAATTCTGAA
CCAGAATTACATGTTAATGAACAGTGTACCTTTAACAGTGTAAATCACGGAATATCCGTGAAGGGATTCTTAA
TTATTTTTTACCAGTTGATTGAAATATCAGTTAAAGGTTGCCAGCATGGTTGCAGATAAACTGATGTTTGAAAT
TCGCTGAAATACTTAATGTGGAATAGGATAATATACTTCCAATGCCCTCAAGGCTGTGACCTTACAGCCATTTTA
CATAGCACATCATTCTCTCTATAGGGATGAACTTTTTCTTGGCACGAAAAGTAGCCGCTCTGGTTGAAGCTTTGC
TTATTGTAACAGGCTTTTATTTCCAGGTAATATGTCTTGGAAAGACTTAATTCTGATTAGAGATATAGATATTACT
GGAACTAATTGTTTTTTTTTCTATTGTACTCTGCTTTATCAAAGAAGTAAACATTTAAATCGTACTACAGAAAT
TAAGATGTTGTCTTGCGATCCTTAATAAATGAATGATTTCCTTTAAAAAA

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FIGURE 639

MISPSSPPPPNLFFFPLQIFPPFTSFPSHLLSLTPPKACYLKAJETQPNFAVAWSNLGCVFNAQGEIWLAIHHF
EKAVTLDPNFLDAYINLGNVLKEARIFDRAVAAYLRALSLSPNHAVVHGNLACVYYEQGLIDLAIPTYRRRAIELQ
PHFPDAYCNLANALKEKGSVAEAEDCYNTALRLCPTHADSLNNLANIKREQGNIEEAVRLYRKALEVFPEFAAAH
SNLASVLQQQGLQEALMHYKEAIRISPTFADAYSNMGNLTLEMQDVQALQCYTRAIQINPAFADAHSNLASIH
KDSGNIPEAIASYRTALKLKPDPDAYCNLAHCLQIVCDWTDYDERMKKLVSIADQLEKNRPLSVHPHHSMLYP
LSHGFRKAI AERHGNLCLDKINVLHKPPYEHPKDLKLSDGRLRVGYVSSDFGNHPTSHLMQSIIPGMHNPDKFEVF
CYALSPDDGTNFRVKVMAEАНFIDLSQIPCNGKAADRIHQDGIHILVNMNGYTKGARNELFALRPAPIQAMWL
YPGTSGALFMDYIITDQETSPAEEVAEQYSEKLAYMPHTFFIGDHANMFPHLKKKAVIDFKSNGHIYDNRIVLNGI
DLKAFDLSLPDVKIVKMKCPDGGDNADSSNTALNMPVIPMNTIAEAVIEMINRGQIQITINGFSISNGLATTQIN
NKAATGEEVPTIIVTTRSQYGLPEDAIVYCНFNQLYKIDPSTLQMWANILKRVPN SVLWLLRFPVAVGEPNIQQY
AQNMGLPQNRIIFSPVAPKEEHVRRGQLADVCLDTPLCNHGTGMDVLWAGTPMVTMPGETLASRVAASQLTCLG
CLELIAKNRQEYEDIAVKLGTDLEYLKKVRGVWKQRISSPLFNTKQYTMELERLYLQMWEHYAAGNKPDHMIKP
VEVTESA

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FIGURE 640

ATGCGTGAGTGCACTCTCCATCCACGTTGGCCAGGCTGGTGTCCAGATTGGCAATGCCTGCTGGGAGCTCTACTGC
CTGGAACACGGCATCCAGCCCGATGGCCAGATGCCAAGTGACAAGACCATTGGGGGAGGAGATGATTCCTTCAAC
ACCTTCTTCAGTGAAACGGGTGCTGGCAAGCATGTGCCCGGGCAGTGTTGTAGACTTGGAACCCACAGTCATT
GATGAAGTTCGCACCTGGCACTTACCGCCAGCTCTTCCACCCTGAGCAACTCATCACAGGCAAGGAAGATGCTGCC
AATAACTATGCCCCGAGGGCACTACACCATTGGCAAGGAGATCATTGACCTCGTGTTGGACCGAATTCGCAAGCTG
GCTGACCAGTGCACCGGTCTTCAGGGCTTCTTGTTTTCCACAGCTTTGGTGGGGGAAGTGGTTCTGGGTTTACC
TCGCTGCTCATGGAACGTCTCTCAGTTGATTATGGCAAGAAGTCCAAGCTGGAGTTCTCCATTTACCCGGCGCCC
CAGGTTTTCCACAGCTGTAGTTGAGCCCTACAACCTCCATCCTCACCACCCACACCACCCTGGAGCACTCTGATTGT
GCCTTCATGGTAGACAATGAGGCCATCTATGACATCTGTCGTAGAAACCTCGATATCGAGCGCCCAACCTACACT
AACCTTAACCGCCTTATTAGCCAGATTGTGTCTCCATCACTGCTTCCCTGAGATTTGATGGAGCCCTGAATGTT
GACCTGACAGAATTCCAGACCAACCTGGTGGCCTACCCCGCATCCACTTCCCTCTGGCCACATATGCCCCCTGTC
ATCTCTGCTGAGAAAGCCTACCATGAACAGCTTACTGTAGCAGAGATCACCAATGCTTGCTTTGAGCCAGCCAAC
CAGATGGTGAAATGTGACCCTCGCCATGGTAAATACATGGCTTGCTGCCTGTTATACCGTGGTGACGTGGTTCCC
AAAGATGTCAATGCTGCCATTGCCACCATCAAACCAAGCGTACCATCCAGTTTGTGGATTGGTGGCCCACTGGC
TTCAAGGTTGGCATTAAATTACCAGCCTCCCCTGTGGTGCCTGGCGGAGACCTGGCCAAGGTACAGAGAGCTGTG
TGCATGCTGAGCAATACCACAGCTGTTGCCGAGGCCTGGGCTCGCCTGGACCACAAGTTTGACCTGATGTATGCC
AAGCGTGCCTTTGTTCACTGGTACGTGGGTGAGGGGATGGAGGAAGGCGAGTTTTAGAGGCCCCGTGAGGACATG
GCTGCCCTTGAGAAGGATTATGAGGAGGTTGGAGCAGATAGTGCTGACGGAGAGGATGAGGGTGAAGAGTATTAA

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FIGURE 641

MRECISIHVGQAGVQIGNACWELYCLEHGIQPDGQMPSDKTIGGGDDSFNTFFSETGAGKHVPRAVFVDLEPTVI
DEVRTGTYRQLFHPEQLITGKEDAANNYARGHYTIGKEIIDLVLDRIKRLADQCTGLQGFLVFHSFGGGTGSGFT
SLLMERLSVDYGKKSLEFSIYPAPQVSTAVVEPYNSILTTHTTLEHSDCAFMVDNEAIYDICRRNLDIERPTYT
NLNRLISQIVSSITASLRFDGALNVDLTEFQTNLVPYPRIHFPLATYAPVISAEKAYHEQLTVAEITNACFEPAN
QMVKCDPRHGKYMACCLLYRGDVVPKDVNAAIATIKTKRTIQFVDWCPTGFKVGINYQPPTVVPGGDLAKVQRAV
CMLSNTTAVAEAWARLDHKFDLMYAKRAFVHWYVGEGMEEGEFSEAREDMAALEKDYEYEVGADSADGEDEGEY

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FIGURE 642

AGTGTGGTTTTAGTTTTCTAAGAAGTGGCGTGGTTTGGGGCTTTATATCCGGGAGGAGCATATGTACGCAAAT
CCTGGGGCGTTTGCAAACCCGGATCCGGGGCGTCTGGCCCCATGCCCGGCCGGGCGTTTGAGGGCTACTGCCACG
CAGCGTTTCTGGAGCCTGCCGGCTGGTGCCCTGGTGGCCTTTATCTCTGTCCCCCTTTGTCTCTTTATCTCAGG
CTCTCCAGGAGGCCGGGGGGCCACTCCGCCTATCGCTCCCCCTCGGCTACGCTGCCACTCCAATGCCCCGCAGGT
CGCGAGCTGCTGTTCTTTGGAAGGCGCCGGAGAACCAGGGGCGTCCCGCGCCACCTCTGACTCGGAGCAGCGCCG
AGCACTGACGCTCCCGCCCTTGGGCAAGGACGCCAGTGCGCCCGCGCGCTCCCTCTGCGCGGCAGCCCCGTGCGG
GGCCCTCAAGGGGAAGCCCAGGCCAGGATGGCCCCGGGTGCGCGGTGGCCGGGCTCCTGTTGCTGGCGGCCGCC
GGCCTCGGAGGAGTGGCGGAGGGGGCCAGGGCTAGCCTTCAGCGAGGATGTGCTGAGCGTGTTCGGCGCAATCTG
AGCCTGTGCGCGGCGCAGCTCCAGCACTTGCTGGAGCAGATGGGAGCCGCTCCCGCGTGGGCGTCCCGGAGCCT
GGCCAGCTGCACTTCAACCAGTGTTTAACTGCTGAAGAGATCTTTCCCTTCATGGCTTTTCAAATGCTACCCAA
ATAACCAGCTCCAAATTCTCTGTCTGTCCAGCAGTCTTACAGCAATTGAACTTTCACCCATGTGAGGATCGG
CCCAGCACAAAACAAGACCAAGTCATTGAGAAGTTTGGGGATATGGATTCTGTGCTGAGTACGATTATTAATCTG
GCATCTCTCTCGGATTGATTTTGAAGTCCACTGATAAAGAAATCTTATTTCCCAAAGATTTTGACCTTTTTTG
GGGCTGGCTATTGGGACTCTTTTTTCAAATGCAATTTTCCAACCTTATCCAGAGGCATTGGATTGATCCCAA
GTCGACAGTTATGTTGAGAAGGCAGTTGCTGTGTTTGGTGGATTTTACCTACTTTTCTTTTTTGAAGAATGCTA
AAGATGTTATTAAAGACATATGGTCAGAATGGTCATACCCACTTTGGAAATGATAACTTTGGTCTCAAGAAAA
ACTCATCAACCTAAAGCATTACCTGCCATCAATGGTGTGACATGCTATGCAATCCTGCTGTCACAGAAGCTAAT
GGACATATCCATTTTGATAATGTCAGTGTGGTATCTCTACAGGATGGAAAAAAGAGCCAAGTTCATGTACCTGT
TTGAAGGGGCCCAAAGTGTGAGAAATAGGGACGATTGCCTGGATGATAACGCTCTGCGATGCCCTCCACAATTT
ATCGATGGCCTGGCGATTGGGGCTTCTGACCTTGTCTCTCTCTCAGGGACTCAGTACTTCCATAGCAATCCTA
TGTGAGGAGTTTCCCCACGAGTTAGGAGACTTTGTGATCTACTCAATGCAGGGATGAGCACTCGACAAGCCTTG
CTATTCAACTTCTTTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT
CCAAATATTATATTGCACTTGCTGGAGGCATGTTTCTCTATATTTCTCTGCGAGATATGTTTCCAGAGATGAAT
GATATGCTGAGAGAAAAGGTAAGTGAAGAAAAACCGATTTCACCTTCTTCATGATTCAGAATGCTGGAATGTTA
ACTGGATTACAGCCATTCTACTCATTACCTTGTATGCAGGAGAAATCGAATTTGGAGTAATAGAAAATGGAAGAT
GGTGTGTTAATAAAGGCATTAAATAGATAAAAAACATCTCCAAAAAGGATTTTGAAGCTGATCCTATTTAGTTAA
AAAGATAATTTTGCTTTCAACTGTAGGTCCAGAAAACTAATTATTGGCATCAGTCTGTGAAATAGTCCATTATTT
GTTGTTAAAAATGCTTCAAAAGGTTTTTCAAGTGTGCTGAGATGCCTGGTATATAGGAGCCTTTGGGAAATACT
TATTTTTTCAAGTATTCATGCATATTAGATATCACCATGAAGCAAGAGACATGCATTCTATAATCATGTAGACACT
CAGACTCAGGGGAAAAATACAAGTTATATCCTGAAAGCCTTTAAACTCTATGGTAGGATCAAAGATTCAAATGGT
TTCAGAGAGGTTTTTATTCAATTAATTTGTTCTAGTGCTTTCAAGAGCAAGTACATCAAAATGTAGAAGGTA
TGTATGCAACACTAATATAAATTATTCCAAGTCTTTAAGGAGCCAAAGAAAAAAGATTTCTCACAGCTTTTTG
TTCTGTTTTGATTTCAATTAGGAAGTTGCAAGTATTATTTGAAAACCATTTCTAAAATAATAGGAGTTAGGAAAT
AAATAAAGTTTTGCTAGCCCTGCTAAGTTCAAGGCTTAGAGGCTTATCGCTAAGTAACTTCAACAGATTCCAC
GAAAAGCTGGATAGCTTTTTTTCTGACTTATGTTGTGGTTGCACCCCTCACAAATGGCAGAACAGTATGTAAAGC
TGGTAACACCTCGGTTTCAGTGCACCATGTGTTTGTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTG
TTGGATGTAATTTTATGCAATTTACTTTTAAAGACAAACATAACTATTTAGCAGAGAAATTTTAAATAAATGCAA
AACAACAGCTGGACTGCTGTACATCAAGGACAGATTAAGTGGAAAAACATATGTTCCCTTATGTGTGATTGAGAGCC
ATTGAGAAAAGACTTCTTTGTGTTGAGCCTATACTTTTCCATATGGTATACCTTGAAAAAATTAGCACACCAT
GGTTATTTTTTCTACCTTTTATAAAGACAGAGCCTGTTTACTCATTTAGAAGATAGAGAAAATTGGTCTAAAATT
GAACATCCTAGATTACACTCCCAAGTCACTTAAGGTGATTTGATGGTGAAGGAAATGATTGACAAAGCCCAACA
ATGATCTCAGGAATTACATTTTCCAACAGACCAAAAAATGTTTTTATGTAGCAGCAATGCAGATTTGGTGAATAT
TTAATATATATTTTAGTATGTATTTCACTTTATGACTGACAATTAATAAATATTGTTTGGCCAAATAGTAAACAC
CCTTTTGAAACCATGAAAAA

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FIGURE 643

MAPGRAVAGLLLLLAAAGLGGVAEGPGLAFSEDVLSVFGANLSLSAAQLQHLLLEQMGAASRVGVPEPGQLHFNQCL
TAEEIFSLHGFSNATQITSSKFSVICPAVLQQLNFHPCEDRPHKHKTRPSHSEVWGYGFLSVTIINLASLLGLILT
PLIKKSYFFPKILTFFVGLAIGTLFSNAIFQLIPEAFGFDPKVDSYVEKAVAVFGGFYLLFFFERMLKMLLKTYGQ
NGHTHFGNDNFGPQEKTHQPKALPAINGVTCYANPAVTEANGHIHFDNVSVSLQDGKKEPSSCTCLKGPKLSEI
GTIAWMITLCDALHNFIDGLAIGASCTLSLLQGLSTSIAILCEEFPHELGDFVILLNAGMSTRQALLFNFLSACS
CYVGLAFGILVGNNFAPNIIIFALAGGMFLYISLADMFPPEMNDMLREKVTGRKTDFTFFMIQNAGMLTGFTAILLI
TLYAGEIELE

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FIGURE 644

GGGGCTACCGCGCCTTTGCTTCCTGGCGCACGCGGAGCCTCCTGGAGCCTGCCACCATCCTGCCTACTACGTGCT
GCCCTGCGCCCGCAGCCATGTGCCGCACCCTGGCCGCCTTCCCCACCACCTGCCTGGAGAGAGCCAAAGAGTTCA
AGACACGTCTGGGGATCTTTCTTCACAAATCAGAGCTGGGCTGCGATACTGGGAGTACTGGCAAGTCCGAGTGGG
GCAGTAAACACAGCAAAGAGAATAGAACTTCTCAGAAGATGTGCTGGGGTGGAGAGAGTCGTTTCGACCTGCTGC
TGAGCAGTAAAAATGGAGTGGCTGCCTTCCACGCTTTCTGAAGACAGAGTTTCAGTGAGGAGAACCTGGAGTTCT
GGCTGGCCTGTGAGGAGTTCAAGAAGATCCGATCAGCTACCAAGCTGGCCTCCAGGGCACACCAGATCTTTGAGG
AGTTCAATTTGCAGTGAGGCCCTAAAGAGGTCAACATTGACCATGAGACCCGCGAGCTGACGAGGATGAACCTGC
AGACTGCCACAGCCACATGCTTTGATGCGGCTCAGGGGAAGACACGTACCCCTGATGGAGAAGGACTCCTACCCAC
GCTTCTGAAGTCGCCTGCTTACCGGGACCTGGCTGCCCAAGCCTCAGCCGCCTCTGCCACTCTGTCCAGCTGCA
GCCTGGACGAGCCCTCACACACCTTGAGTCTCCACGGCAGTGAGGAAGCCAGCCGGGAAGAGAGGTTGAGTCACCC
ATCCCCGAGGTGGCTGCCCTGTGTGGGAGGCAGGTTCTGCAAAGCAAGTGCAAGAGGACAAAAA
AAAAAATGCGCTCCAGCAGCCTGTTTGGGAAGCAGCAGTCTCTCCTTCAGATACTGTGGGACTCATGCTG
GAGAGGAGCCGCCACTTCCAGGACCTGTGAATAAGGGCTAATGATGAGGGTTGGTGGGGCTCTCTGTGGGGCAA
AAAGGTGGTATGGGGGTTAGCACTGGCTCTCGTTCTCACCGGAGAAGGAAGTGTCTAGTGTGGTTTAGGAAACA
TGTGGATAAAGGGAACCATGAAAATGAGAGGAGGAAAGACATCCAGATCAGCTGTTTTGCCCTGTGTCTCAGTTGA
CTCTGATTGCATCCTGTTTTCTAATTCCCAGACTGTTCTGGGCACGGAAGGGACCCTGGATGTGGAGTCTTCCC
CTTTGGCCCTCCTCACTGGCCTCTGGGCTAGCCAGAGTCCCTTAGCTTGTACCTCGTAACACTCCTGTGTGTCT
GTCCAGCCTTGCAGTCATGTCAAGGCCAGCAAGCTGATGTGACTCTTGCCCCATGCGAGATATTTATACCTCAA
CACTGGCCTGTGAGCCCTTTCCAAGTCAGTGGAGAGCCCTGAAAGGAGGCTCACTTGAATCCAGCTCAGTGCTCT
GGGTGGCCCCCTGCAGGTGGCCCTGACCCTGCGTTGCAGCAGGGTCCACCTGTGAGCAGGCCCGCCCTGGGGCC
TCTTCTGGATGTGCCCTCTCTGAGTTCTGTGCTGTCTCTTGGAGGCAGGGCCAGGAGAACAAAGTGTGGAGGC
CTCGGGGAGTGGCTTTTCCAGCTCTCATGCCCCGAGTGTGGAACAAGGCAGAAAAGGATCCTAGGAAATAAGTC
TCTTGGCGGTCCCTGAGAGTCCTGCTGAAATCCAGCCAGTGTTTTTTGTGGTATGAGAACAGGCAAAAAGAGATG
CCCCGAGATAGAAGGGGAGCCTTGTGTTTTCTTCTGCAGACGTGAGATGAACACTGGAGTGGGCAGAGGTGGCM
CAGGACCATGGCACCCCTTAGAGTGCAGAAGCTGGGGGAGAGGCTGCTTCGAAGGGCAGGACTGGGGATACCTGC
CTGTCACCTCAGGGCATCACTGAACAAACATTTCTGATGGSAACTCCTGCGGCAGAGCCCAGGCTGGGGAAGTG
AACTACCCAGGGCAGCCCCCTTTGTGGCCCAGGATAATCAACACTGTTCTCTCTGTACCATGAGCTCCTCCAGGAG
ATTATTTAAGTGTATTGTATCATTGGTTTTCTGTGATTGTGATAACATTGTTTTTGTATTGTTGGTGCTGTTGT
TATTTATTATTGTAATTTAGTTTGCCTCTACTGGAGAATCTCAGCAGGGGTTTCAGCCTGACTGTCTCCCTTTC
TCTACCAGACTCTACCTCTGAATGTGCTGGGAACCTCTTGGAGCCTGTGAGGAACCTCCTCACTGTTTAAATATTT
ATTTATTGTGACAAATGGAGCTGGTTTCCTAGATATGAATGATGTTTGCAATCCCCATTTTCTGTTTCAGCATG
TTATATTCTTATAAAATAAAAGCAAAAGTCAAATATGAAAAAAAAAAAAAAAAAAAAA

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FIGURE 645

MCRTLAAFPTTCLERAKEFKTRLGIFLHKSELGCDTGSTGKSEWGSKHSKENRNFSEDVLGWRESFDLLLSSKNG
VAAFHAFKTEFSEENLEFWLACEEFKKIRSATKLASRAHQIFEEFICSEAPKEVNIDHETRELTRMNLQTATAT
CFDAAQGKTRTLMEKDSYPRFLKSPAYRDLAAQASAASATLSSCSLDEPSHT

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FIGURE 646

GGGGCTACCGCGCCTTTGCTTCCTGGCGCACGCGGAGCCTCCTGGAGCCTGCCACCATCCTGCCTACTACGTGCT
GCCCTGCGCCCGCAGCCATGTGCCGCACCCTGGCCGCCCTTCCCCACCACCTGCCTGGAGAGAGCCAAAGAGTTCA
AGACACGTCTGGGGATCTTTCTTCACAAATCAGAGCTGGGCTGCGATACTGGGAGTACTGGCAAGTCCGAGTGGG
GCAGTAAACACAGCAAAGAGAAATAGAACTTCTCAGAAGATGTGCTGGGGTGGAGAGAGTCGTTTCGACCTGCTGC
TGAGCAGTAAAAATGGAGTGGCTGCCCTTCCACGCTTTCTGAAGACAGAGTTCAGTGAGGAGAACCTGGAGTTCT
GGCTGGCCTGTGAGGAGTTCAGGAAGATCCGATCAGCTACCAAGCTGGCCTCCAGGGGCACACCAGATCTTTGAGG
AGTTCATTTGCAGTGAGGCCCTAAAGAGGTCAACATTGACCATGAGACCCGCGAGCTGACGAGGATGAACCTGC
AGACTGCCACAGCCACATGCTTTGATGCGGCTCAGGGGAAGACACGTACCCTGATGGAGAAGGACTCCTACCCAC
GCTTCCTGAAGTCGCCTGCTTACCGGGACCTGGCTGCCCAAGCCTCAGCCGCCTCTGCCACTCTGTCCAGCTGCA
GCCTGGACGAGCCCTCACACACCTGAGTCTCCACGGCAGTGAGGAAGCCAGCCGGGAAGAGAGGTTGAGTCACCC
ATCCCCGAGGTGGCTGCCCTGTGTGGGAGGCAGGTTCTGCAAAGCAAGTGCAAGAGGACAAAAA
AAAAAATGCGCTCCAGCAGCCTGTTTGGGAAGCAGCAGTCTCTCCTTCAGATACTGTGGGACTCATGCTG
GAGAGGAGCCGCCACTTCCAGGACCTGTGAATAAGGGCTAATGATGAGGGTTGGTGGGGCTCTCTGTGGGGCAA
AAAGGTGGTATGGGGGTTAGCACTGGCTCTCGTTCTCACCGGAGAAGGAAGTGTTCTAGTGTGGTTTAGGAAACA
TGTGGATAAAGGGAACCATGAAAATGAGAGGAGGAAAGACATCCAGATCAGCTGTTTTGCCTGTTGCTCAGTTGA
CTCTGATTGCATCCTGTTTTCTTAATTCCCAGACTGTTCTGGGCACGGAAGGGACCCTGGATGTGGAGTCTTCCC
CTTTGGCCCTCCTCACTGGCCTCTGGGCTAGCCCAGAGTCCCTTAGCTTGACCTCGTAACACTCCTGTGTGTCT
GTCCAGCCTTGCACTGATGTCAGGCCAGCAAGCTGATGTGACTCTTGCCCCATGCGAGATATTTATACCTCAA
CACTGGCCTGTGAGCCCTTTCCAAGTCAGTGGAGAGCCCTGAAAGGAGGCTCACTTGAATCCAGCTCAGTGCTCT
GGGTGGCCCCCTGCAGGTGGCCCTGACCCTGCGTTGCAGCAGGGTCCACCTGTGAGCAGGCCCGCCCTGGGGCC
TCTTCCTGGATGTGCCCTCTCTGAGTTCTGTGCTGTCTCTTGAGGCAGGGCCAGGAGAACAAGTGTGGAGGC
CTCGGGGAGTGGCTTTTCCAGCTCTCATGCCCCGAGTGTGGAACAAGGCAGAAAAGGATCCTAGGAAATAAGTC
TCTTGGCGGTCCCTGAGAGTCTGTGAAATCCAGCCAGTGTTTTTGTGGTATGAGAACAGGCAGGAGAGATG
CCCCGAGATAGAAGGGGAGCCTTGTGTTTCTTCTGACAGCTGAGATGAACACTGGAGTGGGCAGAGGTGGCM
CAGGACCATGGCACCTTAGAGTGCAAGCTGGGGGAGAGGCTGCTTCGAAGGGCAGGACTGGGGATACCTGC
CTGTACCTCAGGGCATCACTGAACAAACATTTCTGATGGSAACTCCTGCGGCAGAGCCCAGGCTGGGGAAAGTG
AACTACCCAGGGCAGCCCCCTTGTGGCCAGGATAATCAACACTGTTCTCTGTACCATGAGCTCCTCCAGGAG
ATTATTTAAGTGTATTGTATCATTGGTTTTCTGTGATTGTCATAACATTGTTTTTGTATTGTTGGTGCTGTTGT
TATTTATTATTGTAATTTAGTTTGCCTCTACTGGAGAATCTCAGCAGGGGTTTCAGCCTGACTGTCTCCCTTTC
TCTACCAGACTCTACCTCTGAATGTGCTGGGAACCTCTTGAGCCTGTGAGGAACTCCTCACTGTTTAAATATTT
ATTTATTGTGACAAATGGAGCTGGTTTCCTAGATATGAATGATGTTTGCAATCCCCATTTTCTGTTTCAGCATG
TTATATTCTTATAAAATAAAAGCAAAAGTCAAATATGAAAAAAAAAAAAAAAAAAAAA

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FIGURE 647

MCRTLAAFPTTCLERAKEFKTRLGIFLHKSELGCDTGSTGKSEWGSKHSKENRNFS EDVLGWRESFDLLLSSKNG
VAAFHAFKTEFSEENLEFWLACEEFKKIRSATKLASRAHQIFEEFICSEAPKEVNIDHETRELTRMNLQTATAT
CFDAAQGKRTLMEKDSYPRFLKSPAYRDLAAQASAASATLSSCSLDEPSHT

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FIGURE 648

GAGCCCAGCCGAGCGTCCGCCGCTGCCCGTGCGCCTCTGCGCTCCGCGCC**AT**GCGCGGCCTCAACTCCCTGGAGG
CGGTGAAACGCAAGATCCAGGCCCTGCAGCAGCAGGCGGACGAGGCGGAAGACCGCGCGCAGGGCCTGCAGCGGG
AGCTGGACGGCGAGCGCGAGCGGCGCGAGAAAGCTGAAGGTGATGTGGCCGCCCTCAACCGACGCATCCAGCTCG
TTGAGGAGGAGTTGGACAGGGCTCAGGAACGACTGGCCACGGCCCTGCAGAAGCTGGAGGAGGCAGAAAAAGCTG
CAGATGAGAGTGAGAGAGGAATGAAGGTGATAGAAAACCGGGCCATGAAGGATGAGGAGAAGATGGAGATTGAGG
AGATGCAGCTCAAAGAGGCCAAGCACATTGCGGAAGAGGGCTGACCGCAAATACGAGGAGGTAGCTCGTAAGCTGG
TCATCCTGGAGGGTGAGCTGGAGAGGGCAGAGGAGCGTGCGGAGGTGTCTGAACTAAAATGTGGTGACCTGGAAG
AAGAACTCAAGAATGTTACTAACAATCTGAAATCTCTGGAGGGCTGCATCTGAAAAGTATTCTGAAAAGGAGGACA
AATATGAAGAAGAAATTAACTTCTGTCTGACAAACTGAAAGAGGGCTGAGACCCGTGCTGAATTTGCAGAGAGAA
CGGTTGCAAACTGGAAAAGACAATTGATGACCTGGAAGAGAAACTTGCCAGGCCAAAGAAGAGAACGTGGGCT
TACATCAGACACTGGATCAGACACTAAACGAACCTTAAGTATAT**TAAG**CAAAACAGAAGAGTCTTGTTCCAACAG
AAACTCTGGAGCTCCGTGGGTCTTTCTCTTCTCTTGTAGAAGTTCCTTTTGTATTGCCATCTTCGCTTTGCTG
GAAATGTCAAGCAAATTATGAATACATGACCAAATATTTTGTATCGGAGAAGCTTTGAGCACCAGTTAAATCTCA
TTCTTCCCTTTTTTTTTTCAAATGGCACCAGCTTTTTCAGCTCTCTTATTTTTTCTTAAGTAGCATTTATTCCT
AAGGTAGGCAGGGTATTTCTTAGTAAGCATACTTTCTTAAGACGGAGGCCATTTGGTTCTGGGAGAATAGGCAG
CCCCACACTTTGAAGAATACAGACCCCAGTATCTAGTCGTGGATATAATTAAACGCTGAAGACCATAACCTTTT
GGGTCAACTGTTGGTCAAACCTATAGGAGAGACCAGGGACCATCACATGGGTAGGGATTTTCCATCCAGAGCCAAT
AAAAGGACTGGTGGGGGCCGGGGTGGCTATTGTGGGAAGTCATAACCCACAGATAGATCAACCTAAGAATCCTG
GCCCTTCTCCACTCTCCACCATGCAGGACAAACATCTTCTCAAGCAGTCAACGTAGAATGCTTGGGAAATAGTCA
TAATTACCCACATATAGTAATTAATAGATGGTAATTAATTGATCCTTGATGTGATGTTCTTTTGCATATTTCTT
CATTCTAAAGTTGTTCCCTGGCCGGGAGCGTTTGCTTTCGCCTGTAATCCCAACACTTTGGGAGGCCAGGACAGA
TCACTTGAGGTGAGGAGTTCGAGACCAGCCCAGCCAACATGGCGAAACCATGTCTCTACTAAAAATACAAAAATT
ATGGTGACGCCTGCCTGTAGTCCAGCTACTCGGGAGGCTGAGGCAGGAGGATCGCTTGAACCCAGGAAGTGGAG
ACTGCAGTGAGCCGATATCGCACCACAGCGCTCCAGCCTGGTCGACAGAGTGAGACTCCATCTCAAGAAAAAATA
AAAATAAAGTTGTTCTCTGAAGAGCAAATGTCTCATTCCAGTAATGACCCACTCAGCAGGAATATGGTGGAGTTC
AGTCCAATTCAGGTGAGCCATATCCAAAAGACCACAAGTCACTACTAAGTTGAGCAAAGAGTTTTTATCTATTA
GCAGAAAGGGCCTCTCTGGCAGCAGAGATTAAAAACTGGCCCAACTTCATTTCCATACTTCAGGGAACAGCAAA
TGAGGATTACTTATCTAGGACTT

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FIGURE 649

MAGLNSLEAVKRKIQALQQQADEAEDRAQGLQRELDGERERREKAEGDVAALNRRIQLVEEELDRAQERLATALQ
KLEEAEKAADESERGMKVIENRAMKDEEKMEIQEMQLKEAKHIAEEADRKYEEVARKLVILEGELERAEEAEVS
ELKCGDLEELKNVTNNLKSLEAASEKYSEKEDKYEEI KLLSDKLKEAETRAEFAERTVAKLEKTIDDLEEKLA
QAKEENVGLHQTLDTLNEINCI

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FIGURE 650

GTCCTGCCGAGCTGTGAGGGCAACGGAGGGGAAATAAAAGGGAACGGCTCCGAATCTGCCCCAGCGGCCGCTGCG
AGACCTCGGCGCCGACATCGCGACAGCGAAGCGCTTTGCACGCCAGGAAGGTCCCCTCTATGTGCTGCTGAGCCG
GTCCTGGACGCGACGAGCCCGCCCTCGGTCTTCGGAGCAGAAATCGCAAAAACGGAAGGACTGGAAATGCGCAGAC
CATATGATGGCCATGAACCACGGGCGCTTCCCCGACGGCACCAATGGGCTGCACCATCACCTGCCCCACCGCATG
GGCATGGGGCAGTTCCCCGAGCCCCCATCACACCAGCAGCAGCAGCCCCAGCAGCCTTCAACGCCCTAATGGGC
GAGCACATACTACGGCGCGGGCAACATGAATGCCACGAGCGGCATCAGGCATGCGATGGGGCCGGGGACTGTG
AACGGAGGGCACCCCCGAGCGCGCTGGCCCCCGCGGCCAGGTTTAACAACCTCCAGTTTCATGGGTCCCCCGGTG
GCCAGCCAGGGAGGCTCCCTGCCGGCCAGCATGCAGCTGCAGAAGCTCAACAACCAGTATTTCAACCATCACCCC
TACCCCCACAACCACTACATGCCGGATTTGCACCTGCTGCAGGCCACCAGATGAACGGGACAAACCAGCACTTC
CGAGATTGCAACCCCAAGCACAGCGGCGGCAGCAGCACCCCCGGCGGCTCGGGCGGCAGCAGCACCCCCGGCGGC
TCTGGCAGCAGCTCGGGCGGCGGCGGGCAGCAGCAACAGCGGCGGCGGCAGCGGCAGCGGCAACATGCCCCGCC
TCCGTGGCCACGTCCCCGCTGCAATGCTGCCGCCCAATGTCATAGACACTGATTTTCATCGACGAGGAAGTTCTT
ATGTCCTTGGTGATAGAAATGGGTTTGGACCGCATCAAGGAGCTGCCCGAACTCTGGCTGGGGCAAAACGAGTTT
GATTTTATGACGGACTTCGTGTGCAAACAGCAGCCAGCAGAGTGAGCTGTTGACTCGATCGAAACCCCGGCGAA
AGAAATCAAACCCCCAACTTCTTCGGCGTGAATTAAGAAACATTCCCTTAGACACAGTATCTCACTTTTCAGA
TCTTGAAAGGTTTGAAGACTTGGAACAAAGTAACTATAAACTTGTAACAATTGGTTTTAAAAAAAATTGCTGC
CACTTTTTTTTCTGTTTTTGTTCGTTTTTGTAGCCTTGACATTCACCCACCTCCCTTATGTAGTTGAAATATC
TAGCTAACTTGGTCTTTTTCGTTGTTTGTTCCTTTCCCTCACTTTCTCCAGTGCTCAACTGTTAGATAT
TAATCTTGGCAAACCTGCTTAATCTTGTGGATTTTGTAGATGGTTTCAAATGACTGAAGTGCATTTCAGATTACGA
GTGAAAGGAAAAATTGCATTAGTTGGTTGCATGAACTTTGAAGGGCAGATATTACTGCACAACTGCCATCTCGC
TTCATTTTTTTAACTATGCATTTGAGTACAGACTAATTTTTAAATATGCTAACTGGAAGATTAAACAGATGTG
GCCCCAACTGTTCTGGATCAGGAAAGTCATACTGTTCACTTTCAAGTTGGCTGTCCCCCGCGCCCCCCCCCA
CCCCCATATGTACAGATGATAATAGGGTGTGGAATGTCGTGAGTGGCAAACATTTACAGATTATTTGTTTCTG
TCTTCAACATTTTTGACACTGTGCTAATAGTTATATTCAGTACATGAAAAGATACTACTGTGTTGAAAGCCTTTT
AGGAAATTTTGACAGTATTTTTGTACAAAACATTTTTTGAAAAATACTTGTTAATTTATTCTATTTTAATTTG
CCAATGTCAATAAAAAGTTAAGAAATAAAAAAAAAAAAAAAAAA

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FIGURE 651

MADHMMAMNHGRFPDGTNGLHHHPAHRMGMGQFPSPHHHQQQQPQHAFNALMGEHIHYGAGNMNATSGIRHAMGP
GTVNGGHPPSALAPAARFNSQFMGPPVASQGGSLPASMQLQKLNNQYFNHHPYPHNHYMPDLHPAAGHQMNVTN
QHFRDCNPKHSGGSSTPGGSGGSSTPGGSGSSSGGGAGSSNSGGGSGSGNMPASVAHVPAAMLPPNVIDTDFIDE
EVLMSLVIEMLDRIKELPELWLGQNEFDFMTDFVCKQQPSRVSC

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FIGURE 652

AATCGCGAAAACCCGGCGAGCGGCGCGCTGGCTATCGAGCGAGCGGGGCGGAACCGGGAGTTGCGCCGCCGCTCGG
GCGCCGGGCTCCGTCGCGGCCGCGAGCCCCGCGGGTCGCCCTCCCGTGCCCTCGCCCGCGGACACCCTGGCCGTGGA
CACCCTGGCCGTGGGCACCCGCGGGGCGCGGGCGCTGCGCGGCGGCGGCGGGCATGAAGGTCACGTGCG
CTCGACGGGCGCCAGCTGCGCAAGATGCTCCGCAAGGAGGCGGCGGCGCGCTGCGTGGTGTCTCGACTGCCGGCCC
TATCTGGCCTTCGCTGCCTCGAACGTGCGCGGCTCGCTCAACGTCAACCTCAACTCGGTGGTGTCTGCGGCGGGCC
CGGGGCGGCGCGGTGTGCGGCGGCTACGTGCTGCCCCAGAGGCGGCGCGCGCGCGGCTCCTGCAGGAGGGCGGC
GGCGGCGTGC GCGGCGGTGGTGGTGTGCTGGACCAGGGCAGCCGCCACTGGCAGAAGCTGCGAGAGGAGAGCGCCGCG
CGTGTGCTCCTCACCTCGCTACTCGCTTGCCTACCCGCGGGCCCGCGGGTCTACTTCCTCAAAGGGGGATATGAG
ACTTTCTACTCGGAATATCCTGAGTGTGCGTGGATGTAAAACCCATTTCAAGAGAAGATTGAGAGTGAGAGA
GCCCTCATCAGCCAGTGTGGAACAGTGGTAAATGTCAGCTACAGGCCAGCTTATGACCAGGGTGGCCAGTT
GAAATCCTTCCCTTCTCTACCTTGGAAGTGCCTACCATGCATCCAAGTGCAGATTCTCGCCAACCTTGACATC
ACAGCCCTGCTGAATGTCTCCCGACGGACCTCCGAGGCCTGCATGACCCACCTACACTACAAATGGATCCCTGTG
GAAGACAGCCACACGGCTGACATTAGCTCCCACTTTCAAGAAGCAATAGACTTCATTGACTGTGTGAGGGAAAAG
GGAGGCAAGGTCTTGGTCCACTGTGAGGCTGGGATCTCCCGTTACCCACCATCTGCATGGCTTACCTTATGAAG
ACCAAGCAGTTCCGCTGAAGGAGGCTTCGATTACATCAAGCAGAGGAGGAGCATGGTCTCGCCCAACTTTGGC
TTCATGGGCCAGCTCCTGCAGTACGAATCTGAGATCCTGCCCTCCACGCCCAACCCCGAGCTCCCTCCTGCCAA
GGGGAGGCGAGGCTCTTCACTGATAGGCCATTTGCAGACACTGAGCCCTGACATGCAGGCTGCTACTGCACA
TTCCCTGCCTCGGTGCTGGCACCAGGTGCCTACCCACTCAACAGTCTCAGAGCTCAGCAGAAGCCCTGTGGCAACG
GCCACATCCTGCTAAAACTGGGATGGAGGAATCGGCCCAGCCCCAAGAGCAACTGTGATTTTTGTTTTTAAGACT
CATGGACATTTTCATACCTGTGCAATACTGAAGACCTCATTCTGTGATGCTGCCCCAGTGAGATAGTGAGTGGTCA
CCAGGCTTGCAAATGAACCTTCAGACGGACCTCAGGGTAGGTTCTCGGGACTGAAGGAAGGCCAAGCCATTACGGG
AGCACAGCATGTGCTGACTACTGTACTTCCAGACCCCTGCCCTCTTGGGACTGCCAGTCTTGCACCTCAGAGT
TCGCCTTTTTCATTTCAAGCATAAGCCAATAAATACCTGCAGCAACGTGGGAGAAAGAAGTTGCTGGACCAGGAGA
AAAGGCAGTTATGAAGCCAATTCATTTGAAGGAAGCACAAATTTCCACCTTATTTTTTGAACCTTGGCAGTTTCA
ATGCTGTCTCTGTGCTTCCGGGCGATAAGCTGATACCGTCTAGTTGGGAAAGTCACCCTACAGGGTTTGTAGG
GACATGATCAGCATCCTGATTTGAACCTGAAATGTTGTGTAGACACCCTCTTGGGTCCAATGAGGTAGTTGGTT
GAAGTAGCAAGATGTTGGCTTTTCTGGATTTTTTTTGGCATGGGTTCTTCACTGACCTTGGACTTTGGCATGATT
CTTAGTCATACTTGAACCTGTCTCATTCCACCTCTTCTCAGAGCAACTCTTCTTTGGGAAAAGAGTTCTTCAGA
TCATAGACCAAAAAAGTCATACCTTCGAGGTGGTAGCAGTAGATTCCAGGAGGAGAAGGGTACTTGCTAGGTATC
CTGGGTCACTGGCGGTGCAAACTGGTTTCTCAGCTGCCTGTCCTTCTGTGTGCTTATGTCTCTTGTGACAATTG
TTTTCTCCCTGCCCCTGGAGGTTGTCTCAACTGTGGACTTCTGGGATTTGCAGATTTTGCAACGTGGTACTAC
TTTTTTTTCTTTTTGTCTGTTAGTTATTTCTCCAGGGGAAAAGGCAATAATTTTCTAAGACCCGTGTGAATGTGA
AGAAAAGCAGTATGTTACTGGTTGTTGTTGTTGTTCTTGTTTTTTATATGTAAAATAAAAAATAGTGAAAGGAG

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FIGURE 653

MKVTSLDGRQLRKMLRKEAAARCVVLD CRPYLAFAASNVRGSLNVNLNSVVLRRARGGAVSARYVLPDEAARARL
LQEGGGGVA'AVVVLDQGSRHWQKLREESAARVVLTSLLACLPA GPRVYFLKGGYETFYSEYPECCVDVKPISQEK
IESERALISQCGKPVVNVSYR PAYDQGGPVEILPFLYLGSAYHASKCEFLANLHITALLNVSRR TSEACMTHLHY
KWIPVEDSHTADISSHFQE AIDFIDCVREKGGKVLVHCEAGISRSPTICMAYLMKTKQFRLKEAFDYIKQRRSMV
SPNFGFMGQLLQYESEILPSTPNPQPPSCQGEAAGSSLI GHLQTLSPDMQGAYCTFPASVLAPVPTHSTVSELSR
SPVATATSC

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FIGURE 654

GGCACGAGGAAGCTACTCAGATAAGAGGCTCCAAGAGGACATTTTTGGATGTGAAAAACAATGAGAAGGAGGACA
ACACACATTTACAATCGTCTTAATTTTGTACTCAGAAAAAGGATGTGAAGACAATGCACAGGGAATACAATAGTT
TCAGATCTGTGTACAGTTTCCTTTTGCTTCATCTCCTGCAACAATGTAATGAAGACACCATGATATCATTAAACAT
TTCACACAAAAGGAAAATGAGGCTGAAATGGTGTGGGCAAGGCCAGGAATCTGGAGCATCCCTAACCAAGCAGC
AGAGCACCTGGGATAGAGAAAGTGCTCAAGAATGTTCACTTACTGATTACTACAATCAAAAAAGATACGACACT
AATTTACCACATTCTTCTTACTTATTTTATGAGATACTATTCTTCCAAGGTGGAGAAAGTGGAGAAAGTAGAGTG
ACGCAGCTAAGGGAGTAAATCGACCCTCAGCCAACAAGTGGCAAAAGCCTGAAGAAAGTGATCAAGATCACTGAT
GACCCCGCGGCCCATCTCCAAGGGGGCGGGTATCACAACCCGACGCCACACCACGTATCATTCCGCAAACTCC
CGCGCCTCCACGCAGAACTGGCAAGAGGGAAGGCGAGACAGCAGTGAACAGCTGGTACGCAGCACCCACAGCAC
CGCGGCAGCAGCTAGTGCCGACTCCCGCCTAGCTCTTTTGACTCTGTTTCGCGGGAAGAATGGGGAAACAGTAAGG
TTGCGGCGCCTCCCGCGAGACGAGGTACCTGAGGCTGGCCCCGCAGTCCCCCGCCGACCAGCACCGGAGCTTCA
CACCCCACTTCCGGGGTCAAGTCACCGCCGGAATCCTGTGATCGCAGAAAGGTAGTCTCAGGTTCCGCCCCCTAT
CCAAGTCCCGCCTCCACTGCCTCTCGCCCTGTATCTGTCAACTCCGGGACGCCGCGCGTCACTAAGCAGCCAAT
CTCCACTTCCGACTCATCCAGCCCCTTCTCCACCCCTTTCAGAGACAGCGCGATTGCGATTTAGGTTTCCGCGC
ATTTAATTGGCGAAGCTGGAGCGCTAGTCTTCGCTGATTGGTGCCGAGAAATCTGCCCCATAGACACCCGCGGGG
CGCACAGTTTCAGTCGTCCGTGGTTTTCCCGCCAGCCGAGTCTTGACCATAATCATGTTGGACATGATGGACT
TGCCCAGGTCGCGCATCAACGCCGGCATGCTAGCTCAATTCATCGACAAGCCTGTCTGCTTCGTAGGGAGGCTGG
AAAAGATTCATCCACCGGAAAAATGTTTATTCTTTCAGATGGAGAAGGAAAAAATGGAACCATCGAGTTGATGG
AACCCCTTGATGAAGAAATCTCTGGAATTGTGGAAGTGGTTGGAAGAGTAACCGCCAAGGCCACCATCTTGTGTA
CATCTTATGTCCAGTTTAAAGAAGATAGCCATCCTTTTGATCTTGGACTTTACAATGAAGCTGTGAAAATTATCC
ATGACTTCCCTCAGTTTTATCCTTTAGGGATTGTGCAACATGATTGATCTTGATGGATTTTCATACGATTGTAAA
TGAGCTATATTAAAGTCTATTAAAGGAAAAAAAAAAAAAAAAAAAAA

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FIGURE 655

MVDMMDLPRSRINAGMLAQFIDKPVCVGRLEKIHPTGKMFILSDGEGKNGTIELMEPLDEEISGIVEVVGRVTA
KATILCTSYVQFKEDSHPFDLGLYNEAVKIIHDFPQFYPLGIVQHD

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FIGURE 656

AGCCGCCGCTCGCCGCTTCCCCTCGTCGGAGCGGCCGCTCGTCCGCCCGGCTTGAGGCCCGCGGGGAGCGCGGC
GCAATTCGTCGGCCCGCGGGGGGGCGGCCTCCCGGCATCTTCGCGGCGACCAAGGACTACCAGGAAGGGGAGCGG
CTGGGATGCGCGCTCCGCGGCCCCGCGAGTACAAAGCGGGCGACCTGGTCTTCGCCAAGATGAAGGGCTACCCGC
ACTGGCCGGCCCCGATTGATGAACTCCCAGAGGGCGCTGTGAAGCCTCCAGCAAACAAGTATCCTATCTTCTTTT
TTGGCACCCATGAAACTGCATTTCTAGGTCCCAAAGACCTTTTTCCATATAAGGAGTACAAAGACAAGTTTGAA
AGTCAAAACAAACGGAAAGGATTTAACGAAGGATTGTGGGAAATAGAAAATAACCCAGGAGTAAAGTTTACTGGCT
ACCAGGCAATTCAGCAACAGAGCTCTTCAGAACTGAGGGAGAAGGTGGAAATACTGCAGATGCAAGCAGTGAGG
AAGAAGGTGATAGAGTAGAAGAAGATGGAAAAGGCAAAAGAAAGAATGAAAAAGCAGGCTCAAAACGGAAAAAGT
CATATACTTCAAAGAAATCCTCTAAACAGTCCCGGAAATCTCCAGGAGATGAAGATGACAAAGACTGCAAAGAAG
AGGAAAAACAAAGCAGCTCTGAGGGTGGAGATGCGGGCAACGACACAAGAAACACAACCTTCAGACTTGAGAAAA
CCAGTGAAGGGACCTAACTACCATAATGAATGCTGCATATTAAGAGAAACCACAAGAAGGTTATATGTTTGGTTG
TCTAATATTCTTGGATTTGATATGAACCAACACATAGTCCTTGTGTGTCATTGACAGAACCCCAAGTTTGTATGTAC
ATTATTCATATTCCTCTCTGTGTGTTTTCGGGGGAAAAGACATTTTAGCCTTTTTTAAAAGTTACTGATTTAAT
TTCATGTTATTTGGTTGCATGAAGTTGCCCTTAACCACTAAGGATTATCAAGATTTTTGCGCAGACTTATACATG
TCTAGGATCCTTTTATCAAGGCAGTTATGATCATCGTTTTCTGCCTTGACCCCAACATCATCAAACACTCAGTT
AAATATAAATTAACATTTTTTAGATGACCACTCAACATAATGCTTAAGAATGGAATTTCTCTCTGTGACAGAAC
CCAGGAATTAATTCCTAAATACATAACGTTGGTATATTGAAGACGAAATTAAAATTGTCCTTCAGTTTTGAGGCC
ATGTGTAAAGTTTAACCATATTGTAATAATCTATTCCGTATTAGAAATAGCTAGTTGACAGCTTATACTTCTCA
AAATTCATATTGTTATGTACACAACTAAGTTTTCTATATGTGAAGTTAGTGAGTCTTTTTGTGTTACTCCAAAT
AAAGGCAATGATTTATTTTTTCCCAGTGCCAATACAATTTTGAGCTAAGCACTCAAGGTGGATACTTTACATTT
TAAAGCTGGAATCAGCAACAGCCCTATGGGAAACCAGACAAAGCATTGACTTTTAAATGTAGACTTTTAAATAA
ACTGTTTTCTTTTGGAACCTACAATTAGAATAGTTAATATTATCCTTAAACCATTATTATGTGTACATTATTGTT
GCTATTGTGATAATAGAGAATTTTATTTATTTTTATGCCAGCTTATATTGTGAGAACACATTTAGTCAGTTTGGG
TTTTATCAATCCTGTTAATGCTTGTCTTGGAAACATCTTTCGCGTATTCACGGTTTGTAGTTGAAAAGTTTACTG
TAAAAAATCAAAAAACAAAAAATGATTGTTTTTACAGAATAAATTTATTGGGATGTGTACTGGGAGTAAGATT
TGAGGTTGTAAGCAAACTAAGTTAGTGTAATTTGGCTTCATATATGTAACGTGAGGTATTAATGTAATTCATATA
TTAAAGCAAAAATTGTTTCGCAGC

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FIGURE 657

MARPRPREYKAGDLVFAKMGYPHWPARIDELPEGAVKPPANKYPIFFFGTHETAFLGPKDLFPYKEYKDKFGKS
NKRKGFNEGLWEIENNPGVKFTGYQAIQQSSSETEGEGGNTADASSEEGDRVEEDGKGKRKNEKAGSKRKKS
TSKKSSKQSRKSPGDEDDKDCKEEENKSSSEGGDAGNDTRNTTSDLQKTSEGT

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FIGURE 658

AGCCGCCGCTCGCCGCTTCCCCTCGTCGGAGCGGGCGCTCGTCCGCCCGGCTTGAGGCCCGCGGGAGCGCGGC
GCAATTCGTCCGCCCCGCGGGGGGCGGCCTCCCGGCATCTTCGCGGCGACCAAGGACTACCAGGAAGGGGAGCGG
CTGGGATGGCGCGTCCGCGGCCCCGCGAGTACAAAGCGGGCGACCTGGTCTTCGCCAAGATGAAGGGCTACCCGC
ACTGGCCGGCCCCGGATTGATGAACTCCCAGAGGGCGCTGTGAAGCCTCCAGCAAACAAGTATCCTATCTTCTTTT
TTGGCACCCATGAACTGCATTTCTAGGTCCCAAAGACCTTTTTCCATATAAGGAGTACAAAGACAAGTTTGAA
AGTCAAACAAACGGAAAGGATTTAACGAAGGATTGTGGGAAATAGAAAATAACCCAGGAGTAAAGTTTACTGGCT
ACCAGGCAATTCAGCAACAGAGCTCTTCAGAACTGAGGGAGAAGGTGGAAATACTGCAGATGCAAGCAGTGAGG
AAGAAGGTGATAGAGTAGAAGAAGATGGAAAAGGCAAAAGAAAGAATGAAAAAGCAGGCTCAAAACGGAAAAAGT
CATATACTTCAAAGAAATCCTCTAAACAGTCCCGGAAATCTCCAGGAGATGAAGATGACAAAGACTGCAAAGAAG
AGGAAAACAAAGCAGCTCTGAGGGTGGAGATGCGGGCAACGACACAAGAAACACAACCTTCAGACTTGAGAAAA
CCAGTGAAGGGACCTAACTACCATAATGAATGCTGCATATTAAGAGAAACCACAAGAAGGTTATATGTTTGGTTG
TCTAATATTCTTGGATTTGATATGAACCAACACATAGTCCTTGTTGTCATTGACAGAACCCAGTTTGTATGTAC
ATTATTCATATTCTCTCTGTTGTGTTTCGGGGGAAAAGACATTTTAGCCTTTTTTAAAGTTACTGATTTAAT
TTCAIGTTATTTGGTTGCATGAAGTTGCCCTTAACCACTAAGGATTATCAAGATTTTTCGCGCAGACTTATACATG
TCTAGGATCCTTTTTATCAAGGCAGTTATGATCATCGTTTTCTGCCTTGACCCACCATCATCAAACACTCAGTT
AAATATAAATTAACATTTTTTAGATGACCACTCAACATAATGCTTAAGAATGGAATTCCTCTCTGTGACAGAAC
CCAGGAATTAATTCCTAAATACATAACGTTGGTATATTGAAGACGAAATTAAAATTGTCCTTCAGTTTTGAGGCC
ATGTGTAAAGTTTAACCATATTGTAAAATATCTATTCCGTATTAGAAATAGCTAGTTGACAGCTTATACTTCTCA
AAATTCATATTGTTATGTACACAACTAAGTTTCTATATGTGAAGTTAGTGAGTCTTTTTGTGTTACTCCAAAT
AAAGGCAATGATTTATTTTTTCCAGTGCCAATACAATTTGAGCTAAGCACTCAAGGTGGATACTTTACATTT
TAAAGCTGGAATCAGCAACAGCCCTATGGGAAACCAGACAAAGCATTGACTTTTAAATGTAGACTTTTAAATAA
ACTGTTTTCTTTTGGAACTACAATTAGAATAGTTAATATTATCCTTAAACCATTATTATGTGTACATTATTGTT
GCTATTGTGATAATAGAGAATTTTATTTATTTTTATGCCAGCTTATATTGTGAGAACACATTTAGTCAGTTTGGG
TTTTATCAATCCTGTAAATGCTTGTCTTGGAAACATCTTTCGCGTATTCACGGTTTGTAGTTGAAAAGTTTACTG
TAAAAAATCAAAAACAAAAAATGTATTGTTTTTACAGAATAAATTTATTGGGATGTGTACTGGGAGTAAGATT
TGAGGTTGTAAGCAAATAAGTTAGTGTAATTTGGCTTCATATATGTAACGTGAGGTATTAATGTAATTCATATA
TTAAAGCAAAAATTGTTTCGCAGC

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FIGURE 659

MARPRPREYKAGDLVFAKMKGYPHWPARIDELPEGAVKPPANKYPIFFFGTHETAFLGPKDLFPYKEYKDKFGKS
NKRKGFNEGLWEIENNPVGKFTGYQAIQQSSSETEGEGGNTADASSEEGDRVEEDGKGKRKNEKAGSKRKKS
TSKKSSKQSRKSPGDEDDKDCKEENKSSSEGGDAGNDRNTTSDLQKTSEGT

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FIGURE 660A

CCGTTACGCGTTTCGGTCCCTTGGCTGACTCACCGCCCTCGCCGCCGCACC**ATGG**ACGCCCCCAGGCAGGTGG
TCAACTTTGGGCCTGGTCCCGCCAAGCTGCCGCACTCAGTGTGTAGAGATACAAAAGGAATTATTAGACTACA
AAGGAGTTGGCATTAGTGTCTTGAAATGAGTCACAGGTCATCAGATTTTGCCAAGATTATTAACAATACAGAGA
ATCTTGTGCGGGAATTGCTAGCTGTTCCAGACAACTATAAGGTGATTTTTCTGCAAGGAGGTGGGTGCGGCCAGT
TCAGTGCTGTCCCTTAAACCTCATTGGCTTGAAAGCAGGAAGGTGTGCTGACTATGTGGTGACAGGAGCTTGGT
CAGCTAAGGCCGCAGAAGAAGCCAAGAAGTTTGGGACTATAAAATATCGTTCACCTAAACTTGGGAGTTATACAA
AAATTCCAGATCCAAGCACCTGGAACCTCAACCCAGATGCCCTTACGTGTATTATTGCGCAAATGAGACGGTGC
ATGGTGTGGAGTTTGACTTTATACCCGATGTCAAGGGAGCAGTACTGGTTTGTGACATGTCCTCAAACCTTCTGT
CCAAGCCAGTGGATGTTTCCAAGTTTGGTGTGATTTTTGCTGGTGCCAGAAGAATGTTGGCTCTGCTGGGGTCA
CCGTGGTGATTGTCCGTGATGACCTGCTGGGGTTTGCCCTCCGAGAGTGCCCTCGGTCTGGAATACAAGGTGC
AGGCTGGAAACAGCTCCTTGTACAACACGCCTCCATGTTTACGATCTACGTCATGGGCTTGGTTCTGGAGTGA
TTAAAAACAATGGAGGTGCCGCGGCCATGGAGAAGCTTAGCTCCATCAAATCTCAAACAATTTATGAGATTATTG
ATAATTCTCAAGGATTCTACGTTTGTCCAGTGGAGCCCCAAAATAGAAGCAAGATGAATATTCCATTCCGCATTG
GCAATGCCAAAGGAGATGATGCTTTAGAAAAAGATTTCTTGATAAAGCTCTTGAACCAATATGTTGTCCTTGA
AAGGGCATAGGTCTGTGGGAGGCATCCGGGCCTCTCTGTATAATGCTGTCACAATTGAAGACGTTTCAAGCTGG
CCGCCTTCATGAAAAAATTTTTGGAGATGCATCAGCTA**TGAA**CACATCCTAACCAGGATATACTCTGTTCTTGAA
CAACATACAAAGTTTAAAGTAACTTGGGGATGGCTACAAAAAGTTAACACAGTATTTTTCTCAAATGAACATGTT
TATTGCAGATTCTTCTTTTTTGAAGAACAACAGCAAAACATCCACAACCTCTGTAAAGCTGGTGGGACCTAATGT
CACCTTAATTCTGACTTGAACGGAAGCATTTTAAAGAAATCTTGTGCTTTTCTAACAAATTCCCGCGTATTTTG
CCTTTGCTGCTACTTTTTCTAGTTAGATTTCAAACCTTGCTGTGGACTTAATAATGCAAGTTGCGATTAAATTATT
TCTGGAGTCATGGGAACACACAGCACAGAGGGTAGGGGGCCCTCTAGGTGCTGAATCTACACATCTGTGGGGTCT
TCCTGGGTTTCAAGTGGCTGTTGATTCAAGGTCAACATTGACCATTGGAGGAGTGGTTTAAAGAGTGCCAGGCGAAGG
GCAAACCTGTAGATCGATCTTTATGCTGTTATTACAGGAGAAGTGACATACTTTATATATGTTTATATTAGCAAGG
TCTGTTTTTAATACCATATACTTTATATTTCTATACATTTATATTTCTAATAATACAGTTATCACTGATATATGT
AGACACTTTTAGAATTTATTAATCCTTGACCTTGTGCATTATAGCATTCCATTAGCAAGAGTTGTACCCCTCC
CCAGTCTTCGCCCTTCTCTTTTTTAAGCTGTTTTATGAAAAAGACCTAGAAGTTCTTGATTCATTTTTACCATTCT
TTCCATAGGTAGAAGAGAAAGTTGATTGGTTGGTTGTTTTTCAATTATGCCATTAACTAAACATTTCTGTAA
TTACCTATCCTTTGTTCTCTACTGTTTTCTTTGTAATGTATGACTACGAGAGTGATACTTTGCTGAAAAGTCTT
TCCCCTATTGTTTATCTATTGTGCTAGTATTTTTATGTTGAATATGTAAAGAACATTAAAGTCTTAAACACGGTTCTA
AGCTAAGTGAAGGGGAAGATCTGAGAGCGTGCTGTTTGTGGCTGTTGATGCATATTCGTGATGTAACAGGTCTTG
GGGCCTCACTTTACCCCATTTGTAAATGGGGCTAATGTACCTGCCTCTTACCTACCTCAGAGGGATTGGTGA
AGCAAACCTGTTAATCTTCGAAAACGACCATTTCACTTCTTGGATATCAAGTGCTAACCAGTATGTTCTTCTTTT
TTATGTAAGGGACAGCTTTTCTCCACAGAGTCTTTCTGCTGGTGAGGACAGCATTCTGAGCAGGGCTTTGTTCT
CTATGTGCATTAGGACTTTTATCATGCCCTTGTTCTGTGTGTAGTTACTTGACAGCATCAAATGCCGCCTCTTCC
TAATGTCTTTCAAGTTTTCATGAACCTAGCAACCCACCTTCCACCATGGTTCTGGGCGCCTGATTTTGCTGTGAC
TCCCAGACCCAGCCACTGTTTCTGCCACCTGTAAACAGGCCATTAAAGCTCCCCAGTGTTTACGCTCCTTCACTC
CCTTGTTTTCCCTGTTGCTATGTGTCACCTGGGCCCTACAGACAGGGGCACACGCTTATGGATGTGTGTACCATT
GAGATGAGAATGGGTAGATGGAACGGAGACCATCAAGCCACACCCCTTCTTAAAACTGGGGACATGAGCCTGAG
CAGAAAGGGTGAAGAAGAGCCATGGGACACAGAGTTGACCCAGCCAGGGGGAAAGCCAGCTCTCTTTAAACCAG
CTAAGCCATTCCAGTCTCCTGTGAAGCCAAAAGGGACCAGGAACCGTGCAAAGGAAACTGGAAACTTTTCCCGC
TGGGTAGAGCATGTTGCTGATACTCTTCTGTTTTCAAGGGAAACAATCACATTGTTTGATTCCAAATGGTAAATG
AACACTCACTATTCTTCAGGCTTCAGTAAATCTTTTTTCTTCTTATATATATATACACAACACACACACACA
TATGTATATCTATACACACATGTGTGTTGTGTATATGCATGTGTGTGTGCGTGTGTATAGTTTTAGCTCCA
AGCCAAGCAAGTTTGTGTTTGGATAGAGGGGAACCTTAACTATTAACATAAGTTGTATGTCTGTGGTATCTTGAT
TTTCCCATTCTTAAAGATGAATTTACAAAAGCCATAAAGCGTGAAATTAGAGCTGGACTTAAGACTCATTGGCCG
ACCATCCTGTGTCTTGGCCTGGCCCTGCAGTAAGAAGCGTGTCTGGGTCTGGAGAAGGGTGCTTCCGAGAGTGTG
CAGGTGGCCCTTCCCTTGGAGGCGAGAAGAGAGAATGTGCTGTCTATCTTCTGGTTTTAGTCCACAGAGTCG
GTAGACCAGGGGTTACGTGACTGGGGAAATCTCACATCTCCTTGTCTGAAAACATTCCCTGCTGTTCTCTTT

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FIGURE 660B

CTAACATGTTGTGGTAAATCTGTTTCAGATACTGCTCATCTGACTGTTTTGTACATGTGACAATTGCCTTAAACC
TAGCACAGTCCTCAGAAATGAATACCGTGTTTCCACTGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 661

MDAPRQVVNFGPGPAKLPHSVLLEIQKELLDYKGVGISVLEMSHRSSDFAKIINNTENLVRELLAVPDNYKVIFL
QGGGCGQFSAPVPLNLIGLKAGRCADYVVTGAWSAKAAEEAKKFGTINIVHPKLGSYTKIPDPSTWNLNPDASYVY
YCANETVHGVEFDFIPDVKGAVLVCDMSSNFLSKPVDVSKFGVIFAGAQKNVGSAGVTVVIVRDDLLGFALRECP
SVLEYKVQAGNSSLYNTPPCFCSIYVMGLVLEWIKNNGGAAAMEKLSSIKSQTIYEIIDNSQGFYVCPVEPQNRSK
MNIPFRIGNAKGDDALEKRFLDKALELNMLSLKGHRVGGIRASLYNAVTTIEDVQKLAAFMKKFLEMHQL

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FIGURE 662

ACTTTCCTGCCCCCTTCCCCGGCCAAGCCCCAACTCCGGATCTCGCTCTCCACCGGATCTCACCCGCCACACCCGGA
CAGGCGGCTGGAGGAGGCGGGCGTCTAAAATTCTGGGAAGCAGAACCTGGCCGGAGCCACTAGACAGAGCCGGGC
CTAGCCCAGAGACATGGAGAGTTGCTACAACCCAGGTCTGGATGGTATTATTGAATATGATGATTTCAAATTGAA
CTCTCCATTGTGGAACCCAAGGAGCCAGCCCCAGAAACAGCTGATGGCCCCCTACCTGGTGATCGTGGAACAGCC
TAAGCAGAGAGGGCTTCCGATTTTCGATATGGCTGTGAAGGCCCTCCCATGGAGGACTGCCCCGGTGCTCCAGTGA
GAAGGGCCGAAAGACCTATCCCACTGTCAAGATCTGTAACCTACGAGGGACCAGCCAAGATCGAGGTGGACCTGGT
AACACACAGTGACCCACCTCGTGCTCATGCCCACAGTCTGGTGGGCAAGCAATGCTCGGAGCTGGGGATCTGCGC
CGTTTCTGTGGGGCCCAAGGACATGACTGCCCAATTTAAACACCTGGGTGTCTGCATGTGACTAAGAAGAACAT
GATGGGGACTATGATACAAAACCTTCAGAGGCAGCGGCTCCGCTCTAGGCCCCAGGGCCTTACGGAGGCCGAGCA
GCGGGAGCTGGAGCAAGAGGCCAAAGAAGTGAAGAAGGTGATGGATCTGAGTATAGTGC GGCTGCGCTTCTCTGC
CTTCTTAGAGCCAGTGATGGCTCCTTCTCCCTGCCCCCTGAAGCCAGTCACCTCCCAGCCCATCCATGATAGCAA
ATCTCCGGGGGCATCAAACCTGAAGATTTCTCGAATGGACAAGACAGCAGGCTCTGTGCGGGGTGGAGATGAAGT
TTATCTGCTTTGTGACAAGGTGCAGAAAGATGACATTGAGGTTTCGGTTCTATGAGGATGATGAGAATGGATGGCA
GGCCTTTGGGGACTTCTCTCCACAGATGTGCATAAACAGTATGCCATTGTGTTCCGGACACCCCCCTATCACAA
GATGAAGATTGAGCGGCCTGTAAAGTGTCTTCTGCAACTGAAACGCAAGCGAGGAGGGGACGTGTCTGATTCCAA
ACAGTTCACCTATTACCCTCTGGTGGAAGACAAGGAAGAGGTGCAGCGGAAGCGGAGGAAGGCCTTGCCACCTT
CTCCCAGCCCTTCGGGGGTGGCTCCACATGGGTGGAGGCTCTGGGGGTGCAGCCGGGGGCTACGGAGGAGCTGG
AGGAGGTGGCAGCCTCGGTTTCTTCCCCTCTCCCTGGCCTACAGCCCCCTACCAGTCCGGCGCGGGCCCCATGCG
GTGCTACCCGGGAGGCGGGGGCGGGGCGCAGATGGCCGCCACGGTGCCAGCAGGGACTCCGGGGAGGAAGCCGC
GGAGCCGAGCGCCCCCTCCAGGACCCCCCAGTGCGAGCCCGCAGGCCCCGGAGATGCTGCAGCGAGCTCGAGAGTA
CAACGCGCGCCTGTTCGGCTGGCGCACGCAGCCCCGAGCCCTACTCGACTACTGCGTACC GCGGACGCCGCGC
GCTGCTGGCGGGACAGCGCCACCTGCTGACGGCGCAGGACGAGAACGGAGACACACCCTGCACCTAGCCATCAT
CCACGGGCAGACCAGTGTCTATTGAGCAGATAGTCTATGTCTATCCACCACGCCCAGGACCTCGGC GTTGTCAACCT
CACCAACCACCTGCACCAGACGCCCTGCACCTGGCGGTGATCACGGGGCAGACGAGTGTGGTGAGCTTTCTGCT
GCGGGTAGGTGCAGACCCAGCTCTGCTGGATCGGCATGGAGACTCAGCCATGCATCTGGCGCTGCGGGCAGGCGC
TGGTGCTCCTGAGCTGCTGCGTGCACTGCTTCAGAGTGGAGCTCCTGCTGTGCCCCAGCTGTTGCATATGCCTGA
CTTTGAGGGACTGTATCCAGTACACCTGGCGGTCCGAGCCCCGAAGCCCTGAGTGCCTGGATCTGCTGGTGACAG
TGGGGCTGAAGTGGAGGCCACAGAGCGGCAGGGGGGACGAACAGCCTTG CATCTAGCCACAGAGATGGAGGAGCT
GGGGTTGGTCACCCATCTGGTCACCAAGCTCCGGGCCAACGTGAACGCTCGCACCTTTGCGGGAAACACACCCCT
GCACCTGGCAGCTGGACTGGGGTACCCGACCCTCACCCGCTCCTTCTGAAGGCTGGTGCTGACATCCATGCTGA
AAACGAGGAGCCCCCTGTGCCCACTGCCTTCACCCCTACCTCTGATAGCGACTCGGACTCTGAAGGGCCTGAGAA
GGACACCCGAAGCAGCTTCCGGGGCCACACGCCTCTTGACCTCACTTG CAGCACCTTGGTGAAGACCTTGCTGCT
AAATGCTGCTCAGAACCCATGGAGCCACCCCTGACCCGCCCCAGCCAGCAGGGCCGGGACTGTCACTTGGTGA
TACAGCTCTGCAGAACCTGGAGCAGCTGCTAGACGGGCCAGAAGCCCAGGGCAGCTGGGCAGAGCTGGCAGAGCG
TCTGGGGCTGCGCAGCCTGGTAGACACGTACCGACAGACAACCTCACCCAGTGGCAGCCTCCTGCGCAGCTACGA
GCTGGCTGGCGGGGACCTGGCAGGTCTACTGGAGGCCCTGTCTGACATGGGCCTAGAGGAGGGAGTGAGGCTGCT
GAGGGGTCCAGAAACCCGAGACAAGCTGCCCAGCACAGAGGTGAAGGAAGACAGTGCGTACGGGAGCCAGTCAGT
GGAGCAGGAGGCAGAGAAGCTGGGGCCACCCCTGAGCCACCAGGAGGGCTCTCGCACGGGGACCCCCAGCCTCA
GGTGA CTGACCTGCTGCTGCCCCAGCCCCCTTCCCGGACCCCTGTACAGCGTCCCCACCTATTTCAAATCTT
ATTTAACACCCACACCCACCCCTCAGTTGGGACAAATAAAGGATTCTCATGGGAAGGGGAGACCCCGAATTCC
T

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FIGURE 663

MESCYNPGLDGIIEYDDFKLNSSIVEPKEPAPETADGPYLVIVEQPKQGRFRFRYGCCEGPSHGGLPGASSEKGRK
TYPTVKICNYEGPAKIEVDLVTHSDPPRAHAHSLVGKQCSELGICAVSVGPKDMTAQFNNLGVLVHTKKNMMGMTM
IQKLQRQLRSRPQGLTEAEQRELEQEAKELKKVMDLSIVRLRFS AFLRASDGSFSLPLKPVTSQPIHDSKSPGA
SNLKISRMDKTAGSVRGGDEVYLLCDKVQKDDIEVRFYEDDENGWQAFGDFSPTDVHKQYAIVFRTPPYHKMKIE
RPVTVFLQLKRKRGGDVSDSKQFTYYPLVEDKEEVQRKRRKALPTFSQPFGGGSHMGGGSGGAAGGYGGAGGGGS
LGFFPSSLAYSPIYQSGAGPMRCYPGGGGGAQMAATVPSRDSGEEAAEPSAPSRTPOCEPQAPEMLQRAREYNARL
FGLAHAAPSPTRLLRHRGRRALLAGQRHLLTAQDENGDTPLHLAIIHGQTSVIEQIVYVIHHAQDLGVVNLTNHL
HQTPLHLAVITGQTSVVSFLLRVGADPALLDRHGDSAMHLALRAGAGAPELLRALLQSGAPAVPQLLHMPDFEGL
YPVHLAVRARSPECLDLLVDSGAEVEATERQGGRTALHLATEMEELGLVTHLVTKLRANVNARTFAGNTPLHLAA
GLGYPTLTRLLLKAGADIHAENEEPLCPLPSPPTSDSDSDSEGPEKDTRSSFRGHTPLDLTLCSTLVKTLNNAQ
NTMEPPLTPPSPAGPGLSLGDTALQNLQQLLDGPEAQGSWAELAERLGLRSLVD TYRQTTSPSGSLLRSYELAGG
DLAGLLEALS DMGLEEGVRLLRGPETRDKLPSTEVKEDSAYGSQSVEQEA EKLGPPEPPPGGLSHGHPQPQVTDL
LPAPSPLPGPPVQRPHLFQILFNTPHPPLSWDK

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FIGURE 664

TTCTAGTTTTCGGTTTCAGGTTTTCGCGCTGCCGGCCAGCGTCTCTGGCCATGGACACCCCGGAAAATGTCCTTCA
GATGCTTGAAGCCCACATGCAGAGCTACAAGGGCAATGACCCCTCTGGTGAATGGGAAAGATACATACAGTGGGT
AGAAGAGAATTTTCTGAGAATAAAGAATACTTGATAACTTTACTAGAACATTTAATGAAGGAATTTTGTAGATAA
GAAGAAATACCACAATGACCCAAGATTTCATCAGTTATTGTTTTAAATTTGCTGAGTACAACAGTGACCTCCATCA
ATTTTTTGAGTTTCTGTACAACCATGGGATTGGAACCTGTCTATCCCCTCTGTACATTGCCTGGGCGGGGCATCT
GGAAGCCCCAAGGAGAGCTGCAGCATGCCAGTGCTGTCTTCAGAGAGGAATTCAAACCAGGCTGAACCCAGAGA
GTTCTGTCAACAACAATACAGGTTATTTTCAGACACGCTCTACTGAAACCCATTTGCCAGCTCAAGCTAGAACCCTC
AGAACCTCTGCATAATGTTTCAGGTTTTAAATCAAATGATAACATCAAATCAAATCCAGGAAATAACATGGCCTG
CATTTCTAAGAATCAGGGTTTCAGAGCTTTCTGGAGTGATATCTTCAGCTTGATGATAAAGAGTCAAATATGGAACG
AAGAGTGATCAGATTTCTAAATCAGAATATCTGTGCACTCATCTTTGGCATCCAAAGTTGATGTTGAGCAGGT
TGTTATGTATTGCAAGGAGAAGCTTATTCGTGGGGAATCAGAATTTTCTTTGAAGAATTGAGAGCCCAGAAATA
CAATCAACGGAGAAAGCATGAGCAATGGGTAAATGAAGACAGACATTATATGAAAAGGAAAGAAGCAAATGCTTT
TGAAGAACAGCTATTAAACAGAAAATGGATGAACTTCATAAGAAGTTGCATCAGGTGGTGGAGACATCCCATGA
GGATCTGCCCGCTTCCAGGAAAGGTCCGAGGTTAATCCAGCACGTATGGGGCCAAGTGTAGGCTCCAGCAGGA
ACTGAGAGCGCCATGTCTTCCAGTAACCTATCAGCAGACACCAGTGAACATGGAAGAAGCCAAAGAGAGGGCACC
TCCTGTTGTTCTCTCTTTGGCAAATGCTATTTCTGCAGCTTTGGTGTCCCCAGCCACCAGCCAGAGCATTGCTCC
TCCTGTTCTTTGAAAGCCCAGACAGTAACAGACTCCATGTTTGCACTGGCCAGCAAAGATGCTGGATGTGTGAA
TAAGAGTACTCATGAATTCAGCCACAGAGTGGAGCAGAGATCAAAGAAGGGTGTGAAACACATAAGGTTGCCAA
CACAAGTTCTTTTACACAACCTCCAAACACATCACTGGGAATGGTTCAGGCAACGCCATCCAAAGTGCAGCCATC
ACCCACCGTGCACACAAAAGAAGCATTAGGTTTCATCATGAATATGTTTCAGGCTCCTACACTTCCTGATATTTT
TGATGACAAAGATGAATGGCAATCTCTAGATCAAAATGAAGATGCATTTGAAGCCCAGTTTCAAAAAAATGTAAG
GTCATCTGGGGCTTGGGGAGTCAATAAGATCATCTCTCTTTGTCTATCTGCTTTTTCATGTGTTTGAAGATGGAAA
CAAAGAAAATTATGGATTACCACAGCCTAAAAATAAACCACAGGAGCCAGGACCTTTGGAGAACGCTCTGTCTAG
CAGACTTCCTTCAAAACCAAAGGAGGAAGTGCCTCATGCTGAAGAGTTTTTGGATGACTCAACTGTATGGGGTAT
TCGCTGCAACAAAACCCCTGGCACCCAGTCCCTAAGAGCCCAGGAGACTTCACATCTGCTGCACAACTTGCGTCTAC
ACCATTCCACAAGCTTCCAGTGGAGTCACTGCACATTTTAGAAGATAAAGAAAATGTGGTAGCAAAACAGTGTAC
CCAGGCGACTTTGGATTCTTGTGAGGAAAACATGGTGGTGCCTTCAAGGGATGGAAAATTCAGTCCAATTCAAGA
GAAAAGCCCCAAAACAGGCCTTGTCTCTCACATGTATTTCAGCATCCTTACTTCGTCTGAGCCAGCCTGCTGCAGG
TGGGGTACTTACCTGTGAGGCAGAGTTGGGCGTTGAGGCTTGCAGACTCACAGACACTGACGCTGCCATTGCAGA
AGATCCACCAGATGCTATTGCTGGGCTCCAAGCAGAATGGATGCAGATGAGTTCACTTGGGACTGTTGATGCTCC
AACTTTCATTGTTGGGAACCCATGGGATGATAAGCTGATTTTCAAACCTTTTATCTGGGCTTTCTAAACCAGTGAG
TTCCTATCCAAATACTTTTGAATGGCAATGTAACTTCCAGCCATCAAGCCCAAGACTGAATTTCAATTGGGTTC
TAAGCTGGTCTATGTCCATCACCTTCTTGAGAGAAGGAGCCTTTGCCAGGTGTACGAAGCTACCCAGGGAGATCT
GAATGATGCTAAAAATAAACAGAAATTTGTTTTAAAGGTCCAAAGCCTGCCAACCCTGGGAATTCTACATTGG
GACCCAGTTGATGGAAAGACTAAAGCCATCTATGCAGCACATGTTTATGAAGTTCTATTCTGCCCACTTATTCCA
GAATGGCAGTGTATTAGTAGGAGAGCTCTACAGCTATGGAACATTATTAATGCCATTAACCTCTATAAAAAATAC
CCCTGAAAAGTGTATGCCTCAAGGTCTTGTCTATCTCTTTTGCTATGAGAATGCTTTACATGATTGAGCAAGTGCA
TGACTGTGAAATCATTCATGGAGACATTAAACCAGACAATTTCTACTTGGAAACGGATTTTGGAAACAGGATGA
TGAAGATGATTTATCTGCTGGCTTGGCACTGATTGACCTGGGTGAGATATAGATATGAAACTTTTCCAAAAGG
AACTATATTACAGCAAAGTGTGAAACATCTGGTTTTTCAGTGTGTTGAGATGCTCAGCAACAAACCATGGAACCTA
CCAGATCGATTACTTTGGGGTGTCTGCAACAGTATATTGCATGCTCTTTGGCACTTACATGAAAGTGAAAAATGA
AGGAGGAGAGTGTAAAGCCTGAAGGTCTTTTTAGAGGCTTCCTCATTTGGATATGTGGAATGAATTTTTTCATGT
TATGTTGAATATTCCAGATTGTCTATCTTCCATCTTTGGATTTGTTAAGGCAAAAGCTGAAGAAAGTATTTCA
ACAACACTATACTAAACAAGATTAGGGCCCTACGTAATAGGCTAATTGTACTGCTCTTAGAATGTAAGCGTTACAG
AAAATAAAATTTGGATATAGACAGTCTTAAATAACACTGTAAATATGAATCTGCTCACTTTAAACCTGTTTT
TTTTTCATTTATTGTTTATGTAAATGTTTGTAAAAATAAATCCCATGGAATATTTCCATGTAAAAA

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FIGURE 665

MDTPENVLQMLEAHMQSYKGN DPLGEWERYIQWVEENFPENKEYLITLLEHLMKEFLDKKKYHNDPRFISYCLKF
AEYN S D L H Q F F E F L Y N H G I G T L S S P L Y I A W A G H L E A Q G E L Q H A S A V L Q R G I Q N Q A E P R E F L Q Q Q Y R L F Q T R L T E T
H L P A Q A R T S E P L H N V Q V L N Q M I T S K S N P G N N M A C I S K N Q G S E L S G V I S S A C D K E S N M E R R V I T I S K S E Y S V H S S L
A S K V D V E Q V V M Y C K E K L I R G E S E F S F E E L R A Q K Y N Q R R K H E Q W V N E D R H Y M K R K E A N A F E E Q L L K Q K M D E L H K K L
H Q V V E T S H E D L P A S Q E R S E V N P A R M G P S V G S Q Q E L R A P C L P V T Y Q Q T P V N M E K N P R E A P P V V P P L A N A I S A A L V S
P A T S Q S I A P P V P L K A Q T V T D S M F A V A S K D A G C V N K S T H E F K P Q S G A E I K E G C E T H K V A N T S S F H T P N T S L G M V Q
A T P S K V Q P S P T V H T K E A L G F I M N M F Q A P T L P D I S D D K D E W Q S L D Q N E D A F E A Q F Q K N V R S S G A W G V N K I I S S L S S
A F H V F E D G N K E N Y G L P Q P K N K P T G A R T F G E R S V S R L P S K P K E E V P H A E E F L D D S T V W G I R C N K T L A P S P K S P G D F
T S A A Q L A S T P F H K L P V E S V H I L E D K E N V V A K Q C T Q A T L D S C E E N M V V P S R D G K F S P I Q E K S P K Q A L S S H M Y S A S L
L R L S Q P A A G G V L T C E A E L G V E A C R L T D T D A A I A E D P P D A I A G L Q A E W M Q M S S L G T V D A P N F I V G N P W D D K L I F K L
L S G L S K P V S S Y P N T F E W Q C K L P A I K P K T E F Q L G S K L V Y V H H L L G E G A F A Q V Y E A T Q G D L N D A K N K Q K F V L K V Q K P
A N P W E F Y I G T Q L M E R L K P S M Q H M F M K F Y S A H L F Q N G S V L V G E L Y S Y G T L L N A I N L Y K N T P E K V M P Q G L V I S F A M R
M L Y M I E Q V H D C E I I H G D I K P D N F I L G N G F L E Q D D E D D L S A G L A L I D L G Q S I D M K L F P K G T I F T A K C E T S G F Q C V E
M L S N K P W N Y Q I D Y F G V A A T V Y C M L F G T Y M K V K N E G G E C K P E G L F R R L P H L D M W N E F F H V M L N I P D C H H L P S L D L L
R Q K L K K V F Q Q H Y T N K I R A L R N R L I V L L L E C K R S R K

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FIGURE 666.

GCGCAGAAGCGGCGGCGGTGGTGGCTTGTGGTGCGGCCTCACCATACAGGAACAGGGCAGACGTTAGCGTGAGTG
ATCACTCTCAATCCCGGGGACCTGGTGGCCTTAGTCTTTCAGGTGGAACGGTGTGCGACATGGGAAAAGAAAACCA
AGCGGACAGCTGACAGTTCTTCTTCAGAGGATGAGGAGGAGTATGTTGTGGAGAAGGTGCTAGACAGGCGCGTGG
TTAAGGGACAAGTGGAATATCTACTGAAGTGGAAGGCCTTTCTGAGGAGCACAATACTTGGGAACCTGAGAAAA
ACTTGGATTGCCCTGAGCTAATTTCTGAATTTATGAAAAAGTATAAGAAGATGAAGGAGGGTGAAAAATAATAAAC
CCAGGGAGAAGTCAGAAAGTAACAAGAGGAAATCCAATTTCTCAAACAGTGCCGATGACATCAAATCTAAAAAAA
AGAGAGAGCAGAGCAATGATATCGCTCGGGGCTTTGAGAGAGGACTGGAACCAGAAAAGATCATTGGGGCAACAG
ATTCTGTGGTGATTTAATGTTCCCTAATGAAATGGAAAGACACAGATGAAGCTGACCTGGTTCTTGCAAAAGAAG
CTAATGTGAAATGTCCACAAATTGTGATAGCATTTTATGAAGAGAGACTGACATGGCATGCATATCCTGAGGATG
CGGAAAACAAAGAGAAAGAAACAGCAAAGAGCTAAAGGAGGGGATGGTCTCTGTCATTTCTCTTGTACATAATA
CATTCACCTCCCTGCCTCCTCTCCTTTCTACCCACCCCTTTCTATCCTAAACACATCCATAAAAAAATGTGCTTAT
CACTGTGCTCCACAAA

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FIGURE 667

MGKKTkRTADSSSSSEDEEEYVVEKVLDRRVVKGQVEYLLKWKGFSEEHNTWEPEKNLDCPELISEFMKKYKKMKE
GENNKPREKSESNNRKSNSFSNSADDIKSKKKREQSNDIARGFERGLEPEKIIIGATDSCGDLMLMKWKDTDEADL
VLAKEANVKCPQIVIAFYEERLTWHAYPEDAENKEKETAKS

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FIGURE 668

CTGAAGCTTG CATGCCTGCAGGTCGACCCACGCGTCCGCGGACGCGTG GGGCGGACGCGTG GGGTTTTTCCTTTCTT
CCAGAAGGAGATTTAACCATAGTAGAAAGAATGGAGAACTATTA ACTGCCTTCCTTCTGTGGGCTGTGATTTTCA
GAGGGGAATGCTAAGAGGTGATTTTCAATGTTGGGACTCAAAGGTGAAGACACTGAAGGACAGAATTTTGGCAG
AGGAAAGATCTTCTTCGGTCACCATACTTGAGTTAGCTCTAGGGAAAGTGGAGGTTTCCATTGGAATTCTATAGC
TTCTTCCAGGTCATAGTGTCTGCCCCCACCTTCCAGTATCTCCTGATATGCAGCATGAATGAAAATGGCAAGTT
TCCTGGCCTTCCTTCTGCTCAACTTTTCGTGTCTGCCTCCTTTTGCTTCAGCTGCTCATGCCTCACTCAGCTCAGT
TTTCTGTGCTTGGACCTCTGGGCCCATCCTGGCCATGGTGGGTGAAGACGCTGATCTGCCCTGTACCTGTTCC
CGACCATGAGTGCAGAGACCATGGAGCTGAAGTGGGTGAGTTCCAGCCTAAGGCAGGTGGTGAACGTGTATGCAG
ATGGAAGGAAGTGAAGACAGGCAGAGTGCACCGTATCGAGGGAGAACTTCGATTCTGCGGGATGGCATCACTG
CAGGGAAGGCTGCTCTCCGAATACACAACGTCACAGCCTCTGACAGTGGAAAGTACTTGTGTTATTTCCAAGATG
GTGACTTCTATGAAAAAGCCCTGGTGGAGCTGAAGGTTGCAGCACTGGGTTCTGATCTTACGTTGATGTGAAGG
GTTACAAGGATGGAGGGATCCATCTGGAGTGCAGGTCCACTGGCTGGTACCCCCAACCCCAAATACAGTGGAGCA
ACAACAAGGGAGAGAACATCCCGACTGTGGAAGCACCTGTGGTTCAGACGGAGTGGGCTGTATGCAGTAGCAG
CATCTGTGATCATGAGAGGCAGCTCTGGGGAGGGTGTATCTGTACCATCAGAAGTTCCCTCCTCGGCCTGGAAA
AGACAGCCAGCATTTCATCGCAGACCCCTTCTTCAGGAGCGCCAGAGGTGGATCGCCGCCCTGGCACGGACCC
TGCTGTCTTGCTGTCTTCTTGGGGAGCCGTTACTTCTGTGGCAACAGCAGGAGGAAAAAAGACTCAGT
TCAGAAAGAAAAAGAGAGAGCAAGAGTTGAGAGAAATGGCATGGAGCACAAATGAAGCAAGAACAAGCACAAAGAG
TGAAGCTCCTGGAGGAACCTCAGATGGAGAAGTATCCAGTATGCATCTCGGGGAGAGAGACATTACAGCCTATAATG
AATGAAAAAAGGCCCTCTTCAAGCCTGCGGATGTGATTCTGGATCCAAAAACAGCAAACCCCATCTCCTTGTTT
CTGAGGACCAGAGGAGTGTGCAGCGTGCCAAGGAGCCCCAGGATCTGCCAGACAACCCTGAGAGATTTAATTGGC
ATTATTGTGTTCTCGGCTGTGAGAGCTTCATATCAGGGAGACATTACTGGGAGGTGGAGGTAGGGGACAGGAAAG
AGTGGCATATAGGGGTGTGCAGTAAGAATGTGCAGAGAAAAGGCTGGGTCAAATGACACCTGAGAATGGATTCT
GGACTATGGGGCTGACTGATGGGAATAAGTATCGGACTCTAACTGAGCCCAGAACCAACCTGAACTTCCTAAGC
CCCCTAAGAAAGTGGGGGTCTTCTGACTATGAGACTGGAGATATCTCATTCTACAATGCTGTGGATGGATCGC
ATATTCACTTTCTCGGACGCTCCTTCTCTGAGGCTCTATATCCTGTTTTCAGAAATTTTGACCTTGGAGCCCA
CGGCCCTGAGTATTTGTCCAGCGTGAAGAAGAAGAGAGTTTCTCCAATTCTGACCGAGTGCTGATCATTCCCT
AGAGACACCAGTAACCCCGGGCTTAGCTAACGAAAGTGGGGAGCCCTCAGGCTGAAGTAACTTTCTCTGCTTCTC
CCTGCCAGCTCAGAGCTGAGGGCTCCCCCTCCACAGCAACCAATCACAACCATAAAGCTACAAGCACGCACTG
AAGCACTTTACTGATACTCATTCAATTATTTCATATGACAGTTGTTTGGTGGTGGTGGTGGTGGTGGTGGTGGT
TACAGATAAGGAACTGGGGTGCAGAAAAGTGAATTGACTACAAAGTAGACATGACTAGTTAACAACACAGCTGG
GATCTAAACAGCAATAACTAATTAATGGAGAACTTAAATGCTCTGAGTGCTGTGTTATGAGCTTTGGTGGAT
GTCACTCCTTTAATCCTCGCAACACCCTGTGGGTAGTCTCATTAGCAAGTATGGAAGTTGAGGCAGGGCAACA
TTAAGCAACTTACATAACTCATGCAGTAATTTCTGCAGTTGGGAGATGTTTCCAGCTTCAGTCCCCGGCCCTATGGC
CGTTCTTTTCCACCCTGTTTCTTCCCCATAGGAAGAACCCACCTGTAGCCCTGAGGTTCTTTTCCAGGATGGC
TCCAGGATAAGGATCACTGTAGGTGGTTGTGGAGTTGACACCCCTGTTGACTCCTTCCAGCTGATTGTGAGAGC
CTTAGACCCAGCACGCCTTGGATTAGCTTTGCAGAGTGTCTTGGTTGAGAGAAATACCCTACCCGTACCCACATGA
CACGTGATTTGGAAGAGACTAGAGGCCACACTTGATAAATCATGGGGAACAGATGTGTTCCACCCAACAAATGT
GATAAGTGATCATGCAGCCAGAGCCAGCCTTCTTCAATCAAGGTTTCCAGGCAGAGCAAATACCCTAGAGATTT
TCTGTGATATAGGAAATTTGGATGAAGGGAGCTAGAAGAAATACAGGGATTTTTTTTTTTTTTTTAAAGATGGAGTC
TTACTCTGTTGCTAGGCTGGAGTGCAGTGGTGCATCTCAGCTCCCTGCAACCTCCACCTCCTGGGTTCAAACAA
TTCTCCTGCCTCAGCCTCCCGAGTACTGGGAATATAGGTGCAGCCACCACACCCAACAAATTTTTGTACTTTTA
GTACAGATGAGGGTTCACTATGTTGGCCAGGATGGTCTCGATCTCTTGACCTCATGATCCACCCACCTCGGTCTC
CCAAAGTGCTGGGATTACAGGCTTGAGCCACCGGGTGACCGGCTTACAGGGATATTTTAAATCCCGTTATGGACT
CTGTCTCCAGGAGAGGGGTCTATCCACCCCTGCTCATTGGTGGATGTTAAACCAATATTCCTTTCAACTGCTGCC
TGCTAGGGAAAAACTACTCCTCATTATCATCATTATTATTGCTCTCCACTGTATCCCCTCTACCTGGCATGTGCT
TGTCAGGTTCTAGTTGTTCAATAAATTTGTTAATAATGCTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AA

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FIGURE 669

MKMASFLAFLLLNFRVCLLLLQLLMPHSAQFSVLGPGPILAMVGEDADLPCHLFPTMSAETMELKWVSSSLRQV
VNVYADGKEVEDRQSAPYRGRTSILRDGITAGKAALRIHNVTASDSGKYLCYFQDGDIFYEKALVELKVAALGSDL
HVDVKGYKDGGIHLECRSTGWYPQPQIQWSNNKGENIPTVEAPVVADGVGLYAVAASVIMRGSSGEGVSTIRSS
LLGLEKTASISIA DPFFRSAQRWIAALARTLPVLLLLLGGAGYFLWQQQEEKKTQFRKKKREQELREMAWSTMKQ
EQSTRVKLLEELRWRSIQYASRGERHSAYNEWKKALFKPADVILDPKTANPILLVSEDQRSVQRAKEPQDLDPNP
ERFNWHYCVLGCEFSISGRHYWEVEVGDRKEWHIGVCSKNVQRKGWVKMTPENGFWTMGLTDGNKYRTLTEPRTN
LKLKPPPKKVGFLDYETGDISFYNAVVGSHIHTFLDVSFSEALYPVFRILTLEPTALSICPA

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FIGURE 670

CAAATCCGTGCTCCTAGATTTGCAGGTTCTGATACTGTGGTTCGAGCTACACTCGCCGCCTGGGCAGACACTCGT
CCAAACCACTGGAGTGTGCTGGTGATCGCAGCCAGCCCTTCGCCTCTCCATGAACCCGTGAGCCTGGGGCAGGTG
CCAGGCGATGGCGCGGCCTGTGAGCGACAGGACCCCGGCCCTCTGCTGCTGGGCGGCCCGGCCGGACACCCCC
TGCGGGGGAGCGCTGCTTGGGTTGCGGAGCCTTCTGCAGGGGACCAGCAAGCCCAAAGAGCCGGCCAGCTGTCT
CCTGAAGGAAAAGGAGCGCAAGGCGGCCCTGCCTGCAGCCACAACCCCTGGGCCAGGCCTGGAGACTGCGGGCCC
GGCGGATGCCCCGGCTGGGGCAGTGGTGGGCGGAGGGTCCCCGCGGGGGCGCCCGGGGCCGGTGCCCGCCCCGGG
TCTGTTGGCGCCACTGCTGTGGGAGCGCACGCTGCCGTTCCGGCGATGTGGAGTACGTAGACCTGGACGCCTTCCT
GCTGGAGCACGGGCTCCCGCCAGCCCGCCGCCCCCGGTGGCCCGTCGCCGGAGCCGTCGCCCGCGCGGACGCC
CGCACCTTCCCCAGGGCCGGGTTCTGTGCGGCTCGGCTTCCCCCGCTCCTCTCCTGGGCACGCCCCCGCCGGG
TGCCCTCGGGACCGCCACGGGCCACCGCGCAGGCCTGACCTCTCGGGACACACCCAGCCCTGTGGACCCAGACAC
CGTGGAGGTGTTGATGACCTTTGAACCCGACCCAGCTGATCTTGCCCTATCAAGCATTCTGGCCACGAGACCTT
TGACCTCTGAAGACATCGCTTCTCAGAAGAGGAACCTTAAGCCCCAGCCAATCATGAAGAAGGCAAGAAAAATCCA
GGTGCCGGAGGAGCAGAAGGATGAGAAATACTGGAGCCGGCGGTACAAGAACAACGAGGCAGCCAAGCGGTCCCG
TGACGCCCCGGCGGCTCAAGGAGAACCAGATATCGGTGCGGGCGGCCTTCCTGGAGAAGGAGAACGCCCTGCTGCG
GCAGGAAGTTGTGGCCGTGCGCCAGGAGCTGTCCCACTACCGCGCCGTGCTGTCCCGATACCAGGCCCAGCACGG
GGCCCTGTGAGGCTGCCCCACATCCCCACCTGGCAGGCGTCTCCTCCGCTTGCTGAGACTTACGCCCTGTTCCCT
TCCTGCCCTGTGCCACGGGCCGGCCAGCTGGGTGCCCCAGGGACGTGATAATGCAGATAAATACATTTATATT
TTAAGAAAAGCGAGCCTCCCCCTCTTGCGGGGGCGGGGAGGGTTCTCTGTGTGTCCCCGGCACGTCAGGGACC
CTATCCTCCACCGCCTCCGTTAACACGATCCTGAATAAATCTTGAGAACCC

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FIGURE 671

MARPVSDRTPAPLLLGGPAGTPPPGGGALLGLRSLQGTSKPKEPASCLLKEKERKAALPAATTPGPGLETAGPAD
APAGAVVGGGSPRGRPGVPAPGLLAPLLWERTLPFGDVEYVDLDAFLLEHGLPPSPPPPGGSPPEPSPARTPAP
SPGPGSCGSASPRSSPGHAPARAALGTATGHRAGLTSRDTPSPVDPDTVEVLMTFEPDPADLALSSIPGHETFD
RRHRFSEEELKPQFIMKKARKIQVPEEQKDEKYWSRRYKNNEAAKRSRDARRLKENQISVRAAFLEKENALLRQE
VVAVRQELSHYRAVLSRYQAQHGAL

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FIGURE 672

AGACTCAACAAGAGCTCCAGCAAAGACTTTCCTGCTAGCTTGACTTGACCTGAGATTAACTAGGGAATCTTGAGA
ATAAAGATGAGCTCTGAAAATTGTTTCGTAGCAGAGAACAGCTCTTTGCATCCGGAGAGTGGACAAGAAAATGAT
GCCACCAGTCCCCATTTCTCAACACGTCATGAAGGGTCCTTCCAAGTTCCTGTCCTGTGTGCTGTAATGAATGTG
GTCTTCATCACCATTTTAATCATAGCTCTCATTGCCTTATCAGTGGGCCAATACAATTGTCCAGGCCAATACACA
TTCTCAATGCCATCAGACAGCCATGTTTCTTCATGCTCTGAGGACTGGGTTGGCTACCAGAGGAAAATGCTACTTT
ATTTCTACTGTGAAGAGGAGCTGGACTTCAGCCCCAAAATGCTTGTTCTGAACATGGTGCTACTCTTGCTGTCATT
GATTCTGAAAAGGACATGAACTTTCTAAAACGATACGCAGGTAGAGAGGAACACTGGGTTGGACTGAAAAAGGAA
CCTGGTCACCCATGGAAGTGGTCAAATGGCAAAGAATTTAACTGTTCAACGTTACAGGGTCTGACAAGTGT
GTTTTCTGAAAAACACAGAGGTGAGCAGCATGGAATGTGAGAAGAATTTATACTGGATATGTAACAAACCTTAC
AAATAATAAGGAAACATGTTCACTTATTGACTATTATAGAATGGAACCTCAAGGAAATCTGTGTCAGTGGATGCTG
CTCTGTGGTCCGAAGTCTTCCATAGAGACTTTGTGAAAAAAAATTTTATAGTGTCTTGGAATTTTCTTCCAAAC
AGAACTATGGAAAAAAGGAAGAAATTCAGGAAAAATCTGCACTGTGGGCTTTTATTGCCATGAGCTAGAAGCAT
CACAGGTTGACCAATAACCATGCCCAAGAATGAGAAGAATGACTATGCAACCTTTGGATGCACCTTATATTATTT
TGAATCCAGAAATAATGAAATAACTAGGCGTGGACTTACTATTTATTGCTGAATGACTACCAACAGTGAGAGCCC
TTCATGCATTTGCACTACTGGAAGGAGTTAGATGTTGGTACTAGATACTGAATGTAAACAAAGGAATTATGGCTG
GTAACATAGGTTTTTTAGTCTAATTGAATCCCTTAACTCAGGGAGCATTATATAAATGGACAAATGCTTATGAAAC
TAAGATTTGTAATATTTCTCTCTTTTTAGAGAAATTTGCCAATTTACTTTGTTATTTTTCCCCAAAAGAATGGG
ATGATCGTGATTTTATTTTTTTTACTTCCTCAGCTGTAGACAGGTCCTTTTCGATGGTACATATTTCTTTGCCTTT
ATAATCTTTTATACAGTGTCTTACAGAGAAAAGACATAAGCAAAGACTATGAGGAATATTTGCAAGACATAGAAT
AGTGTGGAAAATGTGCAATATGTGATGTGGCAAATCTCTATTAGGAAATATTCTGTAATCTTCAGACCTAGAAT
AATACTAGTCTTATAATAGGTTTGTGACTTTCCTAAATCAATTCTATTACGTGCAATACTTCAATACTTCATTTA
AAATATTTTTATGTGCAATAAAATGTATTTGTTTGTATTTTGTGTTTCAGTACAATTATAAGCTGTTTTTATATAT
GTGAAATAAAAGTAGAATAAACACAAAAA

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FIGURE 673

MSSENCFVAENSSLHPESGQENDATSPHFSTRHEGSFQVPVLCVMNVVFITILIIALIALSVGQYNCPGQYTFS
MPSDSHVSSCEDWVG YQRKCYFISTVKRSWTS AQNACSEHGATLAVIDSEKDMNFLKRYAGREEHWVGLKKEPG
HPWKWSNGKEFNW FNV TGSDKCVFLKNTEVSSMECEKNLYWICNKPYK

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FIGURE 674A

CCGGGGTCCCCTTTACCCCAAGTGAGCCAGCTCAGGCTGTCTGCAAAGCCGGAGGTGCGGGCAGCTCCGGGCATT
GCATTGGTGCGGAGGCTTTTATATGCCAGAGAACCCTGAGTGTGCCCTGACATGACAAGGAGCCGTCGTCGTTA
GGACTACCGACCAGACTCCCGGAAATCATGTTGGTAGGATCCCAGTCTTTTTTCGCCTGGAGGGCCCAATGGGATC
ATTAGAAGCCAGTCTTTTGCGGGTTTCAGCGGCCTCCAGGAAAGGCGATCCAGGTGTAACCTCCTTCATTGAAAAT
TCCTCCGCTCTCAAGAAGCCTCAGGCCAACTGAAGAAAATGCACAATTTAGGCCACAAAAACAACAATCCCCC
AAAGAGCCTCAGCCTAAAAGGGTGAAGAAGTCTACAGGGCCTTGAAAAATGGACTTGATGAATATCTGGAGGTT
CACCAGACGGAGCTGGACAAGTTGACAGCTCAGTTAAAAGATATGAAAAGAACTCTCGCCTGGGTGTACTGTAT
GACCTAGACAAGCAAATTAAAACAATTGAAAAGATACATGAGACGCCTGGAGTTTTATATAAGTAAGGTAGATGAA
CTCTATGAAGCTTATTGTATCCAGCGACGCCTCCAGGATGGTGCCAGCAAAATGAAGCAAGCCTTCGCAACATCC
CCTGCCAGCAAAGCTGCCCGGGAGAGTCTGACAGAGATCAATCGGAGCTTCAAGGAGTACACAGAGAATATGTGC
ACCATTGAAGTGGAGCTAGAGAATCTGCTGGGAGAATTCTCCATCAAGATGAAAGGTCTGGCTGGCTTTGCACGC
CTCTGTCTGGAGATCAATATGAAATTTTCATGAAGTATGGCCGGCAGCGGTGAAACTGAAAGGCCAAAATAGAA
GTAAATGGCAAGCAGAGCTGGGATGGAGAAGAAACAGTTTTTCTGCCCTGATAGTTGGGTTCATCTCCATCAAG
GTCACGGAGCTCAAAGGGCTAGCAACTCACATCCTGGTAGGTAGCGTGACCTGTGAGACCAAAGAGCTGTTTGCA
GCCCCACCTCAGGTAGTGGCTGTGACATCAATGACCTTGGTACCATCAAACCTGAACCTGGAAATCACCTGGTAT
CCATTTGACATGGAGGACATGACCGCATCCTCAGGCGCTGGGAACAAGGCAGCAGCCCTTCAGAGGAGAATGTCC
ATGTACAGCCAGGGTACCCCGGAAACGCCCACCTTCAAAGACCACTCCTTCTTTAGGTGGCTGCATCCTTCCCCA
GACAAGCCCAGGCGGCTGTCTGTCTTGAGTGCCTTGCAAGACACTTTCTTTGCCAAGCTGCACCGCAGCCGCTCC
TTCAGTGACCTGCCCTCCCTCAGGCCGAGTCCCAAGGCCGTGCTAGAGCTCTATTCAAATCTACCTGATGACATC
TTTGAAAATGGAAGGCAGCCGAGGAGAAAATGCCACTGTGCTCAGCTTCAGTGACCTGCCCAACGGGGACTGC
GCCCTCACCTCCCCTCAACAGGCTCCCCTTCCAACCTCAACAAATCCAGAAATTACCATCACCCCTGCGGAGTTT
AACCTCAGCAGCTTGGCCTCCAGAATGAGGGTATGGATGACACCAGCTCAGCATCTTCCAGGAACCTCCCTGGGA
GAAGGCCAAGAGCCAAAGTCACACCTGAAGGAGGAAGACCCAGAGGAGCCAGAAAACCTGCCTCGGCCCATCT
GAGGCTTGCCGCCGACAGTCTCAGGTGCTGGGGCTGAGCACCTGTTCTTGAGAATGATGTTGCAGAAGCACTT
CTGCAAGAGTCTGAGGAGGCCTCTGAGCTCAAGCCTGTGGAACCTGGACACTTCGGAAGGAAACATCACAAAGCAG
CTGGTCAAGAGGCTCACATCTGCAGAGGTGCCAATGGCCACAGACAGGCTGCTCTCTGAGGGTCTGTTGGTGGGA
GAATCTGAAGGCTGCAGATCCTTTCTAGATGGAAGCTTAGAGGATGCTTTTAATGGGCTTTTACTTGCATTAGAA
CCACATAAAGAGCAGTATAAAGAGTTTCAGGATCTGAACCAAGAAGTCATGAATTTGGATGATATTCTAAAATGC
AAGCCAGCAGTAAGCCGCAGCAGGTCTTCCAGTTTAAGTCTCACAGTTGAAAGTGCTTTAGAAAGCTTTGATTTT
CTGAACACCTCTGATTTTGACGAGGAGGAGGATGGTGATGAGGTTGTAAATGTTGGCGGAGGTGCTGACTCAGTA
TTTTCAGACACTGAGACTGAGAAACACAGTTACAGGTCGGTTACCCAGAAGCCAGGGGGCATCTCAGTGAAGCG
CTCACTGAAGACACAGGAGTTGGGACCAGTGTGGCAGGAAGTCCTCTCCCACTGACCACAGGCAACGAGAGCCTG
GACATCACCATCGTCAAGGCACCTCCAGTACTGCACCAACTCGTGACGCAAAATGTTTTCTCAAGCAAAACCCCA
TTTGTGGCAAGAAGTCTCTTAGAGAAGCTTTCTAGGCAGATCCAAGTGATGGAGAACTCGCAGCTGTGAGTGAT
GAGAACATAGGAAATATCAGTTCTGTTGTGGAAGCCATAACAGAATTTACAAAAAGCTGTCTTTGCTGTCAATC
TGGACCAAGTGCTGCAGCCCTGTTGGTGTCTACCACAGCCCAGCGACAGAGTGATGAAGCAGCTGGAGGCCAGC
TTTGCCAGAAGTGTCAACAAAGAATATCCAGGACTTGACAGACCCAGTGTTTTCGAACCCCTGGTGTCCCAATTCCTG
GACCAGGCTGAGCCTCTGCTTTCTCCAGCCTGTCTCGGAAGTCGTCACTGTTTTCCAGTATTACAGTTACTTC
ACCAGCCACGGCGTCAGTGACCTGGAGAGTTACCTGAGCCAGCTGGCCAGGCAAGTTTCCATGGTTTCAGACTCTG
CAATCACTAAGAGATGAAAACTGCTACAAACCATGAGTGACCTTGCTCCCAGCAACCTCCTGGCCCAGCAGGAA
GTACTCAGGACTCTGGCTCTGCTATTAACCAGAGAGGACAACGAAGTTAGCGAGGCTGTGACGCTTTACTTGGCA
GCAGCCTCCAAAAATCAGCATTTTCAGGGAAAAGGCCTTGCTCTATTACTGTGAAGCACTAACAAAGACAAACCTC
CAGCTCCAGAAAGCAGCTTGCTGGCTCTGAAAATCCTTGAGGCTACTGAAAGCATTAAAAATGCTGGTGACATTG
TGTCAATCTGATACTGAAGAAAATCAGAAATGTGGCCTCAGAAACCCCTCTGTCTCTGGGAGAAGATGGGCGGCTG
GCATATGAACAATTGGACAAAATTCCTCGAGACTGTGTTAAAGTCGGAGGTCGTATGGAAGTGAAGTTGCCACA
GCCTTTTAAATTACAGATTAACTGCCTAACAGCTGTCTTAATATCTGGCCCTTTTCATCAGGATGGTGCTGTGGTT
TGGGCTGGAAATTGTTTAGAGCCTGAGAGACACGACAACCTGAAATAAAAAATGTAGGCCAGGTGCAGTGGCTCATG
CCTGTAATCCAGTACTTTGGGAGGCCAACGCAGGAGAATTGCTTAAGCCCAGGAGGTTCAAGACCAACCTGGGC

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FIGURE 674B

AACATAGCAAGGCCCTGTCTCTACAAAAAAATAGTTTAAATTAGTCGGGCGTGGTGGCATGCACCTGTAGTCCCA
GCTACTTGGGAGGCTAAGGTGGGAGGATTGCTTGAGCCCAGAAGATTCAGGCTGCAGTGAGCCATAATTGCCCA
CTGCACTCCAGACTGGGTGACAGAGCAAAACCCTGTCTCAAAAAACAAAACAACAACAACATAAAAAACATG
TTATAGAAAGAATTTCAGAGTCTCGTTTCACAGTACCTATCTACTTTTCCTTTGGCCAATATAGAATAGGGCTATG
GTATAATTCAAATAGATTACATCGTCGATTGTGTCTAATAATACTCAGTGAAAGAGTCCATCTTATCTTAATATG
TATGAAATTTAAAAATAGCCATCTTTGTACTTTTTTGCAAGTTTCTCTATAAGCTTGAAATAGTCATGTGATACT
TCGACAAACATCATATGCCTTGCAGTTTTTCTCGGTCTGTCTCAGGGTTGAGTAGTCCCCTTAGCTACCTAAC
TTTACTTTCAATACAAAGCACAAAAAGAATACTTCAAATAAAAGTTTGCCTGCAGAACCTGGCAAAATGACCCA
TTATGAGAGTTTAGATGTTTTAATTTTATGTGCTCCAGCTACTCTGGAGTCTGAGGTGGGAGGATCACTTGAGG
CAGAGGTTGCAGTAAGCTGAGATTACACTACTGCACTCCAGCCCATGTGACAGAGGAATGAGAGCCAGTCTCAA
AAAAAAAACAAAAACTCCCATAAATTTATTTTGTTCCTTTTCCCCATCCTGAAAATTCCCAAATCATGTTCCA
TTATGGAAAAATGATAAGTAAATGACTAAGAACTACATTAAGATTATGCCTATACACTTAAACAAAAAACTCAA
GCTTATGCTTTTTTTTTTTAATTAATGAGAGCTATTTTTTATGATATTCTTACCATAGGGGTGTTTTGCTGCTAA
GACAAATCAAACCAAAGCTGTAGATTCACAAACCTGTGATGCTCTTTGAGGTGGAGGAACCTAGAAGTCAGAG
AAATCCTAATGGAGTAGGAGTGGAGGAACATTTAAAGTGGTCCCTCCTTCTGTAAAAATGACCGTGGGATTAGAA
AGAAGGACATCCTGAGGGGTGGTTACTGCCCCCAGGGAATCACTCACTGGTAGGATTCCCTGGCCAAATAGTTC
AAACATCAGGTCCCATTATTGCTTCAGTATCAGAGATGCAAGTTCATTAAGCAAAGTACAAGACCATTCACTAGC
TCTTATTTAAATATCTTTTCTTCTCTAAAGAGTGTACAAGGTGGGGTATGCCAAGGTATCAAAACAATATATGT
GAGTGTAATTTAACTGTGGAATATCAACTGTACTATGGACGTGTTTGTATCATTTAGATGTCATTTTAAATATT
TACATTTTAGCAAGACTTTTTAAAAAGGACTCATTTCAATTTCAAAGTGCAAATTGTTTGCCAGGCTTCTGGCAAAT
GGTTCCTTCAACTGTGAACCTATAGTGATACATATCTGTATATTTATAAATATTATATATATTACATACCTTCA
GTTTAAAGGTACATTGTACAGTCTGTAGTTAGGAGGTATAGCCTATAGCTTATGTTAAATGGTTGAAATGGTTCT
TTTTATAGAAAGTCAAACACAGATGTTACAGGATTTTGTGTTTGGTTTGTCATTTTTTTTATTTTTTATTTTGACT
ATTGCATGAGTAATTAATTCCAGATCTTTTGTATTACCTCTGTATTTTATGTTTGGTTGAGGGGTGCTTTTAGT
TGTGTGGCATTGTATTGATCTTTCAGTCATGTAAGTTAAATAAAAATTATTTTTGAATTACTAGC

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FIGURE 675

MLVGSQSFSPGGPNGIIRSQSFAGFSGLOERRSRCNSFIENSSALKKPQAKLKKMHNLGHKNNNPKEPQPKRVE
EVYRALKNGLEYLEVHQTELDKLTALQLKDMKRNSRLGVLYDLQIKTIERYMRRLEFHISKVDELYEAYCIQR
RLQDGASKMKQAFATSPASKAARESLEINRSFKEYTENMCTIEVELENLLGEFSIKMKGLAGFARLCPGDQYEI
FMKYGRQRWKLKGKIEVNGKQSWDGEETVFLPLIVGFISIKVTELKGLATHILVGSVTCETKELFAARPQVVAVD
INDLGTIKLNLEITWYPFDMEDMTASSGAGNKAALQRRMSMYSQGTPETPTFKDHSFFRWLHPSDPKPRRLSVL
SALQDTFFAKLHRSRFSFSLPSLRSPKAVLELYSNLPDDIFENGKAAEEKMPLSLSFSDLPNGDCALTSHSTGS
PSNSTNPEITITPAEFNLSSLASQNEGMDDTSSASSRNSLGEGQEPKSHLKEEDPEEPRKPASAPSEACRRQSSG
AGAEHLFLENDVAEALLQESEEASELKPVELDTSEGNITKQLVKRLTSAEVPMATDRLLSEGSVGGEGCRSFL
DGSLEDAFNGLLLALEPHKEQYKEFQDLNQEVMLDDILKCKPAVSRSRSSSLTIVESALESFDFLNTSDFDEE
EDGDEVENVGGGADSVFSDTETEKHSYRSVHPEARGHLSEALTEDTGVGTSVAGSPLPLTTGNESLDITIVRHLQ
YCTQLVQQIVFSSKTPFVARSLLEKLSRQIQVMEKLAASVDENIGNISSVVEAIPFHKKLSLLSFWTKCCSPVG
VYHSPADRVMKQLEASFARTVNKEYPGLADPVFRTLVSQILDQAEPLLSSSLSEVVTVFQYYSYFTSHGVSDLE
SYLSQLARQVSMVQTLQSLRDEKLLQTMSDLAPSNLLAQQEVLRTLALLLTREDNEVSEAVTLYLAAASKNQHFR
EKALLYCEALTKTNLQLOKAAALALKILEATESIKMLVTLCQSDTEEIRNVASETLLSLGEDGRLAYEQLDKFP
RDCVKVGGRGHGEVATAF

FIGURE 676

[illegible]

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FIGURE 677

MEQRRVTDFFARRRPGPPRIAPPKLACRTPSPARPALRAPASATSGSRKRARPPAAPGRDQARPPARRRLRLSVD
EVSSPSTPEAPDIPACPSPGQKIKKSTPAAGQPPHLTSAQDQDTISELASCLQRARELGARVRALKASAQDAGES
CTPEAEGRPEEPCGEKAPAYQRFHALAQPGLPGLVLPYKYQVLAEMFRSMDTIVGMLHNRSETPTFAKVQRGVQD
MMRRRFEERNVGQIKTVYPASYRFRQERSVPTFKDGARRSDYQLTIEPLLEQEADGAAPQLTASRLLQRRQIFSQ
KLVEHVKEHHKAFLASLSPAMVVPEDQLTRWHPRFNVDEVPDIEPAALPQPPATEKLTTAQEVLARARNLISPRM
EKALSQALALRSAAPSSPGSPRPALPATPPATPPAASPALKGVSQDLLERIRAKEAQKQLAQMTRCPEQEQLQR
LERLPELARVLRVSVFVSERKPALSMEVACARMVGSCCTIMSPGEMEKHLLLLSELLPDWLSLHRIRTDITYVKLDK
AADLAHITARLAHQTRAEEGL

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FIGURE 678

GCTCAGATACGCGACGCGTAGCAGGCGGGGACCGAACGGGTGCCTCAGTGTCTTCCCCTCCCCTCGCCTGGCCT
CGCCGTCCTCTCCCCGCAGCCGGACCGGAACATATGTGATCCCGGAAGTTCCGGGGCCTTTGCTGTGTGGGATAAA
CAGTAATGGCGGAGGCTGCAACTCCCGGAACAACAGCCACAACATCAGGAGCAGGAGCGGCAGCGGCGACGGCGG
CAGCAGCCTCCCCACCCCGATCCCCACAGTCACCGCCCCGTCCCTGGGGGCGGGCGGAGGGGGCGGCGGCAGCG
ACGGCAGCGGGCGGCGGCTGGACTAAACAGGTACCTGCAGGTATTTTATGCATGGGGTTTGTAAAGGAAGGAGACA
ACTGTGCTACTCGCATGACCTCTCTGACAGTCCGTATAGTGTAGTGTGCAAGTATTTTCAGCGAGGGTACTGTA
TTTATGGAGACCGCTGCAGATATGAACATAGCAAACCATTTGAAACAGGAAGAAGCAACTGCTACAGAGCTAACTA
CAAAGTCATCCCTTGCTGCTTCCTCAAGTCTCTCATCGATAGTTGGACCACTTGTTGAAATGAATACAGGCGAAC
GTGAGTCAAGAAATTCAAACTTTGCAACTGTAGGAGCAGGTTTCAAGGACTGGGTGAATGCTATTGAGTTTGTTT
CTGGGCAACCCTACTGTGGCCGTACTGCGCCTTCCTGCACTGAAGCACCCCTGCAGGGCTCAGTGACCAAGGAAG
AATCAGAGAAAGAGCAAACCGCCGTGGAGACAAAGAAGCAGCTGTGCCCTTATGCTGCAGTGGGAGAGTGCCGAT
ACGGGGAGAACTGTGTGTATCTCCACGGAGATTCTTGTGACATGTGTGGGCTGCAGGTCTTCATCCAATGGATG
CTGCCCAGAGATCGCAGCATATCAAATCGTGCATTGAGGCCCATGAGAAGGACATGGAGCTCTCATTGTCCGTCA
GCAGCAAGGACATGGTGTGTGGGATCTGCATGGAGGTGGTCTATGAGAAAGCCAACCCCAAGTGAGCGCCGCTTCG
GGATCCTCTCCAACCTGCAACCACACCTACTGTCTCAAGTGCATTTCGCAAGTGGAGGAGTGCTAAGCAATTTGAGA
GCAAGATCATAAAGTGAGACTCCTCCCCAGTCTTCATTTGTGCTTTCTCTTTTGGGGAAGAATTTAGTAACCTTGT
GCCAACTTTCAACCAGATGGACCGCATTTAAATGCATGCATTTTATCTTGAAACTGGGATATTCTAATGGGGATT
TCTTCTTTGTATTTTACGCTAGCTTCTAGGTTAGTTGGTCTATCTACTTTTATTTGAATGAGGAAACCCTGTGTAT
CAGTTAGAATCTTCGTGCTTTTTCTGAGGAGATTGTGTTAATGGATTATTAGCCAGTTTAGGCTCAGTGAACAA
ACTGATCTAGCTCTGAATGTATGTTTCCTGACGTTTTACATTTCCACTTTCCTATTCCATTCATTAAGCTAGCCA
ACAATCCACCATCCTTTAAAGATTGTTCTCATAACTGAACAAAAACCACATAATCTAAACAGAGCAAAGCTACAA
GAAATAAATTTATTTAAACGAAAAAAAAAAAAAAAAA

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FIGURE 679

MAEAATPGTTATTSGAGAAAATAAAASPTPIPTVTAPSLGAGGGGGGSDGSGGGWTKQVTCRYFMHGVCKEGDNC
RYSHDLSDSPYSVCKYFQRGYCIYGDRCRYEHKPLKQEEATATELTTKSSLAASSSLSSIVGPLVEMNTGERE
SRNSNFATVGAGSEDWVNAIEFVPGQPYCGRTAPSCTEAPLQGSVTKEESEKEQTAVETKKQLCPYAAVGECRYG
ENCVYLHGDSCDMCGLQVLHPMDAAQRSQHISKSCIEAHEKDMELSAVSSKDMVCGICMEVVYEKANPSERRFGI
LSNCNHTYCLKCIRKWRSKQFESKIIK

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FIGURE 680

GGCTCGAGTGCCTGGCGGGCTCTGGCTTCCGCGTCCGCCCCCTGCTCCGGCTTCGCCCCGAGCTCCGCGCCCCGCGG
GCAACCAAGCCCCCAGCGAAGCCCGCACAGCTCCGGGTGCCAGGACGGGGGGCCATGCCGTGCCGGAGGGAGGAG
GAAGAGGAAGCCGGCGAGGAGGCGGAGGGGGAGGAAGAGGAGGACGACAGCTTCCTCCTGCTGCAGCAGTCGGTG
ACGCTGGGCAGCTCGGGCGAGGTGGACCGGTGGTGGCCAGATCGGCGAGACGCTGCAGCTGGACGCGGCGCAG
GACAGCCCCGGCTCGCCGTGCGCGCCCCCGGGGGTGGCGCTGCGGGCCCCGGGGCCCCCTGGCTGCGGCGGTGCCG
GCGGACAAGGCCCGGCCCCCGGCGGTGCCGTGCTGCTGCGCGCCGCTTCGGCTGAGACGGTGGGCCCGGCGCCC
TCTGGGGCCCTGCGCTGCGCCCTAGGGGACCGCGGCGCGGTGCGCGGACGCGCTGCGCCCTACTGCGTGGCGGAG
GTCGCCCGCAGGCCCCAGCGCGCTGCCGGGGCCGTGCCGGCGAGGATGGCTCAGGGACGCGGTACCTCCCCGCCG
TTGCAGCAGCGCCGATGGACCCAAGCCGGGGCACGCGCCGGCGACGACGACCCGCATCGGGCTCCTCCAGCAGCTC
GTGCTCTCGGGAAACCTCATCAAGGAAGCCGTGCGGAGACTCCAACGAGCCGTGCGCGCGGTTGCAGCCACGGGC
CCCGCAAGCGCCCCCTGGGCCCGGGGGAGGCCGAGCGGACCTGACCGCATTGCCCTGCAGCCCTCAGGCTCCTTG
CTCTGACCGCAGGCCCTCCTGGAGGAGGAAGTGGAGGCCGCTGCGTAGACCCAACAGCGTCCAGTTCCTACTAACTC
TGAGCTGAAGCCGACGTGCGCCAGCCTGGGAGCGACCACTTTGGCTGCGGGGAGGCGCGTGGGGAGAGATCTCAAC
CAGAGAAGTTACCAGCCGCGGCGAGGCCGTGCGAGAAAACCTTAAGCGTGGAGAAATGTATGCGCCAGGGTGCTTC
CGTGGGGCATGAGAATTTCCCGGGCCATCCAAGCCCAAGGACCTGGGATAAACTGGGAGAACTATGGCAGCTACT
TGCATCGACTTGTACCTCACTTAGCCCTTGGGGGCGTCTGAGCTTGGATTGTTTAAGGAGGGCTCAGGGGTAGG
AATCGCGATGGCTTTATAACAATACTTGAAAACTAACGACACGCATACATTTTCTTATTTTCTGGTGGAGGAGCT
TAGTAAGTGGTGCTACAATTGCTGTGCAAAGAAATTCAGAGGGGAGAGAATGTAAAAGTTTGGTGGTGGGTGG
CTTGGCATTGCCCTTTTTCCACCGATTTCGGTGGCTGGTGAAGGTGGGAGATGTGAATCCAATTAAGGGACTG
GAGAGAGGTGAAGAATTTTGCAGGTGGGAGATTTGGATTTGAATGTGGACTTGTAATGACTTGACCTTGCCATC
TGTGTTCAAGGTCACGGTTTGTGTGGGGTTCTGGGAGAGCTTACTCACCCCGGAGTCTTTTCTTTCTTTGCT
CCAAGAAGAGCCCTGTTGGTGCTTTACCACCGCTTGGAGTCTCCCGAGGACACAAACAGGCAGAGAGGGACGTGT
AGGGAGAGTTCTTTCCTGTTTTCTGTGCTTTTCTTTTACAGGACTCCCGGAAGGCCACTCATGGCCATGCCAGG
AGCTTTCTCAGAAACAGTCATAAACGATCTCTTGAGTCTCTTTCTTGTCTCTCCAGCTGAGCTTTCTTATTCCAC
CCTTTCTGGTGTCTATAGGAATGCATGAGAGACCCTGGACGTTTTTCTGCTCTCTTCTGGCCCTCCATGGAGCCA
TGGGCCTCGGCCTCGGCGGCTCCTCACCCCTACAATTTATTTCTCTCTCCCGTGCCAGCCCTTCTTTTGTGTCTG
AAACCGGTTTTAAATGTGACTCTCCAGAGAAGAAGCCGCTGGCTGTATGAACTTGACGGCGCTTTTGTAAGG
TGCCACCCCCAACTTTAAGGTAGCTAAACCAATTTTTAAAAGATTCAATGGCTTGTTTCATCCTCCAGATGTAGC
TATTGATGTACACTTCGCAACGGAGTGTCTGAAATTGTGGTGGTCTGATTATAGGATTTTCA

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FIGURE 681

MPCRREEEEEAGEEEAEIEEEEDDSFLLLQQSVTLGSSGEVDRLVAQIGETLQLDAAQDSPASPCAPPGVPLRAPG
PLAAAVPADKARPPAVPLLLPPASAETVGPAPSGALRCALGDRGRVRGRAAPYCVAEVAAGPSALPGPCRRGWLR
DAVTSRRLQQRRTQAGARAGDDDPHRLQLVLSGNLIKEAVRRLQRAVAAVAATGPASAPGPGGGRSGPDRIA
LQPSGSL

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FIGURE 682

ATGGCTGTGTGAACGACTGCCATGCCCCACCGGAAGCTTGAGAGCGTGGGGAGCGGCATGTTGGACCATAGGGTG
AGACCAGGTCTGTCCCTCACAGCCAGGAGCCCGAGAGCGAGGACATGGAGCTGCCCTTGGAGGGGCTATGTGCC
GAGGGCCTGGAGCTGGCTGCCCTGCGGCCAGAGAGCCCCGCGCCAGAGGAACAGGAGTGCCACAACCACAGCCCC
GATGGGGACTCCAGCTCTGACTACGTGAACAACACCTCTGAGGAGGAGGACTATGACGAGGGCCTCCCTGAGGAG
GAGGAGGGCATCACCTACTACATCCGCTACTGCCCTGAGGACGACAGCTACCTAGAGGGCATGGACTGCAACGGG
GAGGAGTACCTGGCCACAGTGCACACCCTGTGGACACTGATGAATGCCATGAGGCGGTGGAGGAGTGGACGGAC
TCGGCGGGCCCCGACCCCCACGGCCACGAGGCTGAAGGCAGCCAGGACTACCCAGACGGCCAAC TGCCATTCCG
GAGGATGAGCCCTCCGTCTTGAGGCCCATGACCAGGAAGAAGATGGTCACTACTGTGCCAGCAAAGAGGGGCTAC
CAGGACTACTACCCAGAGGAGGCCAACGGGAACACCGGCGCCTCCCCCTACCGCCTGAGGCGTGGGGATGGGGAC
CTGGAGGACCAGGAGGAGGACATTGACCAGATCGTGGCAGAGATCAAGATGAGTCTGAGCATGACCAGCATCACC
AGCGCCAGTGAGGCCAGCCCCGAGCATGGGCCTGAGCCAGGGCCTGAGGACTCTGTAGAGGCTGCCACCCATC
AAGGCCAGCTGCAGCCCCAGCAGGCACGAGGCGAGGCCCAAGTCGTGAACCTCCTTCCCGAGGCCAAGCACCCC
GGAGACCCCCAGAGAGGCTTCAAGCCCAAGACCAGGACCCAGAAGAGAGGCTGAAGTGGCCCCACGAGCAGGTT
TGCAATGGTCTGGAGCAGCCAAGGAAGCAGCAGCGCTCTGATCTCAATGGACCTGTTGACAATAACAACATTCCA
AAAACAAAAAAGGTGGCATCATTCCAAGTTTGGTGGCTGTTCCAGGGCCTGCGAACCAAAAAACCTCATCGAC
GGGATCATCTTTGCTGCCAATTACCTGGGGTCCACCCAGCTGCTATCAGAACGGAACCCTTCCAAAAACATCAGA
ATGATGCAAGCGCAGGAGGCCGCTCAGCCGGGTCAAGAGGATGCAAAAGGCTGCTAAGATCAAGAAAAAAGCGAAT
TCTGAGGGGGATGCCAGACGCTGACGGAAGTGGACCTCTTCAATTTCCACCCAGAGGATCAAGGTTTTAAATGCA
GACACGCAGGAAACCATGATGGACCACGCCTTGCCTACCATCTCCTACATCGCCGACATTGGGAACATTGTAGTG
CTGATGGCCAGACGCCGATGCCCGGTCAGCCTCTCAGGACTGCATCGAGACCACGCCCCGGGGCCAGGAAGGC
AAGAAGCAGTATAAGATGATCTGCCATGTGTTTCGAGTCGGAGGATGCCAGCTCATCGCCAGTCTATCGGCCAG
GCCTTCAGCGTGGCCTACCAGGAGTTCCTGCGAGCCAATGGCATCAACCCGAAGACTTGAGCCAGAAGGAATAC
AGCGACATCATCAACACCCAGGAGATGTACAACGACGACCTCATCCACTTCTCAAACCTCGGAGAACTGCAAGGAG
CTGCAGCTGGAGAAGCACAAGGGCGAGATCCTGGGCGTGGTGGTGGTGGAGTCGGGCTGGGGCTCCATCCTGCC
ACGGTGATCCTGGCCAACATGATGAATGGCGGCCCGGCTGCCCGCTCGGGGAAGCTGAGCATCGGGGACCAGATC
ATGTCCATCAATGGCACCAGCCTGGTGGGGCTGCCCTCGCCACCTGCCAAGGCATCATCAAGGGCCTGAAGAAC
CAGACACAGGTGAAGCTCAACATTGTCAGCTGTCCCCGGTACCACGGTCCTTATCAAGCGCCAGACCTCAAG
TACCAGCTGGGCTTCAGCGTGCAAGTGAATTATCTGCAGCCTCATGAGAGGGGGCATTGCTGAGCGAGGGGGC
GTCCGTGTGGGCCACCGCATCATCGAGATCAACGGGCAGAGCGTGGTGGCCACAGCCCACGAGAAGATAGTCCAA
GCTCTGTCCAACCTCGGTGCGAGAGATCCACATGAAGACCATGCCCGCCGCTGTTGAGGCTCCTCAGGGGTGAG
GAGACCCCGCTGTACATCTAGGCCACCCACAGCCTGGCCACGCAGCCAGGACACCGGGCAGGGCCGCCCCGGGCCA
GAGGAGCTGGGAGCCGGGCCGAGACTTGACCCCGACGCCACAGCCAGCCAGGACGCTGGCTCCCCAAAGGGT
GTGCCCTCACCACCCACTTGATTTTTTTCATTTTGCCAAAAGGGGTATGTCTTTATCAAAGGAGAGTCACAGAA
CAAATGTTTGTGTTGTAAGCGTTCCAAGTATTTGCCACGTTCTGGACTGTCTTCTCCCTGCACAAGCCAGGGTG
TGTCTCGGTAGCTGTGCGTGGTGTGGAGTGTGTCTTTCTCCCTGAAGCTGTGCGGAGCGAACTGGCGCCTCC
GAGGGACGCGGCTCCCGGGCAGGGCAGCCGTCACCCCTGCCTCCCGCCCCCTTGGCTGGGACGTCTGGGGTCTT
GTGGGGCCCCCACAATGGTCCCAAACAGCTGCCTCTGCCACTGACTGCAGGGACACGGGCAGCCTGGCTCCCAGG
ACACGACTTGTAATGAAAGTTTGGGGACATGTGATTGATTGATTGATTGATTGTAATAAAGGATGATGGCCACA
ACATGAAAACCTCCATATTTATTTAGATGCTATTATTACTGTTTGGACTTTTATTTTGGCAGGCTTTTTTCCAGAC
TCTAGGGTTTTCCAATGTGACTAATGACCACACCTGCCTCTCCCGTCGTCTCTTCTGGGCACCTCCCACCCGGC
TGCATACCCGGCCAGGGCTCCACAGAGACAAGGAXGGCACAGGTGTCTGCCCCCTCTTTAAATCGATCTACAC
ACATCCACGCACATGCGACCCCGAGGGAAACGAAACCCACTCTAGAAAACGCGACCTTGGCCGCACCTAAAGCAG
CCAGCCGTGAGTGCAGACCCCTTGGCCAGCGTGGCGCAGTGGCCCTGAGCAGTAGTGGCATGTGTGTAGATCAAG
TCGGATCTAGTCCAGCTCGGTTTATTAGCGATCCATGTAATCTGACGTCATCTTGTCTCGAAGTCTCTTTTTTTG
GCCCAGGCCTTGAAGAATACACTGTGACTTAAGAAGCCTTACCACGCAGTAATAAGCTTTAGGATGACTGTAT
TCGAGGAGTGCCGTGTGTTGCATGCAGCTACCCGTAGGAAGACTTCGCGCATATCACTAATAAACCTGAAGTCGT
GATGACC

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FIGURE 683

MAHRKLESVGSGLDHRVRPGVPVPHSQEPESSEDMELPLEGYVPEGLELAALRPESPAPEEQECHNHSPDGDSSSD
YVNNTSEEDYDEGLPEEEEGITYYIRYCPEDDSYLEGMDCNGEYLAHSAHPVDTDECHEAVEEWTD SAGPHPH
GHEAEGSQDYPDGQLPIPEDEPSVLEAHDQEEDGHYCASKEGYQDYYPEEANGNTGASPYRLRRGDGDLEDQEED
IDQIVAEIKMSLSMTSITSASEASPEHGPEPGPEDSVEACPPIKASCSPSRHEARPKSLNLLPEAKHPGDPQRGF
KPKTRTPEERLKWPHQVCNGLEQPRKQQRSDLN GPVDNNNIPKTKKVASFP SLVAVPGPCPKNLIDGI IFAAN
YLGSTQLLSERNPSKNIRMMQAQEA VSRVKRMQKAAKIKKKANSEGDAQTLTEVDLFISTQRIKVLNADTQETMM
DHALRTISYIADIGNIVVLMARRRMPRSASQDCIETTPGAQEGKKQYKMICHVFESEDAQLIAQSIGQAFSVAYQ
EFLRANGINPEDLSQKEYSDIINTQEMYND DLIHFSNSENCKELQLEKHKGEILGVVVVESGWGSILPTVILANM
MNGGPAARSGKLSIGDQIMSINGTSLVGLPLATCQGIIKGLKNQTQVKLNIVSCPPVTTVLIKRPDLKYQLGFSV
QNGIICSLMRGGIAERGGVRVGHRIIEINGQSVVATAHEKIVQALSNSVGEIHMKTMPAAMFRLLTGQETPLYI

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FIGURE 684

TTTTTGCAACCAACATGGTTCTATTAAAACTCTCTTTGACTATGGCATTCAAGGACAGCAATACAATCTTTTTT
TTTTTTAACAAGCAACTAATATAAAAAATCTGCAAATGCCATATATTCATATCTAGGCTATTCTTCTCATATAGG
CATGTCATTAGATAGACTTTCTTTCTATTCTTTCTGAGGTATTTTTTGTGGTTTACTTTTATTGTACTGCTGG
ATGCATTATTTTTGATCATCCTTTCCTAAAATGATTTAAAGACCTGCAAATAATTTTATTGCATAGGACACTATT
GATGACACATAGAATGGGAGCTGCAAGTATGTGGCATTGGAACAAGCCTTACAAATATTGCATTTTAAGAATACA
CACATTTTTTACAGTTTGTCTCTTTTAAAAAATTTGAAGTTATAGC

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FIGURE 685A

CCTACTCTATTTCAGATATTCTCCAGATTCCCTAAAGATTAGAGATCATTCTCATTCTCCTAGGAGTACTCACTTC
AGGAAGCAACCAGATAAAAGAGAGGTGCAACGGAAGCCAGAACATTCCCTCCTGGAAATTCAACCTGTTTCGCAGT
TTCTCGAGGAATCAGCATTCAGTCAATCCGGGCCGGGAGCAGTCATCTGTGGTGAGGCTGATTGGCTGGGCAGGA
ACAGCGCCGGGGCGTGGGCTGAGCACAGCGCTTCGCTCTCTTTGCCACAGGAAGCCTGAGCTCATTGAGTAGCG
GCTCTTCCAAGCTCAAAGAAGCAGAGGCCGCTGTTTCGTTTCCTTTAGGTCTTTCCACTAAAGTCGGAGTATCTTC
TTCCAAGATTTACGTCTTGGTGGCCGTTCCAAGGAGCGCGAGGTCTGGGATGATCTTGAAGGGGACCGCAATGG
AGGAGCAAAGAAGAAGAACTTTTTTAACTGAACAATAAAAGTGAAAAAGATAAGAAGGAAAAGAAACCAACTGT
CAGTGTATTTTCAATGTTTCGCTATTCAAATTGGCTTGACAAGTTGTATATGGTGGTGGGAACCTTTGGCTGCCAT
CATCCATGGGGCTGGACTTCCTCTCATGATGCTGGTGTGTTGGAGAAATGACAGATATCTTTGCAAATGCAGGAAA
TTTGAAGATCTGATGTCAAACATCACTAATAGAAGTGATATCAATGATACAGGGTTCTTCATGAATCTGGAGGA
AGACATGACCAGGTATGCCTATTATTACAGTGGAAATTGGTGTCTGGGGTGTCTGGTTGCTGCTTACATTCAAGTTTC
ATTTTGGTGCCTGGCAGCTGGAAGACAAATACACAAAATTAGAAAACAGTTTTTTCATGCTATAATGCGACAGGA
GATAGGCTGGTTTGTGTGCACGATGTTGGGGAGCTTAACACCCGACTTACAGATGATGTCTCCAAGATTAATGA
AGGAATTGGTGCACAAAATTGGAATGTTCTTTTCAGTCAATGGCAACATTTTTCAGTGGGTTTATAGTAGGATTTAC
ACGTGGTTGGAAGCTAACCCCTTGATTTTTGGCCATCAGTCTGTCTTGGACTGTCAGCTGCTGTCTGGGCAAA
GATACTATCTTCATTTACTGATAAAGAAGCTCTTAGCGTATGCAAAAGCTGGAGCAGTAGCTGAAGAGGTCTTGGC
AGCAATTAGAAGCTGTGATTGCATTTGGAGGACAAAAGAAAGAACTTGAAAGGTACAACAAAATTTAGAAGAAGC
TAAAAGAATTGGGATAAAGAAAGCTATTACAGCCAATATTTCTATAGGTGCTGCTTTCCTGCTGATCTATGCATC
TTATGCTCTGGCCTTCTGGTATGGGACCACCTTGGTCTCTCAGGGGAATATTCTATTGGACAAGTACTCACTGT
ATTTTCTGTATTAATTGGGGCTTTTAGTGTGGACAGGCATCTCCAAGCATTGAAGCATTGCAAATGCAAGAGG
AGCAGCTTATGAAATCTTCAAGATAATTGATAATAAGCCAAGTATTGACAGCTATTGCAAGAGTGGGCACAAACC
AGATAATATTAAGGGAATTTGGAATTCAGAAATGTTCACTTCAGTTACCCATCTCGAAAAGAAGTTAAGATCTT
GAAGGGTCTGAACCTGAAGGTGCAGAGTGGGCAGACGGTGGCCCTGGTTGGAAACAGTGGCTGTGGGAAGAGCAC
AACAGTCCAGCTGATGCAGAGGCTCTATGACCCACAGAGGGGATGGTCAAGTGTGATGGACAGGATATTAGGAC
CATAAATGTAAGGTTTCTACGGGAAATCATTGGTGTGGTGTGAGTCAGGAACCTGTATTGTTTGGCACCACGATAGC
TGAAACATTCGCTATGGCCGTGAAAATGTCACCATGGATGAGATTGAGAAAGCTGTCAAGGAAGCCAATGCCTA
TGACTTTATCATGAAACTGCCTCATAAATTTGACACCCTGGTTGGAGAGAGAGGGGGCCAGTTGAGTGGTGGGCA
GAAGCAGAGGATCGCCATTGCACGTGCCCTGGTTCGCAACCCCAAGATCCTCCTGCTGGATGAGGCCACGTCAGC
CTTGGACACAGAAAGCGAAGCAGTGGTTCAAGTGGCTCTGGATAAGGCCAGAAAAGGTGGACCAACATTGTGAT
AGCTCATCGTTTGTCTACAGTTCGTAATGCTGACGTCATCGCTGGTTTCGATGATGGAGTCATTGTGGAGAAAGG
AAATCATGATGAACTCATGAAAGAGAAAAGGCATTTACTTCAAACCTGTGCACAAATGCAGACAGCAGGAAATGAAGT
TGAATTAGAAAATGCAGCTGATGAATCCAAAAGTGAAATTGATGCCTTGGAAATGTCTTCAAATGATTCAAGATC
CAGTCTAATAAGAAAAAGATCAACTCGTAGGAGTGTCCGTGGATCACAAAGCCCAAGACAGAAAGCTTAGTACCAA
AGAGGCTCTGGATGAAAGTATACCTCCAGTTTCCTTTTGGAGGATTATGAAGCTAAATTTAACTGAATGGCCTTA
TTTTGTTGTTGGTGTATTTTGTGCCATTATAAATGGAGGCCTGCAACCAGCATTGCAATAATATTTCAAAGAT
TATAGGGGTTTTTACAAGAATTGATGATCCTGAAACAAAACGACAGAATAGTAACTTGTTTTCTACTATTGTTTCT
AGCCCTTGGAATTATTTCTTTTATTACATTTTTCCTTCAGGGTTTCACATTTGGCAAAGCTGGAGAGATCCTCAC
CAAGCGGCTCCGATACATGGTTTTCCGATCCATGCTCAGACAGGATGTGAGTTGGTTTGTGATGACCTAAAAACAC
CACTGGAGCATTGACTACCAGGCTCGCCAATGATGCTGCTCAAGTTAAAGGGGCTATAGGTTCCAGGCTTGCTGT
AATTACCCAGAATATAGCAAATCTTGGGACAGGAATAATTATATCCTTCATCTATGGTTGGCAACTAACACTGTT
ACTCTTAGCAATTGTACCCATCATTGCAATAGCAGGAGTTGTTGAAATGAAAATGTTGTCTGGACAAGCACTGAA
AGATAAGAAAGAACTAGAAGGTGCTGGGAAGATCGCTACTGAAGCAATAGAAAACCTCCGAACCGTTGTTTCTTT
GACTCAGGAGCAGAAGTTTGAACATATGTATGCTCAGAGTTTGCAGGTACCATACAGAACTCTTTGAGGAAAGC
ACACATCTTTGGAATTACATTTTCTTTCACCCAGGCAATGATGATTTTTTCTATGCTGGATGTTTCCGGTTTGG
AGCCTACTTGGTGGCACATAAACTCATGAGCTTTGAGGATGTTCTGTTAGTATTTTCAGCTGTTGTCTTTGGTGC
CATGGCCGTGGGGCAAGTCAGTTTCAATTTGCTCCTGACTATGCCAAAGCCAAAATATCAGCAGCCACATCATCAT
GATCATTGAAAAACCCCTTTGATTGACAGCTACAGCACGGAAGGCCTAATGCCGAACACATTGGAAGGAAATGT
CACATTTGGTGAAGTTGTATTCAACTATCCACCCGACCGGACATCCAGTGCTTCAGGGACTGAGCCTGGAGGT

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FIGURE 685B

GAAGAAGGGCCAGACGCTGGCTCTGGTGGGCAGCAGTGGCTGTGGGAAGAGCACAGTGGTCCAGCTCCTGGAGCG
GTTCTACGACCCCTTGGCAGGGAAAGTGCTGCTTGATGGCAAAGAAATAAAGCGACTGAATGTTTCAGTGGCTCCG
AGCACACCTGGGCATCGTGTCCCAGGAGCCCATCCTGTTTGAAGTGCAGCATTGCTGAGAACATTGCCTATGGAGA
CAACAGCCGGGTGGTGTACAGGAAGAGATTGTGAGGGCAGCAAAGGAGGCCAACATACATGCCTTCATCGAGTC
ACTGCCTAATAAATATAGCACTAAAGTAGGAGACAAAGGAACTCAGCTCTCTGGTGGCCAGAAACAACGCATTGC
CATAGCTCGTGCCCTTGTTAGACAGCCTCATATTTTGCTTTTGGATGAAGCCACGTCAGCTCTGGATACAGAAAG
TGAAAAGGTTGTCCAAGAAGCCCTGGACAAAGCCAGAGAAGGCCGCACCTGCATTGTGATTGCTCACCGCCTGTC
CACCATCCAGAAATGCAGACTTAATAGTGGTGTTCAGAAATGGCAGAGTCAAGGAGCATGGCACGCATCAGCAGCT
GCTGGCACAGAAAGGCATCTATTTTTCAATGGTCAGTGTCCAGGCTGGAACAAAGCGCCAGTGAACCTCTGACTGT
ATGAGATGTTAAATACTTTTTAATATTTGTTTAGATATGACATTTATTCAAAGTTAAAAGCAAACACTTACAGAA
TTATGAAGAGGTATCTGTTTAACATTTCTCAGTCAAGTTCAGAGTCTTCAGAGACTTCGTAATTAAAGGAACAG
AGTGAGAGACATCATCAAGTGGAGAGAAATCATAGTTTAAACTGCATTATAAATTTTATAACAGAATTAAAGTAG
ATTTTAAAAGATAAAATGTGTAATTTTGTTTATATTTCCCATTTGGACTGTAAGTACTGCCTTGCTAAAAGAT
TATAGAAGTAGCAAAAAGTATTGAAATGTTTGCATAAAGTGTCTATAATAAACTAACTTTTCATGTG

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FIGURE 686

MDLEGDRNGGAKKKNF FKLNNKSEKDKKEKKPTVSVFSMFRYSNWLDKLYMVVGTAAIIHGAGLPLMMLVFGEM
TDIFANAGNLEDLMSNITNRSDINDTGFFMNLEEDMTRYAYYYSGIGAGVLVAAYIQVSFWCLAAGRQIHKIRKQ
FFHAIMRQEIGWFDVHDVGELNTRLTDDVSKINEGIGDKIGMFFQSMATFFTGFIVGFTRGWKLTLVILAI SPVL
GLSAAVWAKILSSFTDKELLAYAKAGAVAEVLA AIRTVIAFGGQKKELERYNKNLEEAKRIGIKKAITANISIG
AAFLLIYASYALAFWYGTTLVLSGEYSIGQVLT VFSVLIGAFSVGQASPSIEAFANARGAAYEIFKIIDNKPSID
SYSKSGHKPDNIKGNLEFRNVHFSYPSRKEVKILKGLNLKVQSGQTVALVGNSGCGKSTTVQLMQRLYDPTGEMV
SVDGQDIRTINVRFLREIIGVVSQEPVLFATTIAENIRYGRENVMTDEIEKAVKEANAYDFIMKLPHKFDTLVGE
RGAQLSGGQKQRIAIARALVRNPKILLLDEATSALDTESEAVVQVALDKARKGRTTIVIAHRLSTVRNADVIA GF
DDGVIVEKGNHDELMKEKGIYFKLVMTQTAGNEVELENAADESKSEIDALEMSSNDSRSSLIRKRSTRRSVRGSQ
AQDRKLSTKEALDESIPPVSFWRIMKLNLT EWPFVVGVFCAIINGGLQPAFAIIFSIIIGVFTRIDDPETKRQN
SNLFSLLFLALGIIISFITFFLQGFTFGKAGEILTKRLRYMVFRSMLRQDVSWFDDPKNTTGALTTRLANDAAQVK
GAIGSRLAVITQNIANLGTGIIISFIYGWQLTLLLLAIVPIIAIAGV VEMKMMLSGQALKDKKELEGAGKIATEAI
ENFRTVVSLTQEQQFEHMYAQSLQVPYRNSLRKAHIFGITFSFTQAMMYFSYAGCFRFGAYLV AHKLMSFEDVLL
VFSVVFGAMAVGQVSSFAPDYAKAKISAAHIIMIIEKTPLIDSYSTEGLMPNTLEGNVTFGEVVFNYPTRPDIP
VLQGLSLEVKKGQTLALVGSSGCGKSTVVQLLERFYDPLAGKVLLDGKEIKRLNVQWLR AHLGIVSQEPILFDCS
IAENIAYGDNSRVVSQEEIVRAAKEANI HAFIESLPNKYSTKVGDKGTQLSGGQKQRIAIARALVRQPHILLLDE
ATSALDTESEKVVQEALDKAREGRTCIVIAHRLSTIQNADLIVVFQNGRVKEHGTHQQLLAQKGIYFSMVSVQAG
TKRQ

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FIGURE 687

GGCAGCTGCACGGCTCCTGGCCCCGGAGCATGCGCGAGAGCCGCCCGGAGCGCCCCGGAGCCCCCGCCGTCCC
GCCCCGGGCGTCCCGCGCCCCGCGGCCAGCGCACCCCCGGACGCTATGGCCACCCCTCCGGCTGGCCCCCTTCTG
TAGGATGGTAGCACACAACCAGGTGGCAGCCGACAATGCAGTCTCCACAGCAGCAGAGCCCCGACGGCGGCCAGA
ACCTTCCTCCTCTTCTCCTCCTCGCCCGCGGCCCCCGCGCGCCCGCGGGCCGTGCCCCGCGGTCCCGGCCCGGC
CCCCGGCGACACGCACTTCCGCACATTCCGTTTCGCACGCCGATTACCGGCGCATCACGCGCGCCAGCGCGCTCCT
GGACGCCTGCGGATTCTACTGGGGGCCCTGAGCGTGCACGGGGCGCACGAGCGGCTGCGCGCCGAGCCCCGTGGG
CACCTTCCTGGTGC GCGACAGCCGCCAGCGGAAC TGCTTTTTCGCCCTTAGCGTGAAGATGGCCTCGGGACCCAC
GAGCATCCGCGTGCACTTT CAGGCCGGCCGCTTTCACCTGGATGGCAGCCGCGAGAGCTTCGACTGCCTCTTCGA
GCTGCTGGAGCACTACGTGGCGGCGCCGCGCCGCATGCTGGGGGCCCGCTGCGCCAGCGCCGCGTGCGGGCCGCT
GCAGGAGCTGTGCCGCCAGCGCATCGTGGCCACCGTGGGCGCGGAGAACCTGGCTCGCATCCCCCTCAACCCCGT
CCTCCGCGACTACCTGAGCTCCTTCCCCCTTCCAGATTTGAACCGGCAGCGCCCGCCGTGCACGCAGCATTAACTGG
GATGCCGTGTTATTTTGTATTACTTGCTTGGAAACCATGTGGGTACCCTCCCCGGCCTGGGTTGGAGGGAGCGGA
TGGGTGTAGGGGCGAGGCGCCTCCCGCCCTCGGCTGGAGACGAGGCCGAGACCCCTTCTCACCTCTTGAGGGGG
TCCCTCCCCCTCCTGGTGCTCCCTCTGGGTCCCCCTGGTTGTTGTAGCAGCTTAACTGTATCTGGAGCCAGGACCT
GAACTCGCACCTCCTACCTCTTCATGTTTACATATACCCAGTATCTTTGCACAAACCAGGGGTGGGGGAGGGTC
TCTGGCTTTATTTTTCTGCTGTGCAGAATCCTATTTTATATTTTTTAAAGTCAGTTTAGGTAATAAACTTTATTA
TGAAAGTTTTTTTTTT

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FIGURE 688

MVAHNQVAADNAVSTAAEPRRRPEPSSSSSSSPAAPARPRPCPAVPAPAPGDTHFRTFRSHADYRRITRASALLD
ACGFYWGPLSVHGAHERLRAEPVGTFLVRDSRQRNCFALSVKMASGPTSIRVHFQAGRFHLDGSRESFDCLFEL
LEHYVAAPRRMLGAPLRQRRVRPLQELCRQRIVATVGRENLARIPLNPVLRDYLSSFFPFI

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FIGURE 689

GGCAGCTGCACGGCTCCTGGCCCCGGAGCATGCGCGAGAGCCGCCCCGGAGCGCCCCGGAGCCCCCGCCGTCCC
GCCCCGCGGCGTCCCCGCGCCCCGCCGCCAGCGCACCCCCGGACGCTATGGCCCACCCCTCCGGCTGGCCCTTCTG
TAGGATCGTAGCACACAACCAGGTGGCAGCCGACAATGCAGTCTCCACAGCAGCAGAGCCCCGACGGCGGCCAGA
ACCTTCCTCCTCTTCTCCTCCTCGCCCCGCGGCCCCCGCGCGCCCCGCGGCGGTGCCCCGCGGTCCCGGCCCGGC
CCCCGGCGACACGCACTTCCGCACATTCCGTTTCGCACGCCGATTACCGGCGCATCACGCGCGCCAGCGCGCTCCT
GGACGCCTGCGGATTCTACTGGGGGCCCCTGAGCGTGCACGGGGCGCACGAGCGGCTGCGCGCCGAGCCCGTGGG
CACCTTCCTGGTGCGCGACAGCCGCCAGCGGAAGTGTCTTTTCGCCCTTAGCGTGAAGATGGCCTCGGGACCCAC
GAGCATCCGCGTGCACTTTCAGGCCGGCCGCTTTCACCTGGATGGCAGCCGCGAGAGCTTCGACTGCCTCTTCGA
GCTGCTGGAGCACTACGTGGCGGCGCCGCGCCGCATGCTGGGGGCCCCGCTGCGCCAGCGCCGCGTGCGGGCCGCT
GCAGGAGCTGTGCCGCCAGCGCATCGTGGCCACCGTGGGCGCGAGAACCTGGCTCGCATCCCCCTCAACCCCGT
CCTCCGCGACTACCTGAGCTCCTTCCCCCTCCAGATTTGACCGGCAGCGCCCCGCCGTGCACGCAGCATTAACTGG
GATGCCGTGTTATTTTGTATTACTTGCCTGGAACCATGTGGGTACCCTCCCCGGCCTGGGTTGGAGGGAGCGGA
TGGGTGTAGGGGCGAGGCGCTCCCGCCCTCGGCTGGAGACGAGGCCGAGACCCCTTCTCACCTCTTGAGGGGG
TCCTCCCCCTCCTGGTGCTCCCTCTGGGTCCCCCTGGTTGTTGTAGCAGCTTAACTGTATCTGGAGCCAGGACCT
GAACTCGCACCTCCTACCTCTTCATGTTTACATATAACCCAGTATCTTTGCACAAACCAGGGGTGGGGGAGGGTC
TCTGGCTTTATTTTCTGCTGTGCAGAATCCTATTTTATATTTTAAAGTCAGTTTAGGTAATAAACTTTATTA
TGAAAGTTTTTTTTTT

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FIGURE 690

MVAHNQVAADNAVSTAAEPRRRPEPSSSSSSSPAAPARPRPCPAVPAPAPGDTHFRTFRSHADYRRITRASALLD
ACGFYWGPLSVHGAHERLRAEPVGTFLVRDSRQRNCFALSVKMASGPTSIRVHFQAGRFHLDGSRESFDCLFEL
LEHYVAAPRRMLGAPLRQRRVRPLQELCRQRIVATVGRENLARIPLNPFVLRDYLSSFPFQI

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FIGURE 691A

ATGGCTGGCGGAGCCTGGGGCCGCTGGCCTGTTACTTGGAGTTCCTGAAGAAGGAGGAGCTGAAGGAGTTCAG
CTTCTGCTCGCCAATAAAGCGCACTCCAGGAGCTCTTCGGGTGAGACACCCGCTCAGCCAGAGAAGACGAGTGGC
ATGGAGGTGGCCTCGTACCTGGTGGCTCAGTATGGGGAGCAGCGGGCCTGGGACCTAGCCCTCCATACCTGGGAG
CAGATGGGGCTGAGGTCACTGTGCGCCCAAGCCAGGAAGGGGAGGCGCACTCTCCCTCATTCCCTACAGCCCA
AGTGAACCCACCTGGGGTCTCCAGCCAACCCACCTCCACCGCAGTGCTAATGCCCTGGATCCATGAATTGCCG
GCGGGGTGCACCCAGGGCTCAGAGAGAAGGGTTTTGAGACAGCTGCCTGACACATCTGGACGCCGCTGGAGAGAA
ATCTCTGCCTCACTCCTCTACCAAGCTCTTCCAAGCTCCCAGACCATGAGTCTCCAAGCCAGGAGTCACCCAAC
GCCCCACATCCACAGCAGTGCTGGGGAGCTGGGGATCCCCACCTCAGCCAGCCTAGCACCCAGAGAGCAGGAG
GCTCCTGGGACCCAATGGCCTCTGGATGAAACGTCAGGAATTTACTACACAGAAATCAGAGAAAGAGAGAGAGAG
AAATCAGAGAAAGGCAGGCCCCCATGGGCAGCGGTGGTAGGAACGCCCCCACAGGCGCACACCAGCCTACAGCCC
CACCACCACCCATGGGAGCCTTCTGTGAGAGAGAGCCTCTGTTCCACATGGCCCTGGAAAAATGAGGATTTTAAAC
CAAAAATTACACAGCTGCTACTTCTACAAAGACCTCACCCAGAACCAAGATCCCCTGGTCAAGAGAAGCTGG
CCTGATTATGTGGAGGAGAATCGAGGACATTTAATTGAGATCAGAGACTTATTTGGCCAGGCCTGGATACCCAA
GAACCTCGCATAGTCATACTGCAGGGGGCTGCTGGAATTGGGAAGTCAACACTGGCCAGGCAGGTGAAGGAAGCC
TGGGGGAGAGGCCAGCTGTATGGGGACCGCTTCCAGCATGTCTTCTACTTCAGCTGCAGAGAGCTGGCCCACTCC
AAGGTGGTGAGTCTCGCTGAGCTCATCGGAAAAGATGGGACAGCCACTCCGGCTCCATTAGACAGATCCTGTCT
AGGCCAGAGCGGCTGCTCTTCATCCTCGATGGTGTAGATGAGCCAGGATGGGTCTTGAGGAGCCGAGTTCTGAG
CTCTGTCTGCACTGGAGCCAGCCACAGCCGGCGGATGCACTGCTGGGCAGTTTGCTGGGGAAACTATACTTCCC
GAGGCATCCTTCTGATCACGGCTCGGACCACAGCTCTGCAGAACCTCATTCTTCTTTGGAGCAGGCACGTTGG
GTAGAGGTCTGGGGTCTCTGAGTCCAGCAGGAAGGAATATTTCTACAGATATTTACAGATGAAAGGCAAGCA
ATTAGAGCCTTTAGGTTGGTCAAATCAAACAAAGAGCTCTGGGCCCTGTGTCTTGTGCCCTGGGTGTCTGGCTG
GCCTGCACTTGCCCTGATGCAGCAGATGAAGCGGAAGGAAAACTCACACTGACTTCCAAGACCACCACAACCCCTC
TGTCTACATTACCTTGCCAGGCTCTCCAAGCTCAGCCATTGGGACCCCACTCAGAGACCTCTGCTCTCTGGCT
GCTGAGGGCATCTGGCAAAAAAGACCCTTTTTTCAGTCCAGATGACCTCAGGAAGCATGGGTTAGATGGGGCCATC
ATCTCCACCTTCTTGAAGATGGGTATTCTTCAAGAGCACCCCATCCCTCTGAGCTACAGCTTCATTACCTCTGT
TTCCAAGAGTTCTTTGCAGCAATGTCTATGTCTTGGAGGATGAGAAGGGGAGAGGTAACATTCTAATTGCATC
ATAGATTTGGAAAAGACGCTAGAAGCATATGGAATACATGGCCTGTTTGGGGCATCAACCACACGTTTCTATTG
GGCTGTAAAGTGATGAGGGGGAGAGAGAGATGGAGAACATCTTCACTGCCGGCTGTCTCAGGGGAGGAACCTG
ATGCAGTGGGTCCCGTCCCTGCAGCTGCTGCTGCAGCCACACTCTCTGGAGTCCCTCCACTGCTTGTACGAGACT
CGGAACAAAACGTTCTTGACACAAGTGATGGCCATTTTGAAGAAATGGGCATGTGTGTAGAAACAGACATGGAG
CTCTTAGTGTGCACITTTCTGCATTAAATTCAGCCGCCACGTGAAGAAGCTTCAGCTGATTGAGGGCAGGCAGCAC
AGATCAACATGGAGCCCCACCATGGTAGTCTGTTTCAGGTGGGTCCCAGTCAAGATGCCTATTGGCAGATTCTC
TTCTCCGTCTCAAGGTCACCAGAAACCTGAAGGAGCTGGACCTAAGTGGAAACTCGCTGAGCCACTCTGCAGTG
AAGAGTCTTTGTAAGACCCTGAGACGCCCTCGCTGCCTCCTGGAGACCTGCGGTTGGCTGGCTGTGGCCTCACA
GCTGAGGACTGCAAGGACCTTGCCTTTGGGCTGAGAGCCAACCAGACCCCTGACCGAGCTGGACCTGAGCTTCAAT
GTGCTCACGGATGCTGGAGCCAAACACCTTGGCCAGAGACTGAGACAGCCGAGCTGCAAGCTACAGCGACTGCAG
CTGGTCAGCTGTGGCCTCACGTCTGACTGCTGCCAGGACCTGGCCTCTGTGCTTAGTGCCAGCCCCAGCCTGAAG
GAGCTAGACCTGCAGCAGAACAACTGGATGACGTTGGCGTGCGACTGCTCTGTGAGGGGCTCAGGCATCCTGCC
TGCAAACCTCATACGCTGGGGCTGGACCAGACAACTCTGAGTGATGAGATGAGGCAGGAACCTGAGGGCCCTGGAG
CAGGAGAAACCTCAGCTGCTCATCTTTCAGCAGACGGAAACCAAGTGTGATGACCCCTACTGAGGGCCTGGATACG
GGAGAGATGAGTAATAGCACATCTCACTCAAGCGGCAGAGACTCGGATCAGAGAGGGCGGCTTCCCATGTTGCT
CAGGCTAATCTCAAACCTCTGGACGTGAGCAAGATCTTCCCAATTGCTGAGATTGCAGAGGAAAGCTCCCCAGAG
GTAGTACCGGTGGAACCTTGTGCGTGCCCTTCTCCTGCCTCTCAAGGGGACCTGCATACGAAGCCTTTGGGGACT
GACGATGACTTCTGGGGCCCCACGGGGCCTGTGGCTACTGAGGTAGTTGACAAAGAAAAGAACTTGTACCGAGTT
CACTTCCCTGTAGCTGGCTCCTACCGCTGGCCCAACACGGGTCTCTGCTTTGTGATGAGAGAAGCGGTGACCGTT
GAGATTGAATTCTGTGTGTGGGACCAGTTCTTGGGTGAGATCAACCCACAGCACAGCTGGATGGTGGCAGGGCCT
CTGCTGGACATCAAGGCTGAGCCTGGAGCTGTGGAAGCTGTGCACCTCCCTCACTTTGTGGCTCTCCAAGGGGGC
CATGTGGACACATCCCTGTTCCAAATGGCCCACTTTAAAGAGGAGGGGATGCTCCTGGAGAAGCCAGCCAGGGTG

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FIGURE 691B

GAGCTGCATCACATAGTTCTGGAAAACCCAGCTTCTCCCCCTTGGGAGTCCTCCTGAAAATGATCCATAATGCC
CTGCGCTTCATTCCCGTCACCTCTGTGGTGTTGCTTTACCACCGCGTCCATCCTGAGGAAGTCACCTTCCACCTC
TACCTGATCCCAAGTGACTGCTCCATTTCGGAAGGCCATAGATGATCTAGAAATGAAATTCCAGTTTGTGCGAATC
CACAAGCCACCCCGCTGACCCCACTTTATATGGGCTGTCGTTACACTGTGTCTGGGTCTGGTTTCAGGGATGCTG
GAAATACTCCCCAAGGAACTGGAGCTCTGCTATCGAAGCCCTGGAGAAGACCAGCTGTTCTCGGAGTTCTACGTT
GGCCACTTGGGATCAGGGATCAGGCTGCAAGTGAAAGACAAGAAAGATGAGACTCTGGTGTGGGAGGCCTTGGTG
AAACCAGGAGATCTCATGCCTGCAACTACTCTGATCCCTCCAGCCCGCATAGCCGTACCTTCACCTCTGGATGCC
CCGCAGTTGCTGCACCTTTGTGGACCAGTATCGAGAGCAGCTGATAGCCCGAGTGACATCGGTGGAGGTTGTCTTG
GACAAACTGCATGGACAGGTGCTGAGCCAGGAGCAGTACGAGAGGGTGCTGGCTGAGAACACGAGGCCAGCCAG
ATGCGGAAGCTGTTTCAGCTTGAGCCAGTCTGGGACCGGAAGTGCAAAGATGGACTCTACCAAGCCCTGAAGGAG
ACCCATCCTCACCTCATTATGGAACCTCTGGGAGAAGGGCAGCAAAAAGGGACTCCTGCCACTCAGCAGCTGAAGT
ATCAACACCAGCCCTTGACCCTTGAGTCTGGCTTTGGCTGACCCTTCTTTGGGTCTCAGTTTCTTTCTCTGCAA
ACAAGTTGCCATCTGGTTTGCCTTCCAGCACTAAAGTAATGGAACCTTGATGATGCCTTTGCTGGGCATTATGTG
TCCATGCCAGGGATGCCACAGGGGGCCCCAGTCCAGGTGGCCTAACAGCATCTCAGGGAATGTCCATCTGGAGCT
GGCAAGACCCCTGCAGACCTCATAGAGCCTCATCTGGTGGCCACAGCAGCCAAGCCTAGAGCCCTCCGGATCCCA
TCCAGGCGCAAAGAGGAATAGGAGGGACATGGAACCATTTCCTCTGGCTGTGTACAGGGTGAGCCCCAAAATT
GGGGTTCAGCGTGGGAGGCCACGTGGATTCTTGGCTTTGTACAGGAAGATCTACAAGAGCAAGCCAACAGAGTAA
AGTGGAAGGAAGTTTATTCAGAAAATAAAGGAGTATCACAGCTCTTTTAGAATTGTCTAGCAGGCTTTCCAGTT
TTTACCAGAAAACCCCTATAAATTAAAAATTTTTTACTTAAATTTAAGAATTAAAAAAATACAAAAAAGAAAAA
TGAAAATAAAGGAATAAGAAGTTACCTACTCCAAAAA

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FIGURE 692

MAGGAWGRLACYLEFLKKEELKEFQLLLANKAHSRSSSGETPAQPEKTSGMEVASYLVAQYGEQRAWDLALHTWE
QMGLRSLCAQAQEGAGHSPSFPYSPSEPHLGSPSQPTSTAVLMPWIHELPAAGCTQGSERRVLRQLPDTSGRRWRE
ISASLLYQALPSSPDHESPSQESPNAPTSTAVLGSWGSPQPQSLAPREQEAPGTQWPLDETSGIYYTEIRERERE
KSEKGRPPWAAVVGTPPQAHTSLQPHHPWEPSVRESLCSTWPWKNEFDNQKFTQLLLLQRPHPRSQDPLVKRSW
PDYVEENRGHLIEIRDLFPGGLDTQEPRIVILQGAAGIGKSTLARQVKEAWGRGQLYGDRFQHVYFSCRELAQS
KVVSLAELIGKDGATATPAPIRQILSRPERLLFILDGVDEPGWVLQEPSSSELCLHWSQPQPADALLGSLLGKTILP
EASFLITARTTALQNLIPSLEQARWVEVLGFSESSRKEYFYRYFTDERQAIRAFRLVKSNNKELWALCLVPVWSWL
ACTCLMQMKRKEKLTLSKTTTTLCLHYLAQALQAQPLGQPQLRDLCSLAAEGIWQKKTLSFDDLRKHGLDGA
ISTFLKMGILQEHPPLSYFHLCHFQEFFAAMSYVLEDEKGRGKHSNCIIDEKTLAYGIGHGLFGASTTRFLL
GLLSDEGEREMENIFHCRLSQGRNLMQWVPSLQLLLQPHSLESLSHCLYETRNTFLTQVMAHFEEMGMCVETDME
LLVCTFCIKFSRHVKKLQIEGRQHRSTWSPTMVVLFRWVPVTDAYWQILFSVLKVTRNLKELDLSGNSLSHSAV
KSLCKTLRRPRCLLETTLRLAGCGLTAEDCKDLAFGLRANQTLTELDLSFNVLTDAKHLQCRLRQPSCKLQRLQ
LVSCGLTSDCCQDLASVLSASPSLKELDLQNNLDDVGVRLLCEGLRHPACKLIRLGLDQTTLSDEMRQELRALE
QEKPQLLIFSRRKPSVMTPTTEGLDTGEMSNSTSSLKRQRLGSERAASHVAQANLKLLDVSKIFPIAEIAEESSPE
VVPVELLCVPSPASQGD LHTKPLGTDDDFWGPTGPVATEVVDKEKNLYRVHFPVAGSYRWPNTGLCFVMREAVTV
EIEFCVWDQFLGEINPQHSWMVAGPLLDIKAEPGAVEAVHLPHFVALQGQGHVDTSLFQMAHFKEEGMLLEKPARV
ELHHIVLENPSFSPGLVLLKMIHNALRFIPVTSVVLLYHRVHPEEVTFHLYLIPSDCSIRKAIDDLKMFQFVRI
HKPPPLTPLYMGCRYTVSGSGSMLEILPKELELCYRSPGEDQLFSEFYVGHLSGSGIRLQVKDKKDETLVWEALV
KPGDLMPATTLIPPARIAVPSPLDAPQLLHFVDQYREQLIARVTSVEVVLDKLGQVLSQEYQYERVLAEENTRPSQ
MRKLFSLSQSWDRKCKDGLYQALKETHPHLIMELWEKGSKKGLLPLSS

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FIGURE 693

CGCGGCGGCGCGGAGCTCGGGCGGCCGTGGAGGAACTCAGCCTCGGCCGCAGGAGGCGCCGGGAGCGGAGCCGCC
GGGAGTCGCGCAACAGGTTTCTTCTCCATCCGTGCGCCACAGGGGACGCGCGCCCTGCCGGGAGAGGGGCTTC
TCGGTTCGCACTCTCGCTCCCAGTCCAGGCAAAATGAAAGACCGGCTAGCAGAACTTCTGGACTTGTCCAAGCAA
TATGACCAGCAGTTCCCAGACGGGGACGATGAGTTTGAATCGCCCCACGAGGACATCGTGTTTCGAGACGGACCAC
ATCCTGGAGTCCCTGTACCGAGACATCCGGGACATTCAGGATGAAAACAGCTGCTGGTGGCCGACGTGAAGCGG
CTGGGAAAGCAGAACGCCCCGCTTCCTCACGTCCATGCGGCGCCTCAGCAGCATCAAGCGCGACACCAACTCCATC
GCCAAGGCCTTCAGGGCCCGGGGCGAGGTCATCCACTGCAAGCTGCGCGCCATGAAGGAGCTGAGCGAGGCGGCT
GAGGCCCAGCACGGCCCGCACTCGGCAGTGGCGCGCATTTGCGGGGCGCAGTACAACGCGCTCACCCCTCACCTTC
CAGCGCGCCATGCACGACTACAACCAGGCCGAGATGAAGCAGCGCGACAACCTGCAAGATCCGCATCCAGCGCCAG
CTGGAGATCATGGGCAAGGAAGTCTCGGGCGACCAGATCGAGGACATGTTTCGAGCAGGGTAAGTGGGACGTGTTT
TCCGAGAACTTGCTGGCCGACGTGAAGGGCCGCGGGCCGCCACAACGAGATCGAGAGCCGCCACCGCGAACTGC
TGCGCCTGGAGAGCCGCCATCCGCGACGTACACGAGCTCTTCTTGAGATGGCGGTGCTGGTGGAGAAGCAGGCC
GACACCCTGAACGTATCGAGCTCAACGTACAAAAGACGGTCGACTACACCGGCCAGGCCAAGGCGCAGGTGCGG
AAGGCCGTGCAGTACGAGGAGAAGAACCCCTGCCGGACCTCTGCTGCTTCTGCTGTCCCTGCCTCAAGTAGCAG
GCCGGCCCGGGCCGCCACCGCCCATCCCAGACCATGGAGCGCGCTGGGAAGGACGCACCAAAGCCGGGAGCTCTG
CCCTGCAGGGAGTTGCCCAACCCCTTCCGGAACTCAGTCTTTAGAAAAGAAACGCCAGGTTCAAGAATTGCAAA
CCAGCCTGTGCTTGGAAAGATGGTTAGTTGATACCGTCCGATGATTCTTCAGTAAAGATAGATTCCCACCTCGTG
CCGAA

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FIGURE 694

MKDRLAELLDSLKQYDQQFPDGDDEFDSPHEDIVFETDHILES LYRDIRDIQDENQLLVADV KRLGKQNA RFLTS
MRRLLSSIKRDTNSIAKAFRARGEVIHCKLRAMKELSEAAEAQHGP HSAVARISRAQYNALTTLTFQ RAMHDYNQAE
MKQRDNCKIRIQRQLEIMGKEVSGDQIEDMFEQGKWDVFSENLLADV KGRGPPTTRSRAATANCCAWRAAIRDVH
ELFLQMAVLVEKQADTLNVIELNVQKTVDYTGQAKAQVRKAVQYEEKNPCRTLCCFCCPCLK

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FIGURE 695

AGTTCCCCGACATCAAGTCACGCATTGCCAAGCGGGGGCGCAAGCTGGTGGACTACGACAGTGCCCGGCACCACT
ACGAGTCCCTTCAAAGTCCAAAAAGAAGGATGAAGCCAAAATTGCCAAGCCTGTCTCGCTGCTTGAGAAAGCCG
CCCCCAGTGGTGCCAAGGCAAAGTGCAGGCTCATCTCGTAGCTCAAACCTAACCTGCTCCGAAATCAGGCCGAGG
AGGAGCTCATCAAAGCCCAGAAGGTGTTTGAGGAGATGAATGTGGATCTGCAGGAGGAGCTGCCGTCCCTGTGGA
ACAGCCGCGTAGGTTTCTATGTCAACACGTTCCAGAGCATCGCGGGCCTGGAGGAAAACCTCCACAAGGAGATGA
GCAAGCTCAACCAGAACCTCAATGATGTGCTGGTCGGCCTGGAGAAGCAACACGGGAGCAACACCTTCACGGTCA
AGGCCCAGCCCAGTGACAACGCGCCTGCAAAAGGGAACAAGAGCCCTTCGCCTCCAGATGGCTCCCTGCCGCCA
CCCCCGAGATCAGAGTCAACCACGAGCCAGAGCCGGCCGGCGGGGCCACGCCCGGGGCCACCTCCCAAGTCCC
CATCTCAGCTCCGGAAGGCCACCACTCCCTCCGCCTCCCAAACACACCCCGTCCAAGGAAGTCAAGCAGGAGC
AGATCCTCAGCCTGTTTGAGGACACGTTTGTCCCTGAGATCAGCGTGACCAACCCCTCCAGTTTGAGGCCCGG
GGCCTTTCTCGGAGCAGGCCAGTCTGCTGGACCTGGACTTTGACCCCTCCCGCCCGTGACGAGCCCTGTGAAGG
CACCCACGCCCTCTGGTCAGTCAATTCCATGGGACCTCTGGGAGCCCACAGAGAGTCCAGCCGGCAGCCTGCCTT
CCGGGGAGCCCAGCGCTGCCGAGGGCACCTTTGCTGTGTCTGGCCCAGCCAGACGGCCGAGCCGGGGCCTGCC
AACCAGCAGAGGCCTCGGAGGTGGCGGGTGGGACCCAACCTGCGGCTGGAGCCCAGGAGCCAGGGGAGACGGCGG
CAAGTGAAGCAGCCTCCAGCTCTCTTCTGCTGTCTGCTGGTGGAGACCTTCCAGCAACTGTGAATGGCACCCTGG
AGGGCGGCAGTGGGGCCGGGCGCTTGGACCTGCCCCAGGTTTCATGTTCAAGGTACAGGCCCAGCACGACTACA
CGGCCACTGACACAGACGAGCTGCAGCTCAAGGCTGGTGATGTGGTGCTGGTGATCCCTTCCAGAACCCTGAAG
AGCAGGATGAAGGCTGGCTCATGGGCGTGAAGGAGAGCGACTGGAACCAGCACAAGGAGCTGGAGAAGTGCCGTG
GCGTCTTCCCCGAGAACTTCACTGAGAGGGTCCCATGACGGCGGGGCCAGGCAGCCTCCGGGCGTGTGAAGAAC
ACCTCCTCCCGAAAAATGTGTGGTTCTTTTTTTTGTGTTTTCGTTTTTCATCTTTGAAGAGCAAAGGGAAA
TCAAGAGGAGACCCCCAGGCAGAGGGGCGTTCTCCAAAGATTAGGTGCTTTTCCAAAGAGCCGCGTCCCGGCAA
GTCCGGCGGAATTCACCAGTGTTCCTGAAGCTGCTGTGTCTCTAGTTGAGTTTCTGGCGCCCTGCCTGTGCCC
GCATGTGTGCTGGCCGAGGGCGGGGCTGGGGGCTGCCGAGCCACCATGCTTGCTGAAGCTTCGGCCGCGCCA
CCCGGGCAAGGGTCTCTTTTCTGGCAGCTGCTGTGGGTGGGGCCCAGACACCAGCCTAGCCTGGCTCTGCCCC
GCAGACGGTCTGTGTGCTGTTTGAAATAAATCTTAGTGTTCAAAACAAAATGAAACAAAAAAAATGAAAAA
AAAAAAAAAAAAAAAAAAAA

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FIGURE 696

GCTGGAGGATGTGGCTGCAGAGCCTGCTGCTCTTGGGCACTGTGGCCTGCAGCATCTCTGCACCCGCCCGCTCGC
CCAGCCCCAGCACGCAGCCCTGGGAGCATGTGAATGCCATCCAGGAGGCCCGGCGTCTCCTGAACCTGAGTAGAG
ACACTGCTGCTGAGATGAATGAAACAGTAGAAGTCATCTCAGAAATGTTTGACCTCCAGGAGCCGACCTGCCTAC
AGACCCGCCTGGAGCTGTACAAGCAGGGCCTGCGGGGCAGCCTCACCAAGCTCAAGGGCCCCTTGACCATGATGG
CCAGCCACTACAAGCAGCACTGCCCTCCAACCCCGGAACTTCCTGTGCAACCCAGACTATCACCTTTGAAAGTT
TCAAAGAGAACCTGAAGGACTTTCTGCTTGTCATCCCCTTTGACTGCTGGGAGCCAGTCCAGGAGTGAGACCGGC
CAGATGAGGCTGGCCAAGCCGGGGAGCTGCTCTCTCATGAAACAAGAGCTAGAAACTCAGGATGGTCATCTTGGA
GGGACCAAGGGGTGGGCCACAGCCATGGTGGGAGTGGCCTGGACCTGCCCTGGGCCACACTGACCCTGATACAGG
CATGGCAGAAGAATGGGAATATTTTATACTGACAGAAATCAGTAATATTTATATATTTATATTTTTAAATATTT
ATTTATTTATTTATTTAAGTTCATATTCATATTTATTCAAGATGTTTTACCGTAATAATTATTATTAAAAATAT
GCTTCT

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FIGURE 697

MWLQSLLLLGTVACSIAPARSPSPSTQPWEHVNAIQEARLLNLSRDTAAEMNETVEVISEMFDLQEPTCLQTR
LELYKQGLRGSLTKLKGPLTMMASHYKQHCPTPETSCATQTITFESFKENLKDFLLVIPFDCWEPVQE

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FIGURE 698

AGTTACGTTTCGGGGCGTGGCCGGGAGCACGTTGGCTCCGCCCCCTGGCGGCTGCCTCAGCGGCGGCGGCGGCGCA
GGCTCAGAGCAGACCCCGCCCGGCGAGGAGGAGGGAGGGCCGCCAGTGTGACATGCTGCTGGAGGAGGTTTCGCG
CCGGCGACCGGCTGAGTGGGGCGGCGGCCCGGGGCGACGTGCAGGAGGTGCGCCGCCTTCTGCACCGCGAGCTGG
TGCATCCCGACGCCCTCAACCGCTTCGGCAAGACGGCGCTGCAGGTCATGATGTTTGGCAGCACCGCCATCGCCC
TGGAGCTGCTGAAGCAAGGTGCCAGCCCCAATGTCCAGGACACCTCCGGTACCAGTCCAGTCCATGACGCAGCCC
GCACTGGATTCTTGGACACCCTGAAGGTCCTAGTGGAGCACGGGGCTGATGTCAACGTGCCTGATGGCACCGGGG
CACTTCCAATCCATCTGGCAGTTCAAGAGGGTCACACTGCTGTGGTCAGCTTTCTGGCAGCTGAATCTGATCTCC
ATCGCAGGGACGCCAGGGGTCTCACACCCTTGGAGCTGGCACTGCAGAGAGGGGCTCAGGACCTCGTGGACATCC
TGCAGGGCCACATGGTGGCCCCGCTGTGATCTGGGGTCACCCTCTCCAGCAAGAGAACCCCGTGGGGTTATGTAT
CAGAAGAGAGGGGAAGAAACACTTTCTCTTCTTGTCTCTCTGCCCCACTGCTGCAGTAGGGGAGGAGCACAGTTT
GTGGCTTATAGGTGTTGGTTTTGGGGGTGTGAGTGTGTGGGGGACGTTTCTCATTGTGTTTTCTCACTCCTTTTG
GTGTGTTGGACAGAGAAGGGCTCCTGCAGGCCACAGCCACCTAAACGGTTCAGTTTCTTCTGCGCCTCAGGCTGC
TGGGGCCTCAGACGAGACCCAAGGGCAGAGCATTAAAGAGTGAAGTCATGACCTCCAGGGAGCCTAGAAGCTGGT
GGCCTTGGCCGGCTGTGCTCAGAGACCTGAAGTGTGCACGTTGCTTCAGGCATGGGGGGTGGGGGGAGCGTCCCA
AATCAATAAGAAGGTAGAATGAGTTATGAGTTATTCATATTCTGTTGGAAGCTTGTTTTCCAGTCTCTTGTACAG
CGTTTTAAAGAAATGGATTCTATTTATTATGCTTTATTGAAAAAATGTTGTAATAATTTAATGTTTTTACCCA
TTAAATTAAGACTTGTGCATGATCAAAAAAAAAAAAAAAAAA

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FIGURE 699

MLLEEVRA GDRLSGAAARGDVQEVRRLLHREL VHPDALNRFGKTALQVMMFGSTAIALELLKQGASPNVQDTSGT
SPVHDAARTGFLDTLKVLEHGADVNVDPGTGALPIHLAVQEGHTAVVSFLAAESDLHRRDARGLTPLELALQRG
AQDLVDILQGHMVAPI

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FIGURE 700

GGGGAGATCTTAGCTGAAGATGACTGACAGTGTTATTTATTCCATGTTAGAGTTGCCTACGGCAACCCAAGCCCA
GAATGACTATGGACCACAGCAAAAATCTTCCTCTCCAGGCCTTCTTGTTCTTGCCTTGTGGCAATAGCTTTGGG
GCTTCTGACTGCAGTTCTTCTGAGTGTGCTGCTATACCAGTGGATCCTGTGCCAGGGCTCCAATACTCCACTTG
TGCCAGCTGTCCTAGCTGCCCAGACCGCTGGATGAAATATGGTAACCATTTGTTATTATTTCTCAGTGGAGGAAAA
GGACTGGAATTCTAGTCTGGAATTCTGCCTAGCCAGAGACTCACACCTCCTTGTGATAACGGACAATCAGGAAAT
GAGCCTGCTCCAAGTTTTCTCAGTGAGGCCTTTTGCTGGATTGGTCTGAGGAACAATTCTGGCTGGAGGTGGGA
AGATGGATCACCTCTAACTTCTCAAGGATTTCTTCTAATAGCTTTGTGCAGACATGCGGTGCCATCAACAAAA
TGGTCTTCAAGCCTCAAGCTGTGAAGTTCCTTTACACTGGGTGTGTAAGAAGTGTCCCTTTGCAGATCAAGCTTT
ATTCTGAAGAATAAACCTAGCTGGCATGCTGGTGTGTACCTGTAGTCCTAGCTATTTGGGAAGCTGAGGTGGGAG
GGTCGCTTGAGCCCAGGAGTTTGAGGCTGCAGTGAGCTATGATTGTGCCACTGTACTCCAGCCTGGGAGATAGAG
CAAGACTCCATCTCTAAAAAAAAAAAAAAAAATGCTAATGTGAGAATATAAATTGTGGGAAATGAGTGAGGGCAAGG
TGGTACTTCCTCCTTCTGAGCTCTTCACACGTAATGCAAAAACCCGGTCTTAAGTGAATTTGTTTTTTTTCTGAG
TATGCATATATGTGGTTGAATGAACCAATGTGTGATTGTATCTTTTCCATTATGTGACTGTTTGACCTGCATATT
AATTTCAAGATAGCAGTCAATTCGATAAGGCATTTTCATAGAGGAAAGTTTACAGAAACAGTTTATGTGGTTGGA
TCACCAAATTATCTTAGGTACTAAGGCCTCAAAAATAAGAAAACTTTATTATTTCTCCTCAGTAGAGTTTGGAC
ATACATAAGGAGAGAAGGTACAGTGATGAAGGAGACCATAATTCTGTAGTGTTGATGATCCTGGATTATAATCTT
TTTCTCTTTATCTTTCATAGTTTTTTTAAAAACATGGACTGTATCTTATCTACCACTATATCCCAAATACCTAAG
ATAGTGCTTACGTTCAGTGACTATTAAATAAATAAATGGATGAATTAATAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 701

MTDSVIYSMLELPTATQAQNDYGPQKSSSSRPSCSCLVAIALGLLTAVLLSVLLYQWILCQGSNYSTCASCPS
PDRWMKYGNHCYYFSVEEKDWNSSLEFCLARDSHLLVITDNQEMSLLQVFLSEAFCWIGLRNNSGWRWEDGSPLN
FSRISSNSFVQTCGAINKNGLQASSCEVPLHWVCKKCPFADQALF

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FIGURE 702

TGAAGATCAGCTATTAGAAGAGAAAGATCAGTTAAGTCCTTTGGACCTGATCAGCTTGATACAAGAACTACTGAT
TTCAACTTCTTTGGCTTAATTCTCTCGGAAACGATGAAATATACAAGTTATATCTTGGCTTTTCAGCTCTGCATC
GTTTTGGGTTCTCTTGGCTGTTACTGCCAGGACCCATATGTAAAAGAAGCAGAAAAACCTTAAGAAATATTTTAAT
GCAGGTCATTTCAGATGTAGCGGATAATGGAACCTCTTTTCTTAGGCATTTTGAAGAATTGGAAAGAGGAGAGTGAC
AGAAAAATAATGCAGAGCCAAATTGTCTCCTTTTACTTCAAACCTTTTAAAAACTTTAAAGATGACCAGAGCATC
CAAAAGAGTGTGGAGACCATCAAGGAAGACATGAATGTCAAGTTTTTCAATAGCAACAAAAAGAAACGAGATGAC
TTCGAAAAGCTGACTAATTATTCGGTAACTGACTTGAATGTCCAACGCAAAGCAATACATGAACTCATCCAAGTG
ATGGCTGAACTGTCGCCAGCAGCTAAACAGGGAAGCGAAAAAGGAGTCAGATGCTGTTTCAAGGTCGAAGAGCA
TCCCAGTAAATGGTTGTCCTGCCTGCAATATTTGAATTTTAAATCTAAATCTATTTATTAATATTTAACATTATTT
ATATGGGGAATATATTTTTAGACTCATCAATCAAATAAGTATTTATAATAGCAACTTTTGTGTAATGAAAATGAA
TATCTATTAATATATGTATTATTTATAATTCCTATATCCTGTGACTGTCTCACTTAATCCTTTGTTTTCTGACTA
ATTAGGCAAGGCTATGTGATTACAAGGCTTTATCTCAGGGGCCAACTAGGCAGCCAACCTAAGCAAGATCCCATG
GGTTGTGTGTTTATTTCACTTGATGATACAATGAACACTTATAAGTGAAGTGATACTATCCAGTTACTGCCGGTT
TGAAAATATGCCTGCAATCTGAGCCAGTGCTTTAATGGCATGTCAGACAGAACTTGAATGTGTCAGGTGACCCTG
ATGAAAACATAGCATCTCAGGAGATTTTCATGCCTGGTGCTTCCAAATATTGTTGACAACGTGACTGTACCCAAA
TGGAAAGTAACTCATTTGTTAAAATTATCAATATCTAATATATATGAATAAAGTGTAAGTTCACAACT

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FIGURE 703

MKYTSYILAFQLCIVLGSLGCYCQDPYVKEAENLKKYFNAGHSDVADNGTLFLGILKNWKEESDRKIMQSQIVSF
YFKLFKNFKDDQSIQKSVEIKEDMNVKFFNSNKKKRDDFEKLTNYSVTDLNVQRKAIHELIQVMAELSPAAGT
KRKRSQMLFQGRRASQ

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FIGURE 704

GTTTGAGCAGCATTGTTAGAGCCTGTGGAAAACACTTTACAACCTGTGTAACCTGTCTTCATCTTTACAGAGGAATA
GTCTACAAAGGAAGACTTGTAACTGGAGAAGAGACCTGTCAATTTACTCCATCCTTTATAGTGATGCTACAGGAC
GAAGAGGAATGGATAAAAAACATTGGCGAGCAACTCAATAAAGCGTATGAAGCCTTCCGGCAGGCATGCATGGATA
GAGATTCTGCAGTAAAAGAATTACAGCAAAAGACTGAGAACTATGAGCAGAGAATACGTGAACAACAGGAACAGC
TGCTACTTCAACAGACTATTATTGACAAGCTAAAATCTCAGTTACTTCTTGTGAATTCACCTCAAGATAACAATT
ATGGCTGTGTTTCTCTGCTTGAAGACAGTGAACAAGAAAGAATAATTTGACTCTTGATCAGCCACAAGATAAAG
TGATTTTCAGGAATAGCAAGAGAAAACTACCAAAGGTAAGAAGACAAGAGGTTTCTTCTCCTAGAAAAGAACTT
CAGCAAGGAGTCTTGGCAGTCCTTTGCTCCATGAAAGGGTAATATAGAGAAGACTTTCTGGGATCTGAAAGAAG
AATTTTCATAAAATATGCATGCTAGCAAAAGCACAGAAAGACCACTTAAGCAAACCTTAATATACCAGACACTGCAA
CTGAAACACAGTGCTCTGTGCCCTATACAGTGTACGGATAAAACAGATAAACAAGAAGCGCTGTTTAAGCCTCAGG
CTAAAGATGATATAAAATAGAGGTGCACCATCCATCACATCTGTACACCAAGAGGACTGTGCAGAGATGAGGAAG
ACACCTCTTTTGAATCACTTTCTAAATTCAATGTCAAGTTTCCACCTATGGACAATGACTCAACTTTCTTACATA
GCACTCCAGAGAGACCCGGCATCCTTAGTCTGCCACGTCTGAGGCAGTGTGCCAAGAGAAATTTAATATGGAGT
TCAGAGACAACCCAGGGAACTTTGTTAAAACAGAAGAACTTTATTTGAAATTCAGGGAATTGACCCCATAGCTT
CAGCTATACAAAACCTTAAAAACAACCTGACAAAACAAAGCCCTCAAATCTCGTAAACACTTGTATCAGGACAACCTC
TGGATAGAGCTGCGTGTTTGCCACCTGGAGACCATAATGCATTATATGTAAATAGCTTCCCACTTCTGGACCCAT
CTGATGCACCTTTTCCCTCACTCGATTCCCCGGGAAAAGCAATCCGAGGACCACAGCAGCCCAATTTGGAAGCCCT
TTCCTAATCAAGACAGTGACTCGGTGGTACTAAGTGGCACAGACTCAGAACTGCATATACCTCGAGTATGTGAAT
TCTGTCAAGCAGTTTTTCCCAACCATCCATTACATCCAGGGGGGATTTCCCTTCGGCATCTTAATTCACACTTCAATG
GAGAGACTTAAGACACATTTGAAAACAGACATATCAAGTTCTATGTGATGATTTTGGGTTTTTAATACTATAAAT
ACTTGATTGTAACTAAATTCAGATCATTATATAGGAAAATCTAGTTTCACAGCTATTTGAATTTTTTCTGGAT
TTACTATATAACTCTTATTTTTTAAAAGATCATTCTGTTCTTTCAAGGAGAAATAAGCCTAAAAGAAGAAAAACA
AAAAAATTCTGTATAAACTGTAATCCTTTGTATTTCATGTTTACAGTGCTATTACTATAATTCAAATTTATGTA
TGTGACTTAGAGTTATATAATCATAATTTATGTTTTATTTCAAATATCTAAGTTTATTGCTTGGATTTCTAGTGAG
AGCTGTTGAATTTGGTGATGTCAAATGTTTCTAGGGTTTTTTTAGTTTGTGTTTTATTGAAAAATTTAATTATTTA
TGCTATAGGTGATATTCTCTTTGAATAAACCTATAATAGAAAATAGCAGACAACATAAACATCTTTGTAAATATC
AAACCTAATACATTTCTTGTCAGTGATAAAACAACCTGGTAGAATTATTTAAACACTTTAGATTTTTAAATAATA
TACATGGCTTTAATTTTTACTGTGTGTATAGCTACATGATGAAATTAATTAAATATTAAGAGGT

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FIGURE 705

MDKNIGEQLNKAYEAFRQACMDRDSAVKELQOKTENYEQRIREQQEQLSLQQTIIDKLKSQLLLVNSTQDNNYGC
VPLEDSETRKNNLTLDQPDQKVISGIAREKLPKVDIASAESSI

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FIGURE 706

GTCTACACCAGCGGTGTCGCTGCCCCGAAAGTGAGAGAAGGCTGATATTGCTAGCTGGAATCCAGGCCTGGGTGCT
GCATGGTGGCGCCCCCTCCCCGTGACCACCGCTGCGTTTTCTCGGGCTTTCTCTGAGGAGCTGCTCTTTGTGCTGTT
TGGCCCCTGCCTACTCGGAATGGAACAAAGCATCGAACAAACAACCTGAGATCCTGTTGTGCTATCACCTGTTGA
AGTTGCCAGTCTTAAGGAAGGAATCAATTTCTTTCGCAATAAGAGCACTGGCAAAGACTACGTCTTGTACAAGAA
TAAGAGCCGACTGAGGGCATGCAAGAATATGTGCAAGCACCAGGAGGCCTGTTTCATAAAAGATATCGAGGATTT
AGCCGGAAGTTGTTGAAATGATGAAAACAACGGACTTTTGCTTTTAGAACTGAATCCTCCTAACCCCTTGGGACT
TACAGCCCAGATCTCCTGAAGAGTTGGCTTTTGGAGAAGTACAGATAACATATCTCACTCATGCCTGCATGGACC
TCAAGTTAGGAGACAAGAGAATGGTGTGTTGACCCCTTGGTTAATCGGTCCTGCTTTTGCCCGTGGATGGTGGTTGC
TCCATGAGCCTCCATCTGATTGGCTGGAGAGGCTGTGCCAGGCAGACCTCATTACATCAGTCATCTGCACTCAG
ACCACCTGAGTTACCCACACTGAAAAAGCTTGCTGGGAGAAGACCAGATATTCCCATTTATGTTGGAAACACAG
AAAGGCCTGTATTTTGGAAATCTGAATCAGAGCGGTGTCCAGTTGACTAATATCAATGTCTGCGCCATTTGGAATAT
GGCAGCAGGTGGACAAAAATCTTCGATTTCATGATCTTGATGGACGGTGTTCATCCTGAGATGGACACTTGCATTA
TTGTGGAGTACAAAAGTTCATAAAATACTCAATATAGTAGACTGCACCAGACCCAATGGGGGAAGGCTGCCTATGA
AGGTTGCTCTAATGATGAGTGATTTTGTCTGGAGGAGCATCAGGCTTTCCAATGACTTTTCAGTGGTGGAAAATTTA
CGGAGGAATGGAAAGCCCAATTCATTAAACAGAAAGGAAGAAGCTCCTGAACTACAAGGCTCGGCTGGTGAAGA
ACCTGCAACCCCGAATTTATTGTCCCTTTGCTGGGTATTTTGTGGAATCTCACCCATCAGACAAGTACATCAAGG
AAACAAACACCAAAAAATGACCCAAATGAACCAACAATCTTATCAAGAAAACTCTGATGTGATAACATGGACCC
CTCGACCGGGAGCCACCCTTGATCTGGGAAGAATGCTGAAGGATCGAACAGACAGCAAGGGCATCATAGAGCCTC
CAGAGGGGACAAAAATTTACAAGGATTCCTGGGATTTTGAACCTTATTTGGAAATCTTGAATGCTGCTCTAGGAG
ATGAAATATTTCTTCACTCATCCTGGATAAAAGAATACTTCACTTGGGCTGGATTTAAAGATTACAACCTTGTGG
TCAGGATGATTGAGACAGATGAGGACTTCAATCCTTTTCTGGAGGATATGACTATTTGGTTGACTTTTTTAGATT
TATCCTTCCCAAAAGAAAGACCACAACGAGAACATCCCTATGAGGAAATCCATAGCCGGGTGGATGTCATCAGAC
ACGTGGTGAAGAATGGTCTACTCTGGGATGAGTTGTATATAGGATTCCAAACACGGCTCCAGCGGGATCCTGACA
TATACCATCACCTGTTTTGGAATCATTTTCAATAAAACTCCCCCTCACACCACCCAACCTGGAAGTCATTCTGGA
TGTGCTGTGAGCAGAATGGGCCTGCGATTTTGAAGAATGCAAAACCACATGAAAAATTTCAAGAATTCATGATC
TGATGCAAAATAAAAAATTTATCATTACATCTTGAACCCAGGAAGCTTACAGCAAAGAGACTATGCTTTTATGACGT
CAGCAATAGATAATTCACGTTGCCTTTGTGATTTGTATATATAGCTTACATTTGTGGATCACTACATAGCCAGA
TTCAAAAATATTTTACTTGTTCATCCACAGTTCTCTACAGAAAGAACCAATGAACCAATAGGAACAAATTCTC
TGTGGAAAACAAAGCATAGCTGTAGTAGATACGAATCCAATCAGAGGAAACAGGAAGAGAAAAACATCCAAGA
CTACAGTGAAACTGGAATGGTCTGTTTTCGTGATATTCGTATGATTAAGATGCAATTTTTTCTTAGGAAAAT
GTGATTGTTAACTAGCATTCTGTTTTACATGTTGACATTTCTAACACACACACCACTGATTGAACTTCAAAATT
TATTTTCTGATTATATATGCTAGGTCTGATTCTGAAGATACAAGAATTCAATGGTGGAAATTTGTCTCCTGAAATT
TCTAGATTCTATAATTAGAAGTGTATTATTACCAACTTCTCACTTAGATTAAACATCAGTGATGTTGATTATTCTGG
TTAACCGCTCACATGCATAACAATAATGCTAGAAATTCAGGAATTATAATTTTGTGATTTATACTGTGTGGTAAA
TTATTCAGTTCTCACTGCAATAAATAATATATGTATATCAATGTAGGTGAGAAATGTCTATGGTGAGCAAT
AAAAGATTATTTTAAATATGAAAAAAAAAAAAAAAAA

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FIGURE 707

MDENNGLLLLLELNPPNPWDLQPRSPHEELAFGEVQITYLTHACMDLKLGDKRMVFD PWLIGPAFARGWLLHEPPS
DWLERLCQADLIYISHLHSDHLSYPTLKKLAGRRPDIPYVGNTERP VFWNLNQS QVQLTNINVV PFGIWQQV DK
NLRFMILMDGVHP EMDTCIIVEYKGHKILNIVDCTRPNGGRLPMKVALMMSDFAGGASGFPMTFSGGKFTEEWKA
QFIKTERKKLLNYKARLVKNLQPRIYCPFAGYFVESHP SDKYIKETNTKNDPNELNNLIKKNSDVITWTPRPGAT
LDLGRMLKDR TDSKGIIEPPEGTKIYKDSWDFEPYLEILNAALGDEIFLHSSWIKEYFTWAGFKDYNLVVRMIET
DEDFNPFPGGYDYLVD FLDLSFPKERPQREHPYEEIHSRVDVIRHVVKNGLLWDELYIGFQTRLQRDPDIYHHLF
WNHFQIKLPLTPPNWKSFLMCCEQNGPAILQECKTT

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FIGURE 708

CCGGGGGGCATGAGGGTCCGAGACTTGTTCTTCTGTCCCTTCCAAGACCCGGCGACAGGAGGCATGAGGGGCCCC
CGGCCGAAATGACAGTGCTGGCGCCAGCCTGGAGCCCAACAACCTATCTCCTCCTGCTGCTGCTGCTGAGCTCGG
GACTCAGTGGGACCCAGGACTGCTCCTTCCAACACAGCCCCATCTCCTCCGACTTCGCTGTCAAAATCCGTGAGC
TGTCTGACTACCTGCTTCAAGATTACCCAGTCACCGTGGCCTCCAACCTGCAGGACGAGGAGCTCTGCGGGGGCC
TCTGGCGGCTGGTCCTGGCACAGCGCTGGATGGAGCGGCTCAAGACTGTCGCTGGGTCCAAGATGCAAGGCTTGC
TGGAGCGCGTGAACACGGAGATACACTTTGTACCAAATGTGCCTTTCAGCCCCCCCCCAGCTGTCTTCGCTTCG
TCCAGACCAACATCTCCCGCCTCCTGCAGGAGACCTCCGAGCAGCTGGTGGCGCTGAAGCCCTGGATCACTCGCC
AGAACTTCTCCCGGTGCCTGGAGCTGCAGTGTGAGCCGACTCCTCAACCCTGCCACCCCCATGGAGTCCCCGGC
CCCTGGAGGCCACAGCCCCGACAGCCCCGAGCCCCCTCTGCTCCTCCTACTGCTGCTGCCCGTGGGCCTCCTGC
TGCTGGCCGCTGCCTGGTGCCTGCACTGGCAGAGGACGCGGCGGAGGACACCCCGCCCTGGGGAGCAGGTGCCCC
CCGTCCCCAGTCCCCAGGACCTGCTGCTTGTGGAGCACTTGACCTGGCCAAGGCCTCATCCTGCGGAGCCTTAAAC
AACGCAGTGAGACAGACATCTATCATCCCATTTTACAGGGGAGGATACTGAGGCACACAGAGGGGAGTCACCAGC
CAGAGGATGTATAGCCTGGACACAGAGGAAGTTGGCTAGAGGCCGGTCCCTTCCTTGGGGCCCCCTCTCATTCCCTC
CCCAGAATGGAGGCAACGCCAGAATCCAGCACCGGCCCCATTTACCCAACCTCTGAACAAAGCCCTTGCCCCCATG
AAATTGTTTATAAATCATCCTTTTCTCCCA

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FIGURE 709

MTVLAPAWSPTTYLLLLLLLLSSGLSGTQDCSFQHSPISSDFAVKIRELSDYLLQDYPVTVASNLQDEELCGGLWR
LVLAQRWMERLKTVAGSKMQGLLERVNTIEHFVTKCAFQPPPSCLRFVQTNISRLLQETSEQLVALKPWITRQNF
SRCLELQCQPDSSTLPPPWSRPLEATAPTAPQPPLLLLLLLPVGLLLAAAWCLHWQTRRRTPRPGEQVPPVP
SPQDLLLVEH

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FIGURE 710

GCGCCTGGCCTATTGAAGGTTTTTAATCTTCAGAGTTTCGACTTTATCAACAACACTTAGAAGCCACCAAAGAAT
TGCAGATGGATCCTAATAGAATATCAGAAGATGGCACTCACTGCATTTATAGAATTTTGAGACTCCATGAAAATG
CAGATTTTCAAGACACAACCTCTGGAGAGTCAAGATACAAAATTAATACCTGATTCATGTAGGAGAATTAACAGG
CCTTTCAAGGAGCTGTGCAAAAGGAATTACAACATATCGTTGGATCACAGCACATCAGAGCAGAGAAAGCGATGG
TGGATGGCTCATGGTTAGATCTGGCCAAGAGGAGCAAGCTTGAAGCTCAGCCTTTTGCTCATCTCACTATTAATG
CCACCGACATCCCATCTGGTTCCCATAAAGTGAGTCTGTCTCTTGGTACCATGATCGGGGTGGGCCAAGATCT
CCAACATGACTTTTAGCAATGGAAAATAAGTTAATCAGGATGGCTTTTATTACCTGTATGCCAACATTTGCT
TTCGACATCATGAACTTCAGGAGACCTAGCTACAGAGTATCTTCAACTAATGGTGTACGTCCTAAACCAGCA
TCAAAATCCCAAGTTCTCATACCTGATGAAAGGAGGAAGCACCAAGTATTGGTCAGGGAATTCTGAATTCATT
TTTATTCCATAAACGTTGGTGGATTTTTTAAGTTACGGTCTGGAGAGGAAATCAGCATCGAGGTCTCCAACCCCT
CCTTACTGGATCCGGATCAGGATGCAACATACTTTGGGGCTTTTAAAGTTTCGAGATATAGATTGAGCCCCAGTTT
TTGGAGTGTTATGTATTTCTGGATGTTTGGAACATTTTTTAAAACAAGCCAAGAAAGATGTATATAGGTGTGT
GAGACTACTAAGAGGCATGGCCCCAACGGTACACGACTCAGTATCCATGCTCTTGACCTGTAGAGAACACGCGT
ATTTACAGCCAGTGGGAGATGTTAGACTCATGGTGTGTTACACAATGGTTTTTAAATTTTGTAAATGAATTCCTAG
AATTAACAGATTGGAGCAATTACGGGTTGACCTTATGAGAACTGCATGTGGGCTATGGGAGGGGTTGGTCCC
TGGTCATGTGCCCCCTTCGCAGCTGAAGTGGAGAGGGTGTCTATCTAGCGCAATTGAAGGATCATCTGAAGGGGCAA
ATTCTTTTGAATTGTTACATCATGCTGGAACCTGCAAAAAATACTTTTTCTAATGAGGAGAGAAAATATATGTAT
TTTTATATAATATCTAAAGTTATATTTTCAGATGTAATGTTTTCTTTGCAAAGTATTGTAAATTATATTTGTGCTA
TAGTATTTGATTCAAAATATTTAAAAATGTCTTGCTGTTGACATATTTAATGTTTTAAATGTACAGACATATTTA
ACTGGTGCACTTTGTAATTCCTGGGGAAAACCTTGCAAGCTAAGGAGGGGAAAAAAATGTTGTTTCCTAATATCA
AATGCAGTATATTTCTTCGTTCTTTTTAAGTTAATAGATTTTTTCAGACTTGTCAAGCCTGTGCAAAAAAATTAA
AATGGATGCCTTGAATAATAAGCAGGATGTTGGCCACCAGGTGCCTTTCAAATTTAGAACTAATTGACTTTAGA
AAGCTGACATTGCCAAAAGGATACATAATGGGCCACTGAAATCTGTCAAGAGTAGTTATATAATTGTTGAACAG
GTGTTTTTCCACAAGTGCCGCAAATTGTACCTTTTTTGTGTTTTTCAAATAGAAAAGTTATTAGTGGTTTTATCAG
CAAAAAGTCCAATTTAATTTAGTAAATGTTATCTTATACTGTACAATAAAAACATTGCCTTTGAATGTTAATT
TTTTGGTACAAAAATAAATTTATATGAAAACCTGAAAAAAAAAAAAAAAAAAAAA

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FIGURE 711

MDPNRISEDGTHCIYRILRLHENADFQDTTLESQDTKLIPDSCRRIKQAFQGAVQKELQHIVGSQHIRAEKAMVD
GSWLDLAKRSKLEAQPF AHL TINATDIPSGSHKVSLSWYHDRGWAKISNMTFSNGKLIVNQDGFYYLYANICFR
HHETSGDLATEYLQLMVYVTKTSIKIPSSHTLMKGGSTKYWSGNSEFHFYSINVGGFFKLRSGEESIEVSNPSL
LDPDQDATYFGAFKVRDID

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FIGURE 712

CTGGGGGTCCGTTCCCCAACTTCTCGGCGCTCCGGACTCCCAAGTCTCCGCCGGACCTCCTTTGGATATTCCCT
CGTGTCTCCGATTCTGAGAGAGGGGGGAAGACGGTGGGGCCTCCCCACCTGCCCCGCAGAAAGATGCAGTTCTTTGG
CCGCCTGGTCAATACCTTCAGTGGCGTCACCAACTTGTTCTCTAACCATTCCGGGTGAAGGAGGTGGCTGTGGC
CGACTACACCTCGAGTGACCGAGTTTCGGGAGGAAGGGCAGCTGATTCTGTTCCAGAACACTCCCAACCGCACCTG
GGACTGCGTCTGGTCAACCCCCAGGAACTCACAGAGTGGATTCCGACTCTTCCAGCTGGAGTTGGAGGCTGACGC
CCTAGTGAATTTCCATCAGTATTCTTCCCAGCTGCTACCCCTTCTATGAGAGCTCCCCCTCAGGTCTGCACACTGA
GGTCTGTCAGCACCTGACCGACCTCATCCGTAACCACCCAGCTGGTCAGTGGCCCCACCTGGCTGTGGAGCTAGG
GATCCGCGAGTGCTTCCATCACAGCCGTATCATCAGCTGTGCCAATTGCGCGGAGAACGAGGAGGGCTGCACACC
CCTGCACCTGGCCTGCCGCAAGGGTGATGGGGAGATCCTGGTGGAGCTGGTGCAGTACTGCCACACTCAGATGGA
TGTACCGACTACAAGGGAGAGACCGTCTTCCATTATGCTGTCCAGGGTGACAATTCTCAGGTGCTGCAGCTCCT
TGGAAGGAACGCAGTGGCTGGCCTGAACCAGGTGAATAACCAAGGGCTGACCCCGCTGCACCTGGCCTGCCAGCT
GGGGAAGCAGGAGATGGTCCGCGTGCTGCTGTGCAATGCTCGGTGCAACATCATGGGCCCCAACGGCTACCC
CATCCACTCGGCCATGAAGTTCTCTCAGAAGGGGTGTGCGGAGATGATCATCAGCATGGACAGCAGCCAGATCCA
CAGCAAAGACCCCCGTTACGGAGCCAGCCCCCTCCACTGGGCCAAGAACGCAGAGATGGCCCGCATGCTGTGTA
ACGGGGCTGCAACGTGAACAGCACCAGCTCCGCGGGGAACACGGCCCTGCACGTGGCGGTGATGCGCAACCGCTT
CGACTGTGCCATAGTGCTGCTGACCCACGGGGCCAACGCGGATGCCGCGGAGAGCACGGCAACACCCCGCTGCA
CCTGGCCATGTGAAAGACAACGTGGAGATGATCAAGGCCCTCATCGTGTTCGGAGCAGAAGTGGACACCCCGAA
TGACTTTGGGGAGACTCCTACATTCCTAGCCTCCAAAATCGGCAGACTTGTACCAGGAAGGCGATCTTGACTCT
GCTGAGAACCGTGGGGGCCGAATACTGCTTCCCACCCATCCACGGGGTCCCCGCGGAGCAGGGCTCTGCAGCGCC
ACATCATCCCTTCTCCCTGGAAAGAGCTCAGCCCCACCGATCAGCCTAAACAACCTAGAACTACAGGATCTCAT
GCACATCTCACGGGCCCCGGAAGCCAGCGTTTCATCTGGGCTCCATGAGGGACGAGAAGCGGACCCACGACCACCT
GCTGTGCCTGGATGGAGGAGGAGTGAAGGCCTCATCATCATCCAGCTCCTCATCGCCATCGAGAAGGCCTCGGG
TGTGGCCACCAAGGACCTGTTTGACTGGGTGGCGGGCACCAGCACTGGAGGCATCCTGGCCCTGGCCATTCTGCA
CAGTAAGTCCATGGCCTACATGCGCGGCATGTACTTTTCGCATGAAGGATGAGGTGTTCCGGGGCTCCAGGCCCTA
CGAGTCGGGGCCCCCTGGAGGAGTTCTGAAAGCGGGAGTTTGGGGAGCACACCAAGATGACGGACGTGAGGAAACC
CAAGGTGATGCTGACAGGGACACTGTCTGACCGGCAGCCGGCTGAACTCCACCTCTTCCGGAACCTACGATGCTCC
AGAAACTGTCCGGGAGCCTCGTTTCAACCAGAACGTTAACCTCAGGCCTCCAGCTCAGCCCTCAGACCAGCTGGT
GTGGCGGGCGGCCCGAAGCAGCGGGGCAGCTCCTACTTACTTCCGACCCAATGGGCGCTTCTGGACGGTGGGCT
GCTGGCCAACAACCCACGCTGGATGCCATGACCGAGATCCATGAGTACAATCAGGACCTGATCCGCAAGGGTCA
GGCCAACAAGGTGAAGAACTCTCCATCGTTGTCTCCCTGGGGACAGGGAGGTCCCCACAAGTGCTGTGACCTG
TGTGGATGTCTTCCGTCCCAGCAACCCCTGGGAGCTGGCCAAGACTGTTTTTGGGGCCAAGGAACTGGGCAAGAT
GGTGGTGGACTGTTGCACGGATCCAGACGGGCGGGCTGTGGACCGGGCACGGGCTGGTGCAGATGGTTCGGCAT
CCAGTACTTCAGATTGAACCCCGAGCTGGGGACGGACATCATGCTGGATGAGGTGAGTGCACAGTGTGCTCAA
CGCCCTCTGGGAGACCGAGGTCTACATCTATGAGCACGCGAGGAGTTCCAGAAGCTCATCCACCTGCTGCTCTC
ACCCTGAGGGTCCCCAGCCTCTCACCGGCCCCAGCTGACCTCGTCCATTAGCCCTGCCAGGCCAAGCCAGCC
ACTGCCCTCCCGGGCAGATCTGGGCCCAGGCACCTCTGAGTCCATAGACCAGGCCTGGGAGAAAGCCAAGCTGCC
TGCCCGAGGCTGGTCTGAAAGGCCTGTCTCCACTAACCCCCCTTCCATCACTTTCTGTGTCATGCCAGGXTGGGA
AAGTCTAGAGCCCCCTTTGGCCCCCTTCCCTGACTGTCAAGGACAACCTGACTCCCCCATCAGCTCAAACATTAAG
GGTACCCGGGCACAACCGTACCCGTGCCCCCAGCCCCAGCCTACCCCTGAGGGCCTGCCGGGGTGCCTTTGCCCCA
GCCCCAGCAAGGGCATTCCAGGCTTCCCTGGTGGGTGCAGCCCAATCCCTCTGCCCTCTGCTCCGTTCCCTGGG
GGCTGGGACTAAAGAAATGGGTGTCCCCCACCCTCATCAGCTGGGAAAGCCCAGGCCGAGGAGTGGGATGCCCGT
TGGACTTTGCCCTTCACACTGGCCCAGCCCCCTCACACTGCCCCACCCCGAGAACCCTCAGCTCTCAAAGGTCACT
CCTGGGAGTTTCTTCTTCCCAATGGAAGTGGCTTAAGAGCCAAAACCTGAAATAAATCATTTGGATTCAAGTTCAA
AAAAAAAAAAAAAA

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FIGURE 713

MQFFGRLVNTFSGVTNLF SNPFRVKEVAVADYTSSDRVREEGQLILFQNTPNRTWDCVLVNPRNSQSGFRLFQLE
LEADALVNFHQYSSQLLPFYESSPQVLHTEVLQHLTDLIRNHPSWSVAHLAVELGIRECFHHSRIISCANCAENE
EGCTPLHLACRKGDGEILVELVQYCHTQMDVTDYKGETVFHYAVQGDNSQVLQLLGRNAVAGLNQVNNQGLTPLH
LACQLGKQEMVRVLLLCNARNIMGPNGYPIHSAMKFSQKGCAEMIISMDSSQIHSKDPYRGASPLHWAKNAEMA
RMLLKRGCVNSTSSAGNTALHVAVMRNRFDCAIVLLTHGANADARGEHGNTPLHLAMSKDNVEMIKALIVFGAE
VDTPNDFGETPTFLASKIGRLVTRKAILTLLRTVGAEYCFPIHGVPAEQGSAAPHHPFSLERAQPPPISLNNLE
LQDLMHISRARKPAFILGSMRDEKRTHDHLCLDGGGVKGLIIIIQLLIAIEKASGVATKDLFDWVAGTSTGGILA
LAILHKSMAVMRGMVFRMKDEVFRGSRPYESGPLEEFLKREFGEHTKMTDVRKPKVMLTGTLSDRQPAELHLFR
NYDAPETVREPRFNQNVNLRPPAQPSDQLVWRAARSSGAAPTYFRPNGRFLDGGLLANNPTILDAMTEIHEYNOQL
IRKGQANKVKKLSIVVSLGTGRSPQVPVTCVDVFRPSNPWELAKTVFGAKELGKMVVDCCCTDPPDGRAVDRARAWC
EMVGIIQYFRLNPQLGTDIMLDEVSDTVLVNALWETEVYIYEHREEFQKLIHLLLSP

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FIGURE 714

TAAAACTTTAGGAAATTAGTACCAGACTTTTATATTGGTCAACAGCAAATGAACATTACTACTCAGCCTCCAAC
ACATGCAGTTTGCCTATACCAGGGATCCTGTCAAAATATACACCACTTATAGCTTCTTAAGTGCAGTTATCATAG
AGCACAGTCCCTGACATCACACAGCTGCAGAGATGAATAAAACAAAGAGGAACCTACTCAGAAGTGAGTCTGGCCC
AGGACCCAAAGAGGCAGCAAAGGAACTTAAGGGCAATAAAATCTCCATTTCAGGAACCAAACAGGAAATATTCC
AAGTAGAATTAAACCTTCAAATGCTTCTTCGGATCATCAAGGGAATGACAAGACATATCACTGCAAAGGTTTAC
TGCCACCTCCAGAGAAGCTCACTGCTGAGGTCTTAGGAATCATTTCATTGTCCTGATGGCCACTGTGTTAAAAA
CAATAGTTCTTATTCTTGTATTGGAGTACTGGAGCAGAAACAATTTTCCCTGAATAGAAGAATGCAGAAAGCAC
GTCATTGTGGCCATTGTCCTGAGGAGTGGATTACATATTCCAACAGTTGTTATTACATTGGTAAGGAAAGAAGAA
CTTGGAAGAAAGAGTTTGCTGGCCTGTGCTTCGAAGAACTCTGATCTGCTTTCTATAGATAATGAGGAAGAAAT
GGTAAGACGTAAATGTTTCAACACTTTACTAAAAGCTTATTTCTGTCAATATCATATTTGTAGAAATCATCCATA
TGTTTATACATATATTTACTTCATATATTTTAAAGTCTGTGTAGTATTCAACTGACTTCATAATATTTTATATT
CATATACTGTTAATGCACATTTGGTTATTTCCAGTTTGTCTTTTCATGGAAACCCATGCTTCTATAAATGTTTTT
ATCACAAAATAAATATAAAGAAAACATAAAAAAAAAACCAAAAAAAAAAAAAAAAAAAGGCGGCCGCGATATAG

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FIGURE 715

MNKQRGTYSEVSLAQDPKRQQRKLKGNKISISGTKQEIQVELNLQNASSDHQGNDKTYHCKGLLPPEKLTAEV
LGIICIVLMATVLKTIVLIPCIGVLEQNNFSLNRRMQKARHCGHCPEEWITYSNSCYIIGKERRTWEERVCPVL
RRTLICFL

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FIGURE 716

GAATTCGATTTTTGAGACTTCTCCATCGGGATCGCCTGGTGTACCAAGTGTCCACTGGTACTGAGGTTTGCTGC
CTGCCTTCTTGCCATGTCTAACGAAGTAGAAACAAGTGCAACCAATGGTCAGCCCGACCAACAGGCCGCACCAAA
AGCACCTCAAAGAAGGAAAAAAGAAAGGCCCTGAAAAGACAGATGAATATCTCTTAGCAAGGTTCAAAGGCCGA
TGGTGTAAATATAAGGCCAAGCTGATTGGCATTGATGATGTGCCAGATGCAAGAGGGGATAAAATGAGCCAAGA
CTCTATGATGAACTAAAGGGAATGGCGGCAGCTGGTCGGTCTCAGGGACAACACAAACAAAGGATCTGGGTCAA
CATTTCCCTTTCTGGGATAAAAAATAATTGATGAGAAAACCTGGGGTAATAGAGCATGAACATCCAGTAAATAAGAT
TTCTTTTCATTGCCCCGTGATGTGACAGACAACCGGGCATTGGTTACGTGTGTGGAGGAGAAGGCCAGCATCAGTT
TTTTGCCATAAAACCGGGCAACAGGCTGAACCATTAGTTGTTGATCTTAAAGACCTTTTTCAAGTTATCTATAA
TGTAAGAAAAAGGAAGAAGAAAAAGATAAGAGGAAGCCAGCAAAGCAGTTGAGAATGGGAGTGAGGCCCT
AATGATTCTAGATGACCAAACTAACAACTGAAATCGGAAAGCAAAGATATCCTGTTAGTGATCTAACTCTGA
AATCGACACCAATCAGAATTCCTTAAGAGAAAATCCATTCTTAACAAACGGCATCACCTCCTGTTCTCTTCCTCG
ACCAACGCCTCAGGCATCCTTCTTGCTGAAAATGCCTTTTCTGCCAATCTCAACTTCTTTCCACCCCTAATCC
TGATCCTTTCCGTGACGATCCTTTCACACAGCCAGACCAATCGACACCTTCTTCGTTGATTCTCTCAAATCTCC
AGATCAGAAGAAAGAGAATTCGAGTAGCTCGTCTACTCCGTGAGTAATGGGCCCCGTAATGGTGATGTTGACTA
CTTTGGTCAGCAATTTGACCAGATCTCTAACCGGACTGGCAAACAGGAAGCTCAGGCAGGCCCATGGCCCTTTTC
AAGTTCGCAAACCCAGCCAGCAGTGAGAACTCAAATGGGGTATCTGAAAGAGAACAGAACGGCTTCTCTGTCAA
ATCCTCCCCGAACCTTTTGTGGGAAGCCCTCCCAAAGGACTGTCCATACAGAATGGCGTAAAGCAGGACTTGGA
AAGCTCTGTCCAGTCTCACCACATGACTCCATAGCCATTATCCCACCTCCACAAAGTACCAAACCAGGAAGAGG
CAGAAGGACTGCTAAGTCTTCAGCCAATGACTTGCTTGCATCAGACATCTTTGCTCCTCCCGTCTCAGAACCTTC
AGGCCAGGCGTCACCCACAGGACAACCTACAGCCCTGCAGCCCAACCTCTGGATCTCTCAAACAAGTGCTCC
TGCCCCAGTGGGGCCCCAGGTGGGTCTAGGTGGTGTAACTGTCACTTCTCAGGCAGGACCATGGAACACAGC
ATCTTTGGTCTTCAATCAGTCCCCCTCAATGGCTCCGGGAGCCATGATGGGTGGTCAACCTTCAGGTTTTAGTCA
GCCCCGTCATTTTGGTACAAGTCCAGCTGTTTCAGGTTGGAACCAGCCTTCACCCCTTGACGCTCAACTCCCCC
TCCAGTGCCTGTTGTCTGGGGCCCTTCTGCATCTGTGGCACCAATGCTTGGTCAACAACAAGCCCTTTGGGGAA
TCCTTTTCAGAGCAATATTTTCCAGCTCCTGCTGTGTCCACTCAGCCCCCATCCATGCATCCTCTCTCCTGGT
CACTCCTCCTCAGCCACCTCCCAGAGCTGGCCCTCCCAAGGACATCTCCAGTGATGCCTTCACTGCCTTAGACCC
ACTTGGGGATAAAGAGATCAAGGATGTGAAAGAAATGTTTAAAGGATTTCCAACCTGCGGCAGCCACCTGCTGTGCC
CGCGCGGAAGGGAGAGCAGACTTCTTCTGGGACTTTGAGTGCCCTTGCCAGTTATTTCAACAGCAAGGTTGGCAT
TCCTCAGGAGAATGCAGACCATGATGACTTTGATGCTAATCAACTATTGAACAAGATCAATGAACCACCAAAGCC
AGCTCCCAGACAAGTTTCCCTGCCAGTTACCAAATCTACTGACAATGCATTTGAGAACCCTTTCTTTAAAGATTC
TTTTGGTTCAACAAAGCCTCTGTGGCTTCTTCTCAACCTGTATCTTCTGAGATGTATAGGGATCCATTTGGAAA
TCCTTTTGCCATAAATTCTGAACTTGGTCTGCAGACCATCCAGAGGAATAAAAAGGTTGGCCTTAGTAGTCAAAAA
CAAAGCTGATAGCCAGACACGTTCTGATTTCTGCCCTTGTTCCAGCTTTGACGTATTATCTGTTGCCTTATTTCT
CATTGCCTCTTCTACTTGTAATAATGCTTTTCACTTTCTGTCTAGGTTAAAGCTAAACTGAATCTATGGCTTTAAA
TAAATTAAGATCCTAACTCTCTAGCTTAAGTGTAATGAAGTACAGTAGTTTCCCTACTGAACCCTGCCTCTTG
TGTCCCTGGAACCTTCTAGAACACCTGCCTTCTACCCTCTGGTTGGGAGATGCAGCCACCACATCCCTTCATATC
ATACTGTTTTGAATAAATTTCAAATCCTTAAAAA

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FIGURE 717

MSNEVETSATNGQPDQQAAPKAPSKKEKKKGPEKTDEYLLARFKGDGVKYKAKLIGIDDDVPDARGDKMSQDSMMK
LKGMAAAGRSQGQHKQRIWVNISLSGIKIIDEKTGVIEHEHPVNKISFIARDVTDNRAFGYVCGGEGQHQFFAIK
TGQQAEPPLVVDLKDLEFQVIYNVKKKEEEKKIEEASKAVENGSEALMILDDQTNKLKSESKDILLVDLNSEIDTN
QNSLRENPFLLTNGITSCSLPRPTPQASFLPENAFSANLNFFPTPNPDFFRDDPFTQPDQSTPSSFDLSPDQKK
ENSSSSSTPLSNGPLNGDVDFGQQFDQISNRTGKQEAQAGPWPFSSSQTPAVRTQNGVSEREQNGFSVKSSPN
PFVGSPPKGLSIQNGVKQDLESSVQSSPHDSIAIIPPPQSTKPGRGRRTAKSSANDLLASDIFAPPVSEPSGQAS
PTGQPTALQPNPLDLFKTSAPAPVGPQVGLGGVTITLPQAGPWNTASLVFNQSPSMAPGAMMGQPSGFSQPVIF
GTSPAVSGWNQPSPFPAASTPPPVVWGPSASVAPNAWSTTSPLGNPFQSNIFPAPAVSTQPPSMHSSLLVTPPQ
PPPRAGPPKDISSDAFTALDPLGDKEIKDVKEMFKDFQLRQPPAVPARKGEQTSSGTLFAFASYFNKVGIPQEN
ADHDDFDANQLLNKINEPPKPAPRQVSLPVTKSTDNAFENPFFKDSFGSSQASVASSQPVSSSEMYRDPFGNPFA

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FIGURE 718

GTCGCGCCATTTTGCCGGGGTTTGAATGTGAGGCGGAGCGGCGGAGCGGATAGTGCCAGCTACGGTCCGCG
GCTGGGGTTCCCTCCTCCGTTTCTGTATCCCCACGAGATCCTATAGCAATGGAACTCAGCGATGCAAATCTGCAA
ACACTAACAGAATATTTAAAGAAAACACTTGATCCTGATCCTGCCATCCGACGTCCAGCTGAGAAAATTTCTTGAA
TCTGTTGAAGGAAATCAGAATTATCCACTGTTGCTTTTGACATTACTGGAGAAGTCCCAGGATAATGTTATCAAA
GTATGTGCTTCAGTAACATTCAAAAACATATATTTAAAGGAACTGGAGAATTGTTGAAGATGAACCAACAAAAT
TGTGAAGCCGATCGAGTGGCCATTAAAGCCAACATAGTGCACCTGATGCTTAGCAGCCCAGAGCAAATTCAGAAG
CAGTTAAGTGATGCAATTAGCATTATTGGCAGAGAAGATTTCCACAGAAATGGCCTGACTTGCTGACAGAAATG
GTGAATCGCTTTAGAGTGGAGATTTCCATGTTATTAATGGAGTCCCTCCGTACAGCACATTATTATTTAAAGA
TACCGTCATGAATTTAAGTCAAACGAGTTATGGACTGAAATTAAGCTTGTTCTGGATGCCTTTGCTTTGCCTTTG
ACTAATCTTTTAAAGGCCACTATTGAACTCTGCAGTACCCATGCAAATGATGCCTCTGCCCTGAGGATTCTGTTT
TCTTCCCTGATCCTGATCTCAAAATTTGTTCTATAGTTTAACTTTTCAGGATCTCCCTGAATTTTGGGAAGGTAAT
ATGGAACTTGGATGAATAATTTCCATACTCTCTTAACATTGGATAATAAGCTTTTACAACTGATGATGAAGAG
GAAGCCGGCTTATTGGAGCTCTTAAATCCAGATTGTGTATAATGCCGCACTCTATGCACAAAAGTACGATGAA
GAATTCAGCGATACCTGCCTCGTTTTGTTACAGCCATCTGGAATTTACTAGTTACAACGGGTCAAGAGGTTAA
TATGATTTGTTGGTAAGTAATGCAATTCATTTCTGGCTTCAGTTTGTGAGAGACCTCATTATAAGAATCTATTT
GAGGACCAGAACACGCTGACAAGTATCTGTGAAAAGGTTATTGTGCCTAACATGGAATTTAGAGCTGCTGATGAA
GAAGCATTTGAAGATAATTTCTGAGGAGTACATAAGGAGAGATTGGAAAGGATCTGATATTGATACTAGACGCAGG
GCTGCTTGTGATCTGGTACGAGGATTATGCAAGTTTTTTGAGGGACCTGTGACAGGAATCTTCTCTGGTTATGTT
AATTCATGCTGCAGGAATACGCAAAAAATCCATCTGTCAACTGGAAACACAAAGATGCAGCCATCTACCTAGTG
ACATCTTTGGCATCAAAAGCCCCAAACACAGAAGCATGGAATTACACAAGCAAATGAACTTGTAACCTAACTGAG
TTCTTTGTGAATCAGATCCTCCCTGATTTAAATCAGCTAATGTGAATGAATTTTCTGTCTTAAAGCTGACGGT
ATCAATATATTATGATTTTATAGAAATCAAGTGCCAAAGAACATCTTTAGTCTCGATTCTCTCTTGATTAAT
CATCTTCAAGCTGGAAGTATTGTTGTTTCATACTTACGCAGCTCATGCTCTTGAACGGCTCTTTACTATGCGAGGG
CCTAACAAATGCCACTCTCTTACAGCTGCAGAAATCGCACCGTTTGTGAGATTCTGCTAACAAACCTTTTCAA
GCTCTCACACTTCTGGCTCTTCAGAAAATGAATATATTATGAAAGCTATCATGAGAAGTTTTTCTCTCTACAA
GAAGCCATAATCCCCTACATCCCTACTCTCATCACTCAGCTTACACAGAAGCTATTAGCTGTTAGTAAGAACCCA
AGCAAACCTCACTTTAATCACTACATGTTTGAAGCAATATGTTTATCCATAAGAATAACTTGCAAAGCTAACCC
GCTGCTGTTGTAAATTTTGAAGGAGGCTTTGTTTTTGGTGTCTTACTGAAATCTTACAAAATGATGTGCAAGAATTT
ATTCCATACGTCTTTCAAGTGATGCTTTGCTTCTGGAACACACAAAAATGACATCCCGTCTTCTATATGGCC
TTATTTCTCATCTCCTTCAGCCAGTGCTTTGGGAAAGAACAGGAAATATTCCTGCTCTAGTGAGGCTTCTTCAA
GCATTCTTAGAACGCGGTTCAAACACAATAGCAAGTGCTGCAGCTGACAAAATTCCTGGGTTACTAGGTGTCTTT
CAGAAGCTGATTGCATCCAAAGCAAATGACCACCAAGGTTTTTATCTTCTAAACAGTATAATAGAGCACATGCCT
CCTGAATCAGTTGACCAATATAGGAAACAAATCTTCATTCTGCTATTCCAGAGACTTCAGAATTCAAAACAACC
AAGTTTATCAAGAGTTTTTTAGTCTTTATTAATTTGTATTGCATAAAATATGGGGCACTAGCACTACAAGAAATA
TTTGATGGTATACAACCAAAAATGTTTGGAAATGGTTTTTGGAAAAAATTATTATTCCTGAAATTCAGAAGGTATCT
GGAAATGTAGAGAAAAAGATCTGTGCGGTTGGCATAACCAACTTACTAACAGAATGTCCCCCAATGATGGACACT
GAGTATACAAAACGTGGACTCCATTATTACAGTCTTTGATTGGTCTTTTTGAGTTACCCGAAGATGATACCATT
CCTGATGAGGAACATTTTATTGACATAGAAGATACACCAGGATATCAGACTGCCTTCTCACAGTTGGCATTGCT
GGGAAAAAAGAGCATGATCCTGTAGGTCAAATGGTGAATAACCCCAAAATTCACCTGGCACAGTCACTTCACATG
TTGTCTACCGCTGTCCAGGAAGGGTTCCATCAATGGTGAGCACCAGCCTGAATGCAGAAGCGCTCCAGTATCTC
CAAGGGTACCTTCAGGCAGCCAGTGTGACACTGCTTTAAACTGCATTTTTCTAATGGGCTAAACCCAGATGGTTT
CCTAGGAAATCACAGGCTTCTGAGCACAGCTGCATTAAACAAAGGAAGTTTTCTTTTGAACCTTGTCACGA

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FIGURE 719

MELSDANLQTLTEYLKKTLDPDPAIRRPAAEFLESVEGNQNYPLLLLTLLLEKSQDNVIKVCASVTFKNIKRNWR
IVEDEPNKICEADRVAIKANIVHMLSSPEQIQKQLSDAISIIIGREDFPQKWPDLITEMVNRFAQSGDFHVGVL
RTAHSLEFKRYRHEFKSNELWTEIKLVLDALPLTNLFKATIELCSTHANDASALRILFSSLILISKLFYSLNFQ
DLPEFWEGNMETWMNNFHTLLTLDNKLLQTDDEEEAGLLELLKSQICDNAALYAQKYDEEFQRYLPRFVTAIWNL
LVTTGQEVKYDLLVSNAIQFLASVCERPHYKNLFEDQNTLTSICEKVIVPNMEFRAADEEAFEDNSEEYIRRDLE
GSDIDTRRRRAACDLVRGLCKFFEGPVTGIFSGYVNSMLQEYAKNP SVNWKHKDAAIYLVTSLASKAQTQKHGITO
ANELVNLTEFFVNHILPDLKSANVNEFPVLKADGIKYIMIFRNQVPKEHLLVSIPLLINHLQAGSIVVHTYAHA
LERLFTMRGPNNATLFTAAEIAFPVEILLTNLFKALTLPGSSENEYIMKAIMRSFSLQEAIPYIPTLITQLTQ
KLLAVSKNPSKPHFNHYMFEAICLSIRITCKANPAAVNFEALFLVFTEILQNDVQEFIPYVFQVMSLLLETHK
NDIPSSYMALEFPHLLQPVWLWERTGNIPALVRLQAFLEGRSNTIASAAADKIPGLLGVFQKLIASKANDHQGYL
LNSIIEHMPPEVDQYRKQIFILLFQRLQNSKTTKFISFLVFINLYCIKYGALALQEIFDGIQPKMFGMVLEKI
IPEIQKVSNGVEKKICAVGITNLLTECPPMMDTEYTKLWTPLLQSLIGLFELPEDDTIPDEEHFIDIEDTPGYQ
TAFSQLAFAGKKEHDPVGMVNNPKIHLAQSLHMLSTACPGRVPSMVSTSLNAEALQYLQGYLQAASVTLL

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FIGURE 720A

CCGTCCCGGGGCGGACGGGCGCGGGCGGGAGGATGGAGCTGAACTCCCTGCTGATCCTGCTGGAGGCGGCCGAGT
ACCTGGAGCGCAGGGATCGAGAGGCCGAGCACGGCTACGCCTCGGTGCTGCCCTTCGACGGCGACTTCGCCAGGG
AGAAAACAAAGGCGGCCGGCCTGGTGC GCAAGGCCCCGAACAACAGGTCTTCACACAACGAGCTAGAAAAGCACA
GACGAGCCAACTCAGGCTGTACCTTGAGCAGCTCAAGCAACTGGTGGCCCTGGGCCCCGACAGCACCCGCCACA
CCACGCTGAGCCTCCTGAAGCGGGCCAAGGTGCACATCAAGAACTGGAGGAGCAGGACCGCCGGGCACTGAGCA
TCAAGGAGCAGCTGCAGCAGGAGCATCGTTTCCTGAAGCGGCGCCTGGAGCAGCTGTCGGTGCAGAGCGTGGAGC
GCGTGC GACAGATAGCACGGGCTCTGCTGTCTCCACGGACGACTCAGAGCAAGAAGTGGACATAGAGGGCATGG
AGTTTGGCCCTGGTGGAGCTGGACAGTGTGGCAGCAGCAGTGACGCGGACGACCACTACAGCCTGCAGAGTGGCA
CCGGCGGCGACAGTGGCTTCGGGCCCCACTGCCGGCGGCTGGGCGCCCCGCCCTCTCGTAGGCCCGTGCCCTCT
GCTCCTTGGCCTGCCTGCCGCCAGCCACGCGTGTGAGCCCTCCAGTTCTCCTTCAGTTGACGCCAGCCTCTCCA
CAGGCCCCACTGCTGTGCCATTCTGGAAGCTCCAGCTGCTGCTGGGCTGCCTGGCACTGCCCGCTTGCCGGTCAGG
GCCTGCCGAGCTGCCTGCCCTTCCAGCTGGGCAGAGTCCCTGCAAGGAGGCAGGGCCCAGCTTCCACATCCGG
AGCCCTGGTCAGCATAGCCGCCCACGGTCTGTTCTCAGATTCCATAATCATTCCAGAAGTATTAAACGTCATTGCT
GCAAACCTCGGCAGGTGCCGTGTGAGGGCTTAATGACCACCACAGGGAGCTCAGACCCCAACCTGGATCCCAG
GAGAAAGGAGTGGACCGAGGAAGGAAGGAAGGCAAGGCTGTCTGTCCATCCGTCCGTCTGTCCACCTACCTGTCA
GTCCACATAGGCTCCTGGCGTGGACAAGGGGTCTGTGAAGGGCGGGAAGTGGGTGAGCACCTGGGGCAGGTGGGT
GGTTAAGGTCCTTCCCACTTCGAGGTGTGAGAACCTAGGGCTGGGCTCTCGGGGCCAGGCAGGCCAGCCCAGCC
CACGCCGAGCTGGGCAGCGTCTGCTCTGGTAGGACTGTGAGACGCACACGCGCACGCACCTAGACACACCCACTC
ATGTACATGCTCACACATGCAGACACACCTGGGCGTCCCAGGTACATGTTCTGGGGATGATGGCCTTCAGGGG
TCATCTGGCAAACAGCCCCTGGGCTGTGCTGGATCCCCCTCTAGCTCCTGCTCAGCCAGCCCCACCCAGTAGTC
CTGCCTGTCTGCACAGGAGAGGGGCTTCTCTTCTGGCTGGGGCTGGGGTGAAGTGGAGGCTGGTTAAGTTGCAG
CCGCTGGGTCTCGGGGGCTTACTCATCTCCCTTTTTTAAACAAAAAGCAAAAAAGTAAATGCTGCACTGCCCA
GCAGCCCGGTTAGGGCTCCTGGAGCCACCTTAGGAAAGGGCTTCTCATGAGCTCTGCTGCGGCAGCTTCAGCTGG
CAGAGAGGCTTTCCAGAAAAAAGGCAACCAATTTTTTAAAGAAAGGCTTAAAGACTCTCGGCCCTAGGGA
CGTCCGTGTGTGCCGCTCTGTTTCTGTACCAGATTTTTGTATTCTATTTTCTAGCTGTTGTTGCGTCTCTGT
TTGCTGAGGGGTGGGAGCCACCCAGCGTCTCAGGGACCTGTCCCTCCGTACGTCGTCAAAGTGTGCCTTGTGTC
TTGTGTGAGGCCTTGCCCTTCCCACAGCATGTCCCTCGTGGCTCAGGGTGGCCAGGCCTGCCAGCTAGTGCT
GTCCTCCCATCTCCTGTGGGCAGCCCCCTCCCGGCAGCCAGGGCTTCTGGAGGCGATGCAGCCAGGCCCTGTGG
GTGGCACGGAGGGGCTGTGACCTGGTCCCCAGTGTGCCCCTCCCAGTGGCTGGCAGGGGCTGCTTGTCTACTA
GAGAGATGGATTCTCACCTGTACCTGACTCGAGCCCCCTGCTTCTGGCCTAGGCGAGGGTTCCAGGTTTCAGA
CACTGGCAGCCAATGAAGACTGTGCTCGCTGGGTGGTGCAGGCCTGGCACCAGGAGGCTTGACCCGCTTTCTCT
TCCTGACGTCCTCTGTCTTGGGGCTGGCCCATAGCAGTGCTGCGTGCCTCTGGTACATCTGTAGCCAATTCC
CATATCATGGGAAAATTCTGTGTCTATTTTCAGTCGTACGCATAGACGCCCCAGGATGGGGGGCCCACTGTGGCG
GAAGGGGTCCCTGGAAACAACCTTGGCACAGAACCTGCCCTGCAGGCTGTAGGGGGCATGGTGCCTGGAGCTGA
GGGGCATCCGAACGCGTTGCGGGTGGTTGTGAGGAGGCCTGTCTGCATCTCCTTCCGGCCCCACTGGGGTCCAGG
GGTGGCCAGAAAGGAGCTTCCCTTGCTGCTGAGTCTGTCCCCCAGGCTTCATTTCAAACACCGTGGCACCTC
CGAGCAAGGCGGGCCGTGTGTAAAAGCTTGCTTCCCCAGCCAGCACTGCAGGGCCCTGAGGTGGTCTGTCTCCTG
CCCTCAATTCTTGAAGCACAGCTCCCTGCCCCACCCTCCAGTGCCTGAGGCAGCTAGGGGGCTTCTGCTCTCATC
TCTGACCAGCAGAATCCACCCGGTGACCAGTGGTGGCCCCCTCAGCCCACCCTCCCGGCAGCTCAGCCTGTGGCTC
TTGAGGCCGTGGTTCCACGCTGGACTGGGAGGCAGTCTCAGCCACCCGGGTGCTGTTTACGCTGCCCCCTCCCTGC
CATCAGCAGGTGGGTGAGGGGTGCCCAGTGGGTGGGGGGCCGTGCTAGGAGTACACATGCTCCAACCTCCCA
CTGCTCCCTGTGAGGGGGCCAGGCTGCCATCACTGGAGGCTGCAGGGACCAAGAGGCCATCACCGTGTCTATAGA
GAGCAGACAGAAGCAGAACAGAGCCCCGGGGCTCCTGAGCCTCTGCGTGTGCCCTCCCAGCCACACCACTGCTCT
CGGCCACTGAGCACCCAGACTCAGGCTTGGGTTCCTCAGCCTTATTGGAAGGCAGCTCCCGCATACCAGGATAAC
CCCCGCAAACCATAGCAGACCCCCGCCATCTCGCAGAGTGGGAGAGGCTGCAGCAAGGCTTTGCCTCTGCAG
ACCCCATCTTAGTGGCACGGTGTGTTGGGCTGTGTCCCGGGTGGTGGAAACCCTGTACCGGTCTGTGGCCCTAGG
GTCCCTGCTCTGTCTGCCCCGGCCGTGCTGTCCGCTGGGTGAGGCAGGCTCCCCGTGCCCTGCCCTCCCTCTGT
CAGGGAACCTGGGACCCCCCTCCCCACTGCCTGCACAGAGGACCCTGACCCTCGGCCAGCAGGGTGGCCCCAGGTC

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FIGURE 720B

CATGTTGGGCACTAGGGCAGGTTCCGTGCCAGAGTCGGGGGCCACACGAGGGCCTGGTGCCGGTGAGGGGGGCGT
GCGCTAGAGGGGGAAAGGGGCCCCGGCCACCTGTCCACCGTGTGGGCCGTGCTGTGTCCTTATGTCATTGTAAT
ATAAATACAGATTTTTATATCTC

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FIGURE 721

MELNSLLILLEAAEYLERRDREAEGYASVLPFDGDFAREKTKAAGLVRKAPNNRSSHNELEKHRRAKLRRLYLEQ
LKQLVPLGPDSTRHTTLLKRAKVHIKKLEEQDRRALSIKEQLQQEHRFLKRRLEQLSVQSVERVRTDSTGSAV
STDDSEQEVDIEGMEFGPGELDSVGSSSDADDHYSLSQSGTGGDSGFGPHCRRLGRPALS

[illegible]

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FIGURE 723

MQQPFNYPYPQIYWVDSSASSPWAPPGTVLPCPTSVPRRPGQRRPPPPPPPPPLPPPPPPPLPPLPLPPLKKRG
NHSTGLCLLVMFFMVLVALVGLGLGMFQLFHLQKELAELESTSQMHTASSLEKQIGHPSPPPEKKELRKVAHLT
GKSNSRSMPLWEDTYGIVLLSGVKYKKGGLVINETGLYFVYSKVYFRGQSCNNLPLSHKVYMRNSKYPQDLVMM
EGKMSYCTTGQMWARSSYLGAFFNLTSADHLYVNVSELSLVNFEESQTFFGLYKL

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FIGURE 724

[illegible]

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FIGURE 725

MNMSVLTTLQEYEFKQFNENEAIQWMQENWKKSFLFSALYAAFIFGGRHLMNKRAKFELRKPLVLWSLTLAVFSI
FGALRTGAYMVYILMTKGLKQSVCDQGFYNGPVSKEWAYAFVLSKAPELGDTIFIILRKQKLIFLHWYHHITVLL
YSWYSYKDMVAGGGWFMTMNYGVHAVMYSYYALRAAGFRVSRKFAMFITLSQITQMLMGCVVNYLVFCWMQHDQC
HSHFQNIWFSSLMYLSYLVLFCHFFFEAYIGKMRKTTKAE

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FIGURE 726

GACGTTTCGCGCCAATTTTCGGTTGGCCGGCCACAGTCCACCGCGCGGAGATTCTCAGCTTCCCCAGGAGCAAGAC
CTCTGAGCCCGCCAAGCGCGGCCGCACGGCCCTCGGCAGCGATGGCACTGAAGGACTACGCGCTAGAGAAGGAAA
AGGTTAAGAAGTTCTTACAAGAGTTCTACCAGGATGATGAACTCGGGAAGAAGCAGTTCAAGTATGGGAACCAGT
TGGTTCGGCTGGCTCATCGGGAACAGGTGGCTCTGTATGTGGACCTGGACGACGTAGCCGAGGATGACCCCGAGT
TGGTGGACTCAATTTGTGAGAATGCCAGGCGCTACGCGAAGCTCTTTGCTGATGCCGTACAAGAGCTGCTGCCTC
AGTACAAGGAGAGGGAAGTGGTAAATAAAGATGTCCTGGACGTTTACATTGAGCATCGGCTAATGATGGAGCAGC
GGAGTCGGGACCCCTGGGATGGTCCGAAGCCCCCAGAACCAGTACCCTGCTGAACTCATGCGCAGATTTGAGCTGT
ATTTTCAAGGCCCTAGCAGCAGCAAGCCTCGTGTGATCCGGGAAGTGCGGGCTGACTCTGTGGGGAAGTTGGTAA
CTGTGCGTGGAAATCGTCACTCGTGTCTCTGAAGTCAAACCCAAGATGGTGGTGGCCACTTACACTTGTGACCAGT
GTGGGGCAGAGACCTACCAGCCGATCCAGTCTCCCACTTTTCATGCCTCTGATCATGTGCCAAGCCAGGAGTGCC
AAACCAACCGCTCAGGAGGGCGGCTGTATCTGCAGACACGGGGCTCCAGATTCATCAAATTCAGGAGATGAAGA
TGCAAGAACATAGTGATCAGGTGCCTGTGGGAAATATCCCTCGTAGTATCACGGTGTGGTAGAAGGAGAGAACA
CAAGGATTGCCCAGCCTGGAGACCACGTCAGCGTCACTGGTATTTTCTTGCCAATCCTGCGCACTGGGTTCCGAC
AGGTGGTACAGGGTTTACTCTCAGAAACCTACCTGGAAGCCCATCGGATTGTGAAGATGAACAAGAGTGAGGATG
ATGAGTCTGGGGCTGGAGAGCTCACCAGGGAGGAGCTGAGGCAAATTGCAGAGGAGGATTTCTACGAAAAGCTGG
CAGCTTCAATCGCCCCAGAAATATACGGGCATGAAGATGTGAAGAAGGCACTGCTGCTCCTGTAGTCGGGGGTG
TGGACCAGTCTCCTCGAGGCATGAAAATCCGGGGCAACATCAACATCTGTCTGATGGGGGATCCTGGTGTGGCCA
AGTCTCAGCTCCTGTACATATTGATCGACTGGCGCCTCGCAGCCAGTACACAACAGGCCGGGGCTCCTCAGGAG
TGGGGCTTACGGCAGCTGTGCTGAGAGACTCCGTGAGTGGAGAAGTACCTTAGAGGGTGGGGCCCTGGTGTGCTG
CTGACCAGGGTGTGTGCTGCATTGATGAGTTCGACAAGATGGCTGAGGCCGACCGCACAGCCATCCACGAGGTCA
TGGAGCAGCAGACCATCTCCATTGCCAAGGCCGGCATTCTCACCACACTCAATGCCCCTGCTCCATCCTGGCTG
CCGCCAACCTGCCTACGGGCGCTACAACCCTCGCCGCAGCCTGGAGCAGAACATACAGCTACCTGCTGCACTGC
TCTCCCGGTTTGACCTCCTCTGGCTGATTACAGGACCGGCCCGACCGAGACAATGACCTACGGTTGGCCCAGCACA
TCACCTATGTGCACCAGCACAGCCGGCAGCCCCCTCCAGTTTGAACCTCTGGACATGAAGCTCATGAGGCGTT
ACATAGCCATGTGCCGCGAGAAGCAGCCCAATGGTGCCAGAGTCTCTGGCTGACTACATCACAGCAGCATACGTGG
AGATGAGGCGAGAGGCTTGGGCTAGTAAGGATGCCACCTATACTTCTGCCCGGACCCCTGCTGGCTATCCTGCGCC
TTTCCACTGCTCTGGCACGTCTGAGAATGGTGGATGTGGTGGAGAAAGAAGATGTGAATGAAGCCATCAGGCTAA
TGGAGATGTCAAAGGACTCTCTTCTAGGAGACAAGGGGCAGACAGCTAGGACTCAGAGACCAGCAGATGTGATAT
TTGCCACCGTCCGTGAACTGGTCTCAGGGGGCCGAAGTGTCCGGTTCTCTGAGGCAGAGCAGCGCTGTGTATCTC
GTGGCTTACACCCGCCCAGTTCCAGGCGGCTCTGGATGAATATGAGGAGCTCAATGTCTGGCAGGTCAATGCTT
CCCGACACGGATCACTTTTTGTCTGATTCCAGCCTGCTTGCAACCCTGGGGTCTCTTGTTCCTGCTGGCCTGC
CCCTTGGGAAGGGGCAGTGTATGCCTTTGAGGGGAAGGAGGAGCCCTCTTCTCCCATGCTGCACTTACTCCTTT
TGCTAATAAAAGTGTGTTGTAGATTGTC

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FIGURE 727

MALKDYALEKEKVKKFLQEFYQDDELGKKQFKYGNQLVRLAHREQVALYVDLDDVAEDDPPELVDSICENARRYAK
LFADAVQELLPPQYKEREVVKNDVLDVYIEHRLMMEQSRDPGMVRSPQNQYPALMRRFELYFQGPSSSKPRVIR
EVRADSVGKLVTVRGIVTRVSEVKPKMVVATYTCDCQCGAETYQPIQSPTFMPLIMCPSQECQTNRSGGRLYLQTR
GSRFIKFQEMKMQEHSQVPVGNIPRSITVLVEGENTRIAQPGDHVSVTGIFLPILRTGFRQVVQGLLSETYLEA
HRIVKMNKSEDDDESGAGELTREELRQIAEEDFYEKLAASIAPEIYGHEDVKKALLLLLVGGVDQSPRGMKIRGNI
NICLMGDPGVAKSQLLSYIDRLAPRSQYTTGRGSSGVGLTAAVLRDSVSGELTEGGALVLADQGVCCIDEFDKM
AEADRTAIHEVMEQQTISIAGILTTLNARCSILAAANPAYGRYNPRRSLEQNIQLPAALLSRFDLLWLIQDRP
DRDNDLRLAQHITYVHQHSRQPPSQFEPLDMKLMRRYIAMCREKQPMVPESLADYITAAYVEMRREAWASKDATY
TSARTLLAILRLSTALARLRMVDVVEKEDVNEAIRMEMSKDSL LGDKGTARTQRPADVIFATVRELVSGGRSV
RFSEAEQRCVSRGFTPAQFQAALDEYEELNVWQVNASRTRITFV

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FIGURE 728

GCGGAGCGAGAGGCTGAGAGAGTCGGAGACACTATCCGCTTCCATCCGTCGCGCAGACCCTGCCGGAGCCGCTGC
CGCTATGGATGATCGAGAGGATCTGGTGTACCAGGCGAAGCTGGCCGAGCAGGCTGAGCGATACGACGAAATGGT
GGAGTCAATGAAGAAAGTAGCAGGGATGGATGTGGAGCTGACAGTTGAAGAAAGAAACCTCCTATCTGTTGCATA
TAAGAATGTGATTGGAGCTAGAAGAGCCTCCTGGAGAATAATCAGCAGCATTGAACAGAAAGAAGAAAAACAAGGG
AGGAGAAGACAAGCTAAAAATGATTCCGGGAATATCGGCCAAATGGTTGAGACTGAGCTAAAGTTAATCTGTTGTGA
CATTCTGGATGTACTGGACAAACACCTCATTCCAGCAGCTAACACTGGCGAGTCCAAGGTTTTCTATTATAAAAT
GAAAGGGGACTACCACAGGTATCTGGCAGAATTTGCCACAGGAAACGACAGGAAGGAGGCTGCCGGAGAACAGCCT
AGTGGCTTATAAAGCTGCTAGTGATATTGCAATGACAGAACTTCCACCAACGCATCCTATTTCGCTTAGGTCCTTGC
TCTCAATTTTTCCGTATTCTACTACGAAATCTTAATTCCCCTGACCGTGCCTGCAGGTTGGCAAAAGCAGCTTT
TGATGATGCAATTGCAGAACTGGATACGCTGAGTGAAGAAAGCTATAAGGACTCTACACTTATCATGCAGTTGTT
ACGTGATAATCTGACACTATGGACTTCAGACATGCAGGCTGACGGTGAAGAGCAGAATAAAGAAGCGCTGCAGGA
CGTGGAAGACGAAAATCAGTGAGACATAAGCCACAAGAGAAACCATCTCTGACCACCCCTCCTCCCCATCCCA
CCCTTTGGAAACTCCCCATTGTCACTGAGAACCACCAAATCTGACTTTTACATTTGGTCTCAGAATTTAGGTTCC
TGCCCTGTTGGTTTTTTTTTTTTTTTTTTTTTAAACAGTTTTCAAAGTTCTTAAAGGCAAGAGTGAATTTCTGTG
GATTTTACTGGTCCCAGCTTTTAGGTTCTTTAAGACACTAACAGGACTACATAGAGGCTTTTTCAGCATTACTGT
GTCGTCTCCGTGCCAGATGTGGCAAGATCACCATTAGCAAATGGAAATTACATTTGAAAGCCATTAGACTTATAG
GTGATGCAAGCATCTAAGAGAGAGGTTAATCACACTATAGAGGCATAAGTGGTATCAGTTTTCATTTTTCTAATT
GTTTAAACTGTGTTTTATACCAGTGTGTGCAAGTAATTGGGTGTTAGCTTGAGATGGTTAAAGGTGGTTTGGGGA
GGGACTTCGTTGTAATGGTTTTGCTGTAAAAAATGTTTCCAACCTCCGCTGAAATGTTGCTGAAAAGCATGGTGCT
GGTAACAGTTCAACAATCCGTGGCTGCTCATTCTTGCCCTACTTTACTCTCCCACTGAAGCAGGTTAGCGTTGAAG
GTGGTATGGAAAAGCCTGCATGCCTGTTCAATTCTTTTGTTTCTTCTCCTTCCCCCTCCCCCTACCTCCTTCCCC
TCACTCCTCCCCCTCCTTCGCTCGCTCAACCTCTTTTGTTTCAAGTATGTGTAACCTGAAGCTAATTTGTACTACTGG
ATATCTGACTGGAGCCACAGATACAGAATCTGTATTGTTCTTACTGAAACACAGCATGGAATTAACATTAACTT
AAATAAAACAAACCTAAATTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 729

MDDREDLVYQAKLAEQAERYDEMVESMKKVAGMDVELTVEERNLLSVAYKNVIGARRASWRIISSIEQKEENKGG
EDKLMIREYRQMVETELKLICCDILDVLDKHLIPAANTGESKVFYYKMGDYHRYLAEFATGNDRKEAAENSLV
AYKAASDIAMTELPPTHPIRLGLALNFSVFYYEILNSPDRACRLAKAAFDDATAELDTLSEESYKDSTLIMQLLR
DNLTTLWTSDMQGDGEEQNKEALQDVEDENQ

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FIGURE 730

GGCACGAGGGGCGGCGGAGCCGACTCGTCGCGGCCGAGGCGCACGCGGTCCGCGCCGGCGTCAGTCTGGGATTGG
CCGGCCCCGCGACTTCCCTCCGCCCCCTGCCAATCGCCGGGGACGACTTCCGTGGGTTTTTCCGGCTCTCCCGCGTC
GCTAAGGAGCGACGGGCTGTCGGCCAGACCCGAGTTCTCGGTGCGCTCAGCGGCCCGCGACGCTAGGAGGCGCG
GCTCCGCCCCCGCTACCATGAGGCCCCGGAAGCCTTCTGCTCCTGCTGCTCTTGGGGCTGGTGCAGCTGCTGG
CCGTGGCGGGTGCCGAGGGCCCCGACGAGGATTCTTCTAACAGAGAAAATGCCATTGAGGATGAAGAGGAGGAGG
AGGAGGAAGATGATGATGAGGAAGAAGACGACTTGGAAAGTTAAGGAAGAAAATGGAGTCTTGGTCTAAATGATG
CAAACCTTTGATAATTTTGTGGCTGACAAAGACACAGTGCTGCTGGAGTTTTATGCTCCATGGTGTGGACATTGCA
AGCAGTTTTGCTCCGGAATATGAAAAATTGCCAACATATTAAAGGATAAAGATCCTCCCATTCCTGTTGCCAAGA
TCGATGCAACCTCAGCGTCTGTGCTGGCCAGCAGGTTTGATGTGAGTGGCTACCCACCATCAAGATCCTTAAGA
AGGGGCAGGCTGTAGACTACGAGGGCTCCAGAACCAGGAAGAAAATTGTTGCCAAGGTCAGAGAAGTCTCCACAGC
CCGACTGGACGCCTCCACCAGAAGTCACGCTTGTGTTGACCAAAGAGAACTTTGATGAAGTTGTGAATGATGCAG
ATATCATTCTGGTGGAGTTTTATGCCCATGGTGTGGACACTGCAAGAACTTGCCCCGAGTATGAGAAGGCCG
CCAAGGAGCTCAGCAAGCGTTCTCCTCCAATTCCCCTGGCAAAGGTCGACGCCACCGCAGAAACAGACCTGGCCA
AGAGGTTTGATGTCTCTGGCTATCCACCCTGAAAATTTCCGCAAAGGAAGGCCTTATGACTACAACGGCCAC
GAGAAAAATATGGAATCGTTGATTACATGATCGAGCAGTCCGGGCCTCCCTCCAAGGAGATTCTGACCCTGAAGC
AGGTCCAGGAGTTCCTGAAGGATGGAGACGATGTCATCATCATCGGGTCTTTAAGGGGGAGAGTGACCCAGCCT
ACCAGCAATACCAGGATGCCGCTAACAACTGAGAGAAGATTACAAATTTACCACACTTTTACGACAGAAATAG
CAAAGTTCTTGAAAGTCTCCCAGGGGCAGTTGGTTGTAATGCAGCCTGAGAAATTCAGTCCAAGTATGAGCCCC
GGAGCCACATGATGGACGTCCAGGGCTCCACCCAGGACTCGGCCATCAAGGACTTCGTGCTGAAGTACGCCCTGC
CCCTGGTTGGCCACCGCAAGGTGTCAAACGATGCTAAGCGCTACACCAGGCGCCCCCTGGTGGTCTGCTACTACA
GTGTGGACTTCAGCTTTGATTACAGAGCTGCAACTCAGTTTTGGCGGAGCAAAGTCCTAGAGGTGGCCAAGGACT
TCCCTGAGTACACCTTTGCCATTGCGGACGAAGAGGACTATGCTGGGGAGGTGAAGGACCTGGGGCTCAGCGAGA
GTGGGGAGGATGTCAATGCCGCCATCCTGGACGAGAGTGGGAAGAAGTTCGCCATGGAGCCAGAGGAGTTTGACT
CTGACACCCTCCGCGAGTTTGTCACTGCTTTCAAAAAAGGAAAACTGAAGCCAGTCATCAATCCCAGCCAGTGC
CCAAGAACAACAAGGGACCCGTCAAGGTGCTGGTGGGAAAAGACCTTTGACTCCATTGTGATGGACCCCAAGAAGG
ACGTCTCATCGAGTTCTACGCACCATGGTGCGGGCACTGCAAGCAGCTAGAGCCCGTGTACAACAGCCTGGCCA
AGAAGTACAAGGGCCAAAAGGGCCTGGTCAATCGCCAAGATGGACGCCACTGCCAACGACGTCCCAGCGACCGCT
ATAAGGTGGAGGGCTTCCCCACCATCTACTTCGCCCCCAGTGGGGACAAAAGAACCAGTTAAATTTGAGGGTG
GAGACAGAGATCTGGAGCATTGAGCAAGTTTATAGAAGAACATGCCACAAAAGTGAAGCAGGACCAAGGAAGAGC
TTTGAAGGCCCTGAGGTCTGCGGAAGGTGGGAGGAGGCAGACACCCTGCGTGGCCCATGGTTCGGGGCGTCCACGCC
GAGGCCGGCAACAAACGACAGTATCTCGGATTCCCTTTTTTTTTTTTTTTTTTAAATTTTTTATACTTTGGTGTTCAC
TTCATGCTCTGAATACTGAATAACCATGAATGACTGAATAGTTTAGTCCAGATTTTTACAGAGGATACATCTATT
TTTATCATTATTTGGGGTTTGAAAAATTTTTTTTTTACACCTTCTAATTTCTTTATTTCTCAAAGCAGATAATTCT
TCTGTGTGAAAATGTTTTCTTTTTTTAATTTAAGGTTTAAATTCCTTTGCCAATCATGTTGATTTTGCTCTTT
GCTTTTTCGTTGTCTGAGAAATTGTTGGCGTAGATTGGCTTCTGGTATGTGTTTCTGATTGCTTCCTGTTGAGC
ACAAAGTGAGAGCTGCCACTGAGCAGCCCTGCCAGGGGTGCTGTTTCAGGCTGGGCATCGCCAGGCGGCCCTCCCT
GCAAACCAAGGGCTGGGGGCAAAGGGGCATGATCCAGGGTCCCCAGGGTGGGCTCAGCTCCAGGGAGAGGCCAC
CCACGTGGCAGCCCCACCTCTTGAGAGCCCCAGTGCCGGAGCAGAAAGGACCCTGGACCCAGAGGCAGATACTG
CGGGTGGTAGAAAAGGTAGAGTAGGCTGTGGCAATGGAATAAAACACGATTAAAAACGTTAAAAA

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FIGURE 731

MRPRKAFLLLLLLGLVQLLAVAGAEGPDEDSSNRENAIEDEEEEEEEEDDDEEEDDLEVKEENGVLVLNDANFDNF
VADKDTVLLIFYAPWCGHCKQFAPEYEKIANILKDKDPPIPVAKIDATSASVLASRFDVSGYPTIKILKKGQAVD
YEGSRTQEEIVAKVREVSQPDWTPPEVTLVLTKENFDEVVNDADIILVEFYAPWCGHCKKLAPEYEKAAKELSK
RSPP IPLAKV DATAETDLAKRFDVSGYPTLKIFRKGRPYDYNGPREKYGIVDYMIEQSGPPSKEILTLKQVQEFL
KDGDDVIIIGVFKGESDPAYQQYQDAANNLREDYKFHHTFSTEIAKFLKVSQQLVVMQPEKFQSKYEPRSHMMD
VQGSTQDSAIDFVLKYALPLVGHRKVSNDKRYTRRPLVVVYYSVDFSFYRAATQFWRSKVLEVAKDFPEYTF
AIADEEDYAGEVKDLGLSEGEDVNAAILDSEGGKFAMEPEEFDSDTLREFVTAFKKGKLKPVIKSQPVPKNNKG
PVKVVVGKTFDSIVMDPKKDV LIEFYAPWCGHCKQLEPVYNSLAKKYKGQKGLVIAKMDATANDVP SDRYKVEGF
PTIYFAPSGDKKNPVKFEGGDRDLEHLSKFIEEHATKLSRTKEEL

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FIGURE 732

AGGTTCTCTTACATCGACCGCCTAAGAGTCGCGCTGTAAGAAGCAACAACCTCTCCTCTTCGTCTCCGCCATCAG
CTCGGCAGTCGCGAAGCAGCAACCATGCGTGAGTGCACTCTCCATCCACGTTGGCCAGGCTGGTGTCCAGATTGGC
AATGCCTGCTGGGAGCTCTACTGCCTGGAACACGGCATCCAGCCCGATGGCCAGATGCCAAGTGACAAGACCATT
GGGGGAGGAGATGATTCTTCAACACCTTCTTCAGTGAGACGGGGGCTGGCAAGCATGTGCCCCGGGCAGTGTTT
GTAGACTTGGAACCCACAGTCATTGATGAAGTTCGCACTGGCACCTACCGCCAGCTCTTCCACCCTGAGCAACTT
ATCACAGGCAAAGAAGATGCTGCCAATAACTATGCCCCGAGGGCACTACACCATTGGCAAGGAGATCATTGACCTC
GTGTTGGACCGAATTTCGCAAGCTGGCCGACCAAGTGCACGGGTCTCCAGGGCTTCTTGGTTTTCCACAGCTTTGGT
GGGGAACTGGTTCCTGGGTTACCTCGCTGCTCATGGAACGTCTCTCAGTTGATTATGGCAAGAAGTCCAAGCTG
GAGTTCCTATTTACCCGGCGCCCCAGGTTTTCCACAGCTGTAGTTGAGCCCTACAACCTCCATCCTCACCACCCAC
ACCACCCTGGAGCACTCTGATTGTGCCTTCATGGTAGACAATGAGGCCATCTATGACATCTGTCTAGAAACCTC
GATATTGAGCGTCCAACCTATACTAACCTGAATAGGTTAATAGGTCAAATTGTGTCTCCATCACTGCTTCCCTG
AGATTTGATGGAGCCCTGAATGTTGACCTGACAGAATTCCAGACCAACCTGGTGCCCTATCCCCGCATCCACTTC
CCTCTGGCCACATATGCCCCGTGTCATCTCTGCTGAGAAAGCCTACCATGAACAGCTTTCTGTAGCAGAGATCACC
AATGCTTGCTTTGAGCCAGCCAACCAGATGGTGAAATGTGACCCTCGCCATGGTAAATACATGGCTTGCTGCCTG
TTGTACCGTGGTGACGTGGTTCCCAAGATGTCAATGCTGCCATTGCCACCATCAAGACCAAGCGTACCATCCAG
TTTGTGGATTGGTGCCCCACTGGCTTCAAGGTTGGCATCAACTACCAGCCTCCCACTGTGGTGCCTGGTGGAGAC
CTGGCCAAGGTACAGAGAGCTGTGTGCATGCTGAGCAACACCACAGCCATTGCTGAGGCCTGGGCTCGCCTGGAC
CACAAGTTTGACCTGATGTATGCCAAACGTGCCTTTGTTCACTGGTACGTTGGGGAGGGGATGGAGGAAGGTGAG
TTTTCAGAGGCCCCGTGAGGACATGGCTGCCCTTGAGAAGGATTATGAGGAGGTGGTGTGGATTCTGTTGAAGGA
GAGGGTGAGGAAGAAGGAGAGGAATACTAAAGTTAAAACGTACAAAGGTGCTGCTTTTACAGGGAAGCTTATTC
TGTTTTAAACATTGAAAAGTTGTGGTCTGATCAGTTAATTTGTATGTAGCAGTGTATGCTCTCATATACAATTAC
TGACCTATGCTCTAAAACATGAATGCTTTGTTACAGACCCAAGCTGTCCATTTCTGTGATGGGTTTTGAATAAAG
TATTCCTGTCTTAAAAAAAAAAAAAA

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FIGURE 733

MRECISIHVGQAGVQIGNACWELYCLEHGIQPDGQMP SDKTIGGGDDSFNTFFSETGAGKHVPRAVFVDLEPTVI
DEVRTGTYRQLFHPEQLITGKEDAANNYARGHYTIGKEIIDLVLDRIKRLADQCTGLQGFLVFHSFGGGTGSGFT
SLLMERLSVDYGKKSLEFSIYPAPQVSTAVVEPYNSILTHTTLEHSDCAFMVDNEAIYDICRRNLDIERPTYT
NLNRLIGQIVSSITASLRFDGALNVDLTEFQTNLVPYPRIHFPLATYAPVISAEKAYHEQLSVAEITNACFEPAN
QMVKCDPRHGKYMACCLLYRGDVVPKDVNAAIATIKTKRTIQFVDWCPTGFKVGINYQPPTVVPGGDLAKVQRAV
CMLSNTTAIAEAWARLDHKFDLMYAKRAFVHWYVGEEMEEGEFSEAREDMAALEKDYEYEVGVDSVEGEGEEEGEE
Y

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FIGURE 734

AGGTTCTCTTACATCGACCGCCTAAGAGTCGCGCTGTAAGAAGCAACAACCTCTCCTCTTCGTCTCCGCCATCAG
CTCGGCAGTCGCGAAGCAGCAACCATGCGTGAGTGATCTCCATCCACGTTGGCCAGGCTGGTGTCCAGATTGGC
AATGCCTGCTGGGAGCTCTACTGCCTGGAACACGGCATCCAGCCCGATGGCCAGATGCCAAGTGACAAGACCATT
GGGGGAGGAGATGATTCCCTTCAACACCTTCTTCAGTGAGACGGGGGCTGGCAAGCATGTGCCCCGGGCAGTGTTT
GTAGACTTGGAACCCACAGTCATTGATGAAGTTCGCACTGGCACCTACCGCCAGCTCTTCCACCCTGAGCAACTT
ATCACAGGCAAAGAAGATGCTGCCAATAACTATGCCCCGAGGGCACTACACCATTGGCAAGGAGATCATTGACCTC
GTGTTGGACCGAATTCGCAAGCTGGCCGACCAGTGACGGGTCTCCAGGGCTTCTTGGTTTTCCACAGCTTTGGT
GGGGGAAC TGTTCTGGGTTACCTCGCTGCTCATGGAACGTCTCTCAGTTGATTATGGCAAGAAGTCCAAGCTG
GAGTTCTCTATTTACCCGGCGCCCCAGGTTTTCCACAGCTGTAGTTGAGCCCTACAACCTCCATCCTCACCACCCAC
ACCACCCTGGAGCACTCTGATTGTGCCTTCATGGTAGACAATGAGGCCATCTATGACATCTGTGCTAGAAACCTC
GATATTGAGCGTCCAACCTATACTAACCTGAATAGGTTAATAGGTCAAAATTGTGTCTCCATCACTGCTTCCCTG
AGATTTGATGGAGCCCTGAATGTTGACCTGACAGAATTCCAGACCAACCTGGTGCCCTATCCCCGCATCCACTTC
CCTCTGGCCACATATGCCCCGTGCTCTCTGCTGAGAAAGCCTACCATGAACAGCTTTCTGTAGCAGAGATCACC
AATGCTTGCTTTGAGCCAGCCAACCAGATGGTGAAATGTGACCCTCGCCATGGTAAATACATGGCTTGCTGCCTG
TTGTACCGTGGTGACGTGGTTCCCAAAGATGTCAATGCTGCCATTGCCACCATCAAGACCAAGCGTACCATCCAG
TTTGTGGATTGGTGCCCCACTGGCTTCAAGGTTGGCATCAACTACCAGCCTCCCACTGTGGTGCTGGTGAGAC
CTGGCCAAGGTACAGAGAGCTGTGTGCATGCTGAGCAACACCACAGCCATTGCTGAGGCCTGGGCTCGCCTGGAC
CACAAGTTTGACCTGATGTATGCCAAACGTGCCTTTGTTCACTGGTACGTTGGGGAGGGGATGGAGGAAGGTGAG
TTTTTCAGAGGCCCCGTGAGGACATGGCTGCCCTTGAGAAGGATTATGAGGAGGTTGGTGTGGATTCTGTTGAAGGA
GAGGGTGAGGAAGAAGGAGAGGAATACTAAAGTTAAAACGTCACAAAGGTGCTGCTTTTACAGGGAAGCTTATTC
TGTTTTAAACATTGAAAAGTTGTGGTCTGATCAGTTAATTTGTATGTAGCAGTGTATGCTCTCATATACAATTAC
TGACCTATGCTCTAAAACATGAATGCTTTGTTACAGACCCAAGCTGTCCATTTCTGTGATGGGTTTTGAATAAAG
TATTCCTGTCTTAAAAAAAAAAAAAA

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FIGURE 735

MRECISIHVGQAGVQIGNACWELYCLEHGIQPDGQMPSDKTIGGGDDSFNTFFSETGAGKHVPRAVFVDLEPTVI
DEVRTGTYRQLFHPEQLITGKEDAANNYARGHYTIGKEIIDLVLDRIKRLADQCTGLQGFLVFHSFGGGTGSGET
SLLMERLSVDYGKKSLEFSIYPAPQVSTAVVEPYNSILTTHTTLEHSDCAFMDNEAIYDICRRNLDIERPTYT
NLNRLIGQIVSSITASLRFDGALNVDLTFQTNLVPYPRIHFPLATYAPVISAEKAYHEQLSVAEITNACFEPAN
QMVKCDPRHGKYMACCLLYRGDVVPKDVNAAIATIKTKRTIQFVDWCPTGFKVGINYQFP TVVPGGDLAKVQRAV
CMLSNTTAIAEAWARLDHKFDLMYAKRAFVHWYVGEGMEEGEFSEAREDMAALEKDYEYEVGVD SVEGE EEEEEEE
Y

FIGURE 736

[illegible]

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FIGURE 737

MQQPFNYYPQIYWVDSSASSPWAPPGTVLPCPTSVPRRPGQRRPPPPPPPPPLPPPPPPPLPPLPLPPLKKG
NHSTGLCLLVMFFMVLVALVGLGLGMFQLFHLQKELAELESTSQMHTASSLEKQIGHPSPPPEKKELRKVAHLT
GKSNSRSMFLEWEDTYGIVLLSGVKYKKGGLVINETGLYFVYSKVYFRGQSCNNLPLSHKVYMRNSKYPQDLVMM
EGKMMSYCTTGQMWARSSYLGAFFNLTSADHLYVNVSELSLVNFEESTFFGLYKL

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FIGURE 738

GTAGATAGTCAGATGTCTTTTGAAAATGTGTTTTCGGTGTGGAATATTAACCCAATCTTTGATAACTCTTCCAGA
ACCTTCGGCTCGCGTGCTTCTGAGCTGCTGTGGATGGCCTCGGCTCTCTGGACTGTCCTTCCGAGTAGGATGTCA
CTGAGATCCCTCAAATGGAGCCTCCTGCTGCTGTCACTCCTGAGTTTCTTTGTGATGTGGTACCTCAGCCTTCCC
CACTACAATGTGATAGAACGCGTGAAC TGGATGTACTTCTATGAGTATGAGCCGATTTACAGACAAGACTTTTCA
TTCACACTTCGAGAGCATTCAAAC TGTCTCATCAAAATCCATTTCTGGTCATTCTGGTGACCTCCCACCCTTCA
GATGTGAAAGCCAGGCAGGCCATTAGAGTTACTTGGGGTGAAAAAAGTCTTGGTGGGGATATGAGGTTCTTACA
TTTTTCTTATTAGGCCAAGAGGCTGAAAAGGAAGACAAAATGTTGGCATTGTCCTTAGAGGATGAACACCTTCTT
TATGGTGACATAATCCGACAAGATTTTTTAGACACATATAATAACCTGACCTTGAAAACCATTATGGCATT CAGG
TGGGTAACTGAGTTTTTGCCCCAATGCCAAGTACGTAATGAAGACAGACACTGATGTTTTTCATCAATACTGGCAAT
T TAGTGAAATATCTTTTAAACCTAAACCACTCAGAGAAGTTTTTTCACAGGTTATCCTCTAATTGATAATTATTCC
TATAGAGGATTTTACCAAAAAACCCATATTTCTTACCAGGAGTATCCTTTCAAGGTGTTCCCTCCATACTGCAGT
GGGTTGGGTTATATAATGTCCAGAGATTTGGTGCCAAGGATCTATGAAATGATGGGTACGTA AAAACCCATCAAG
TTTGAAGATGTTTATGTCTGGGATCTGTTTGAATTTATTAAAAGTGAACATTCATATTCCAGAAGACACAAAATCTT
TTCTTTCTATATAGAATCCATTTGGATGTCTGTCAACTGAGACGTGTGATTGCAGCCCATGGCTTTTTCTTCCAAG
GAGATCATCACTTTTTTGGCAGGTCATGCTAAGGAACACCACATGCCATTATTAACCTTCACATTCTACAAAAAGCC
TAGAAGGACAGGATACTTTGTGGAAAGTGTTAAATAAAGTAGGTACTGTGGAAAATTCATGGGGAGGTCAGTGTG
CTGGCTTACACTGAACTGAACTCATGAAAAACCCAGACTGGAGACTGGAGGGTTACACTTGTGATTATTAGTC
AGGCCCTTCAAAGATGATATGTGGAGGAATTAAATATAAAGGAATTGGAGGTTTTTGCTAAAGAAATTAATAGGA
CCAAACAATTTGGACATGTCATTCTGTAGACTAGAATTTCTTAAAAGGGTGTTACTGAATTATAAGCTCACTAGG
CTGTAAAAACAAAACAATGTAGAGTTTTATTTATTGAACAATGTAGTCACTTGAAGGTTTTGTGTATATCTTATG
TGGATTACCAATTTAAAAATATATGTAGTTCTGTGTCAAAAACTTCTTCACTGAAGTTATACTGAACAAAATTT
TACCTGTTTTTGGTCATTTATAAAGTACTTCAAGATGTTGCAGTATTTTACAGTTATTATTATTAAAATTACTT
CAACTTTGTGTTTTTAAATGTTTTGACGATTTCAATACAAGATAAAAAGGATAGTGAATCATTCTTTACATGCAA
ACATTTTCCAGTTACTTAACTGATCAGTTTATTATTGATACATCACTCCATTAATGTAAAGTCATAGGTCATTAT
TGCACATCAGTAATCTCTTGGACTTTGTTAAATATTTTACTGTGGTAATATAGAGAAGAATTAAAGCAAAAAAAA
AAAAAAAAAAAAAAAAAAAAA

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FIGURE 739

MASALWTVLPSRMSLRSLKWSLLLLSLLSFFVMWYLSLPHYNVIERVNWMYFYEYEPYRQDFHFTLREHSNCSSH
QNPFLVILVTSHPSDVKARQAIRVTWGEKKSWWGYEVLTFLLGQEAEKEDKMLALSLEDEHLLYGDIIRQDFLD
TYNNLTCLKTIMAFRWVTEFCPNAKYVMKTDTDVFINTGNLVKYLNLNLNHSEKFFTGYPLIDNYSYRGFYQKTHIS
YQEYPFKVFPPYCSGLGYIMSRDLVPRIYEMMGHVKPIKFEDVYVGICLNLLKVNIHIPEDTNLFFLYRIHLDVC
QLRRVIAAHGFSSKEIITFWQVMLRNTTCHY

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FIGURE 740A

ATTTCCCGCCAGCAGGAGCCGCGCGGTAGATGCGGTGCTTTTAGGAGCTCCGTCCGACAGAACGGTTGGGCCTTG
CCGGCTGTGCGGTATGTCGCGACAGAGCACCTGTACAGCTTCTTCCCCAAGTCTCCGGCGCTGAGTGATGCCAAC
AAGGCCTCGGCCAGGGCCTCACGCGAAGGCGGCCGTGCCGCCGTGCCCCCGGGGCCTCTCCTTCCCCAGGCGGG
GATGCGGCCCTGGAGCGAGGCTGGGCCTGGGCCCAGGCCCTTGGCGCGATCCGCGTCACCGCCCAAGGCGAAGAAC
CTCAACGGAGGGCTGCGGAGATCGGTAGCGCCTGTGCCCCACCAGTTGTGACTTCTCACCAGGAGATTTGGTT
TGGGCCAAGATGGAGGGTTACCCCTGGTGGCCTTGTCTGGTTTACAACCACCCCTTTGATGGAACATTCATCCGC
GAGAAAGGGAAATCAGTCCGTGTTTATGTACAGTTTTTTGATGACAGCCCAACAAGGGGCTGGGTAGCAAAAGG
CTTTTAAAGCCATATACAGGTTCAAATCAAAGGAAGCCAGAAGGGAGGTCATTTTTTACAGTGCAAAGCCTGAA
ATACTGAGAGCAATGCAACGTGCAGATGAAGCCTTAAATAAAGACAAGATTAAGAGGCTTGAATTGGCAGTTTGT
GATGAGCCCTCAGAGCCAGAAGAGGAAGAAGAGATGGAGGTAGGCACAACCTTACGTAACAGATAAGAGTGAAGAA
GATAATGAAATTGAGAGTGAAGAGGAAGTACAGCCTAAGACACAAGGATCTAGGCGAAGTAGCCGCCAAATAAAA
AAACGAAGGGTCATATCAGATTCTGAGAGTGACATTGGTGGCTCTGATGTGGAATTTAAGCCAGACACTAAGGAG
GAAGGAAGCAGTGATGAAATAAGCAGTGGAGTGGGGGATAGTGAGAGTGAAGGCCTGAACAGCCCTGTCAAAGTT
GCTCGAAAAGCGGAAGAGAATGGTGACTGGAATGGCTCTCTTAAAAGGAAAAGCTCTAGGAAGGAAACGCCCTCA
GCCACAAAACAAGCAACTAGCATTTCATCAGAAACCAAGAATACTTTGAGAGCTTTCTCTGCCCTCAAATTTCT
GAATCCCAAGCCACGTTAGTGGAGGTGGTGATGACAGTAGTCGCCCTACTGTTTGGTATCATGAACTTTAGAA
TGGCTTAAGGAGGAAAAGAGAAGAGATGAGCACAGGAGGAGGCCTGATCACCCCGATTTTGATGCATCTACACTC
TATGTGCCTGAGGATTTCTCAATTCTTGTACTCTGGGATGAGGAAGTGGTGGCAGATTAAGTCTCAGAACTTT
GATCTTGTICATCTGTTACAAGGTGGGGAATTTTATGAGCTGTACCACATGGATGCTCTTATTGGAGTCAGTGAA
CTGGGGCTGGTATTTCATGAAAGGCAACTGGGCCCATTCTGGCTTTCTGAAATTGCATTGGCCGTTATTTCAGAT
TCCCTGGTGCAGAAGGGCTATAAAGTAGCACGAGTGGAAACAGACTGAGACTCCAGAAATGATGGAGGCACGATGT
AGAAAGATGGCACATATATCCAAGTATGATAGAGTGGTGAGGAGGGAGATCTGTAGGATCATTACCAAGGGTACA
CAGACTTACAGTGTGCTGGAAGGTGATCCCTCTGAGAACTACAGTAAGTATCTTCTTAGCCTCAAAGAAAAAGAG
GAAGATTCTTCTGGCCATACTCGTGCATATGGTGTGTGCTTTGTTGATACTTCACTGGGAAAGTTTTTCATAGGT
CAGTTTTTCAGATGATCGCCATTGTTTCGAGATTTAGGACTCTAGTGGCACACTATCCCCAGTACAAGTTTTATTT
GAAAAAGGAAATCTCTCAAAGGAACTAAAACAATTCTAAAGAGTTTATTGTCTCTCTTTCAGGAAGGTCTG
ATACCCGGCTCCAGTTTTTGGGATGCATCCAAACTTTGAGAACTCTCCTTGAGGAAGAATATTTTAGGGAAGAG
CTAAGTGATGGCATTGGGGTGATGTTACCCAGGTGCTTAAAGGTATGACTTCAGAGTCTGATTCCATTGGGTTG
ACACCAGGAGAGAAAAGTGAATTGGCCCTCTCTGCTCTAGGTGGTTGTGTCTTCTACCTCAAAAAATGCCTTATT
GATCAGGAGCTTTTATCAATGGCTAATTTTGAAGAATATATTCCCTTGGAATTCTGACACAGTCAGCACTACAAGA
TCTGGTGCTATCTTACCAAAGCCTATCAACGAATGGTGCTAGATGCAGTGACATTAAACAACCTGGAGATTTTT
CTGAATGGAACAAATGGTTCTACTGAAGGAACCCCTACTAGAGAGGGTTGATACTTGCCATACTCCTTTTGGTAAG
CGGCTCCTAAAGCAATGGCTTTGTGCCCCACTCTGTAACCATTATGCTATTAATGATCGTCTAGATGCCATAGAA
GACCTCATGGTTGTGCCTGACAAAATCTCCGAAGTTGTAGAGCTTCTAAAGAAGCTTCCAGATCTTGAGAGGCTA
CTCAGTAAATTCATAATGTTGGGTCTCCCTGAAGAGTCAGAACCACCCAGACAGCAGGGCTATAATGTATGAA
GAACTACATACAGCAAGAAGAAGATTATTGATTTTCTTCTGCTCTGGAAGGATTCAAAGTAATGTGTAAATTT
ATAGGGATCATGGAAGAAGTTGCTGATGGTTTTAAGTCTAAAATCCTTAAGCAGGTATCTCTCTGCAGACAAAA
AATCCTGAAGGTGTTTTCTCTGATTTGACTGTAGAATTGAACCGATGGGATACAGCCTTTGACCATGAAAAGGCT
CGAAAGACTGGACTTATTACTCCCAAAGCAGGCTTTGACTCTGATTATGACCAAGCTCTTGCTGACATAAGAGAA
AATGAACAGAGCCTCCTGGAATACCTAGAGAAACAGCGCAACAGAATTGGCTGTAGGACCATAGTCTATTGGGGG
ATTGGTAGGAACCGTTACCAGCTGGAAATCCTGAGAATTTACCACCTCGCAATTTGCCAGAAGAATACGAGTTG
AAATCTACCAAGAAGGGCTGTAAACGATACTGGACCAAACTATTGAAAAGAAGTTGGCTAATCTCATAAATGCT
GAAGAACGGAGGGATGTATCATTGAAGGACTGCATGCGGCGACTGTTCTATAACTTTGATAAAAATTACAAGGAC
TGGCAGTCTGCTGTAGAGTGTATCGCAGTGTGGATGTTTTACTGTGCCTGGCTAACTATAGTCGAGGGGGTGAT
GGTCTATGTGTCGCCAGTAATTCTGTTGCCGGAAGATACCCCCCTTCTTAGAGCTTAAAGGATCACGCCAT
CCTTGCAATTACGAAGACTTTTTTTGGAGATGATTTTATTCCTAATGACATTCTAATAGGCTGTGAGGAAGAGGAG
CAGGAAAATGGCAAAGCCTATTGTGTGCTTGTACTGGACCAAAATATGGGGGGCAAGTCTACGCTTATGAGACAG
GCTGGCTTATTAGCTGTAATGGCCAGATGGGTTGTTACGTCCCTGCTGAAGTGTGCAGGCTCACACCAATTGAT

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FIGURE 740B

AGAGTGTTTACTAGACTTGGTGCCTCAGACAGAATAATGTCAGGTGAAAGTACATTTTTTGTGAATTAAGTGAA
ACTGCCAGCATACTCATGTCATGCAACAGCACATTCTCTGGTGCTTGTGGATGAATTAGGAAGAGGTACTGCAACA
TTTGATGGGACGGCAATAGCAAATGCAGTTGTTAAAGAACTTGCTGAGACTATAAAATGTCGTACATTATTTTCA
ACTCACTACCATTTCATTAGTAGAAGATTATTCTCAAAATGTTGCTGTGCGCCTAGGACATATGGCATGCATGGTA
GAAAATGAATGTGAAGACCCCAGCCAGGAGACTATTACGTTCCCTCTATAAATTCATTAAGGGAGCTTGCCTAAA
AGCTATGGCTTTAATGCAGCAAGGCTTGCTAATCTCCCAGAGGAAGTTATTCAAAGGGACATAGAAAAGCAAGA
GAATTTGAGAAGATGAATCAGTCACTACGATTATTCGGGAAGTTTGCCTGGCTAGTGAAAGGTCAACTGTAGAT
GCTGAAGCTGTCCATAAATTGCTGACTTTGATTAAAGGAATTATAGACTGACTACATTGGAAGCTTTGAGTTGACT
TCTGACCAAAGGTGGTAAATTCAGACAACATTATGATCTAATAAACTTTATTTTTTAAAAATGA

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FIGURE 741

MSRQSTLYSFFPKSPALSDANKASARASREGGRAAAAPGASPSGGDAWSEAGPGPRPLARSASPPKAKNLNGG
LRRSVAPAAPTSCDFSPGDLVWAKMEGYPPWWPCLVYNHPFDGTFIREKGKSVRVHVQFFDDSPTRGWVSKRLKPK
YTGSKSKEAQKGGHFYSAPKPEILRAMQRADEALNKDKIKRLELAVCDEPSEPEEEEEEMEVEGTTYVTDKSEEDNEI
ESEEEVQPKTQGSRRSSRQIKKRRVISDSESDIGGSDVEFKPDTKEEGSSDEISSGVGDSESEGLNSPVKVARRK
KRMVTGNGSLKRKSSRKETPSATKQATSISSSETKNTLRAFSAPQNSSEQAHVSGGGDDSSRPTVWYHETLEWLKE
EKRRDEHRRRPDHPDFDASTLYVPEDFLNSCTPGMRKWWQIKSQNFDLVICYKVKGKFYELYHMDALIGVSELGLV
FMKGNWAHSGFPEIAFGRYSDSLVQKGYKVARVEQTETPEMMEARCRKMAHISKYDRVVRREICRIITKGTQYTS
VLEGDPSENYSKYLLSLKEKEEDSSGHTRAYGVCFVDTSLGKFFIGQFSDDRHCSTRFTLVAHYPPVQVLFKGN
LSKETKTIKSSSLCSLQEGIPGSQFWDASKTLRTLLEEEYFREKLSDGIGVMLPQVLKGMTSESDSIGLTPGE
KSELALSALGGCVFYLKKCLIDQELLSMANFEEYIPLDSDTVSTTRSGAIFTKAYQRMVLDAVTLNNEIFLNGT
NGSTEGTLLERVDTCHTPFGKRLKQWLCAPLCNHYAINDRLDAIEDLMVVPDKISEVVELLKKLPDLERLLSKI
HNVGSPLKSQNHPSRAIMYEETYSKKKIIDFLSALEGFKVMCKIIGIMEEVADGFKSKILKQVISLQTKNPEG
RFPDLTVELNRWDTAFDHEKARKTGLITPKAGFDSYDQALADIRENEQSLLEYLEKQRNRIGCRTIVYWGIGRN
RYQLEIPENFTTRNLPEEYELKSTKKGCKRYWTKTIEKKLANLINAEERRDVSLKDCMRRLFYNFDKNYKDWQSA
VECIAVLVDVLLCLANYSRGGDGPMCRPVILLPEDTPPFLELKGSRHPCITKTFFGDDFIPNDILIGCEEEQENG
KAYCVLVTGPNMGGKSTLMRQAGLLAVMAQMGCVPAEVCRLTPIDRVFTRLGASDRIMSGESTFFVELSETASI
LMHATAHSLVLVDELGRGTATFDGTAIANAVVKELAETIKCRTLFSTHYHSLVEDYSQNVAVRLGHMACMVENEC
EDPSQETITFLYKFIKGACPKSYGFNAARLANLP EEVIQKGRKAREFEKMNQSLRLFREVCLASERSTVDAEAV
HKLLTLIKEL

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FIGURE 742

GACGCCGACGATGAAGACACCGTGGAAGGTTCTTCTGGGACTGCTGGGTGCTGCTGCGCTTGTCAACATCATCAC
CGTGCCCGTGTTCTGCTGAACAAAGGCACAGATGATGCTACAGCTGACAGTCGCAAACTTACACTCTAACTGA
TTACTTAAAAAATACTTATAGACTGAAGTTATACTCCTTAAGATGGATTTTCTGATCATGAATATCTCTACAAACA
AGAAAAATAATATCTTGGTATTCAATGCTGAATATGGAAACAGCTCAGTTTTCTTGGAGAACAGTACATTTGATGA
GTTTGGACATTCTATCAATGATTATTCAATATCTCCTGATGGGCAGTTTTATTCTCTTAGAATACAACACTACGTGAA
GCAATGGAGGCATTCTACACAGCTTCATATGACATTTATGATTTAAATAAAAGGCAGCTGATTACAGAAGAGAG
GATTCCAAACAACACACAGTGGGTCACATGGTCACCAAGTGGGTCATAAATTGGCATATGTTTGGAAACAATGACAT
TTATGTTAAAAATTGAACCAAATTTACCAAGTTACAGAATCATATGGACGGGGAAAGAGATATAATATATAATGG
AATAACTGACTGGGTTTATGAAGAGGAAGTCTTCAGTGCCTACTCTGCTCTGTGGTGGTCTCCAAACGGGCACTTT
TTTAGCATATGCCCAATTTAACGACACAGAAGTCCCACTTATTGAATACTCCTTCTACTCTGATGAGTCACTGCA
GTACCCAAAGACTGTACGGGTTCATATCCAAAGGCAGGAGCTGTGAATCCAAGTGTAAAGTTCTTTGTTGTAA
TACAGACTCTCTCAGCTCAGTCACCAATGCAACTTCCATACAAATCACTGCTCCTGCTTCTATGTTGATAGGGGA
TCACTACTTGTGTGATGTGACATGGGCAACACAAGAAAGAATTTCTTTGCAGTGGCTCAGGAGGATTACAGAACTA
TTCGGTCATGGATATTTGTGACTATGATGAATCCAGTGGAAAGATGGAAGTCTTAGTGGCACGGCAACACATTGA
AATGAGTACTACTGGCTGGGTGGAAGATTTAGGCCTTCAGAACCTCATTTTACCTTGATGGTAATAGCTTCTA
CAAGATCATCAGCAATGAAGAAGGTTACAGACACATTTGCTATTTCCAAATAGATAAAAAAGACTGCACATTTAT
TACAAAAGGCACCTGGGAAGTCATCGGGATAGAAGCTCTAACAGTGATTATCTATACTACATTAGTAATGAATA
TAAAGGAATGCCAGGAGGAAGGAATCTTTATAAAATCCAAGTGTAGTACTATACAAAAGTGACATGCCTCAGTTG
TGAGCTGAATCCGGAAGGTGTCAGTACTATTCTGTGTCATTTCAGTAAAGAGGCGAAGTATTATCAGCTGAGATG
TTCCGGTCTGGTCTGCCCTCTATACTCTACACAGCAGCGTGAATGATAAAGGGCTGAGAGTCTTGGGAAGACAA
TTCAGCTTTGGATAAAATGCTGCAGAATGTCCAGATGCCCTCCAAAAAAGTGGACTTCATTATTTTGAATGAAAC
AAAATTTTGGTATCAGATGATCTTGCCTCCTCATTTTGATAAATCCAAGAAATATCCTCTACTATTAGATGTGTA
TGCAGGCCCCATGTAGTCAAAAAGCAGACACTGTCTTCAGACTGAACTGGGCCACTTACCTTGCAAGCACAGAAAA
CATTATAGTAGCTAGCTTTGATGGCAGAGGAAGTGGTTACCAAGGAGATAAGATCATGCATGCAATCAACAGAAG
ACTGGGAACATTTGAAGTTGAAGATCAAATTGAAGCAGCCAGACAAATTTTCAAAAATGGGATTTGTGGACAACAA
ACGAATTGCAATTTGGGGCTGGTCATATGGAGGGTACGTAACCTCAATGGTCCTGGGATCAGGAAGTGGCGTGTT
CAAGTGTGGAATAGCCGTGGCGCTGTATCCCGGTGGGAGTACTATGACTCAGTGTACACAGAACGTTACATGGG
TCTCCCAACTCCAGAAGACAACCTTGACCATTACAGAAATTCACAGTCATGAGCAGAGCTGAAAATTTTAAACA
AGTTGAGTACCTCCTTATTCATGGAACAGCAGATGATAACGTTCACTTTTCAGCAGTCAGCTCAGATCTCCAAAGC
CCTGGTTCGATGTTGGAGTGGATTTCCAGGCAATGTGGTATACTGATGAAGACCATGGAATAGCTAGCAGCACAGC
ACACCAACATATATATATACCCACATGAGCCACTTCATAAAACAATGTTTCTCTTTACCTTAGCACCTCAAAATACC
ATGCCATTTAAAGCTTATTAAAACTCATTTTTGTTCATTATCTCAAACTGCACTGTCAAGATGATGATGATC
TTTAAATACACACTCAAATCAAGAACTTAAGGTTACCTTTGTTCCCAAATTTTACATCCTATCATCTTAAGTAG
GGACTTCTGTCTTCACAACAGATTATTACCTTACAGAAGTTTGAATTATCCGGTCGGGTTTTATTGTTTAAATC
ATTTCTGCATCAGCTGCTGAAACAACAAATAGGAATTGTTTTATGGAGGCTTTGCATAGATTCCCTGAGCAGGA
TTTTAATCTTTTTCTAACTGGACTGGTTCAAATGTTGTTCTCTTTTAAAGGGATGGCAAGATGTGGGCAGTGA
TGTCCTAGGGCAGGGACAGGATAAGAGGGATTAGGGAGAGAAGATAGCAGGGCATGGCTGGGAACCCAAGTCCA
AGCATACCAACACGACCAGGCTACTGTGAGCTCCCTCGGAGAAAAGTGTGAGTCTGCGTGTGAACAGCTCTTC
TCCTTTAGAGCACAATGGATCTCGAGGGATCTCCATACCTACCAGTTCTGCGCCTCGAGGCCGCGACTCTAGA

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FIGURE 743

MKTPWKVLLGLLGAAALVTIITVPVLLNKGTDDATADSRKTYTLTDYLNKNTYRLKLYSLRWISDHEYLYKQENN
ILVFNAEYGNSSVFLENSTFDEFGHSINDYSISPDGQFILLEYNVVKQWRHSYTASYDIYDLNKRQLITEERIPN
NTQWVTWSPVGHKLAYVWNNDIYVKIEPNLPSYRITWTGKEDIYNGITDWVYEEVFSAVSALWWSPNGTFLAY
AQFNDTEVPLIEYSFYSDSLQYPKTVRVPPYKAGAVNPTVKFFVVNTDSLSSVTNATSIQITAPASMLIGDHYL
CDVTWATQERISLQWLRIQNYSVMDICDYDESSGRWNCLVARQHIEMSTTGWVGRFRPSEPHFTLDGNSFYKII
SNEEGYRHICYFQIDKKDCTFITKGTWEVIGIEALTSDYLYYISNEYKGMPPGGRNLYKIQLSDYTKVTCLSCELN
PERCQYYSVSFSKEAKYYQLRCSGPGLPLYTLHSSVNDKGLRVLEDNSALDKMLQNVQMPSKKLDFIILNETKFW
YQMILPPHFDKSKKYPLLLDVYAGPCSQKADTVFRLNWATYLASTENIIVASFDGRGSGYQGDKIMHAINRRLGT
FEVEDQIEAARQFSKMGFVDNKRIAIWGSYGGYVTSMLVLSGSGVFKCGIAVAPVSRWEYYDSVYTERYMGLPT
PEDNLDHYRNSTVMSRAENFKQVEYLLIHGTADDNVHFQQAQISKALVDVGVDFQAMWYTDEDHGIASSTAHQH
IYTHMSHF IKQCFSLP

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FIGURE 744

CCGGTCGGATGCCGGACCGGGGGCACCGCTGAGGCGGTGGGTCCCCGACCTGCGAGACAGGTTTGGAAGCCCCCG
CTGCGCCCGAGTCCGTGCGGACCGCGAGGCCGCGGGCGGGTGGAGGCGCGTCTCCGGCACGATGAAGGATTTGGGG
GCAGAGCACTTGGCAGGTCATGAAGGGGTCCAACCTTCTCGGGTTGTTGAACGTCTACCTGGAACAAGAAGAGAGA
TTCCAACCTCGAGAAAAAGGGCTGAGTTTGATTGAGGCTACCCCGGAGAATGATAACACTTTTGTGTCCAGGATTG
AGAAATGCCAAAGTTGAAGATTTAAGGAGTTTAGCCAACCTTTTTTGGATCTTGCACTGAAACTTTTTGTCTCGGCT
GTCAATATTTTGGACAGGTTCTTGGCTCTTATGAAGGTGAAACCTAAACATTTGTCTTGCACTTGAGAGTCTGTTCT
TTTTTGCTGGCTGCTAGAAATAGTTGAAGAAGACTGCAATATTCCATCCACTCATGATGTGATCCGGATTAGTCAG
TGTAATGTACTGCTTCTGACATAAAACGGATGGAAAAAATAATTCAGAAAAATTGCACTATGAATTGGAAGCT
ACTACTGCCTTAAACTTTTTGCACCTTATACCATACTATTATACTTTGTCTACTTCAGAAAGGAAAGAAATACTG
AGCCTTGATAAACTAGAAGCTCAGCTGAAAGCTTGCAACTGCCGACTCATCTTTTCAAAGCAAAACCATCTGTA
TTAGCCTTGTGCCTTCTCAATTTGGAAGTGGAACCTTTGAAATCTGTTGAATTACTGGAAATTCTCTTGCTAGTT
AAAAACATTCCAAGATTAATGACACTGAGTTCTTCTACTGGAGAGAGTTGGTTTCTAAATGCCTAGCCGAGTAT
TCTTCTCCTGAATGTTGCAAACAGATCTTAAGAAGTTGGTTTGGATCGTTTCAAGGCGCACAGCCAGAACCTC
CACAACAGCTACTATAGTTCTCTGAGCTGCCAACGATACCTGAGGGGGGTGTTTTGATGAAAGTGAAAGTGAG
GACTCTTGTGAAGATATGAGTTGTGGAGAGGAGAGTCTCAGCAGCTCTCCTCCCAGTGATCAAGAGTGACCTTC
TTTTTCAACTTCAAAGTGGCACAACACTGTGCTTTCCATCTTAGAAATCTGATTGTTCTGTGAGAATTTATATT
TACAGGGTTTCAAAGCAATAAATGGGGGAATAGGTAGTTTCTGGTTTAGCCCCCATCTAGTCAGGAATTAATAT
ACTGGAATACCTACCTTCTATTTGTTATTTCAGATCAGATCTGGCCTATTTTCATATTTATCCTAAGCCATCAAAT
GGGGTAGTGCTCTTAAACCATTAAACAGTACTTTAGACATTGGCACTTTATTTTTCTCGTAGATCTTTAGCTACT
TTGGGGAGGAGGAAGGTGCTGATACCTTCAATTTGTTACTTTTCAAGATTTTAAAAATACTAGTGTAGCTTA
TCTTAAACATTTTATAAAACCTTCAGATGTCTTTAAGCAGATTGGAAGTATGCAAGTGCTTCTTAGCAGGGACA
GTGGATAATCCTTAATGGTTTATCATAGATTTACCCTCCCCCTTCTCAGAAGAGTGAGTATGCTCTTAAATGT
CAAACACATTTTGTGTTTTGTTTTTAAATGATCAGTGTCTATTTGATGTGATGCAGATCTTATAAATTTGGG
AATTATAATATTGACATTTCTGTGATTTTATATATGTAATGTCTTAATTGAGATTTGTGTTAAGGCAGAAATAA
TTAGGCTAGGGCTCTTAGTTTTATTCTTATTGCCCCAAGTATTGTCAAACCTATGGTATTATTTAATGTTACTT
TAAAAATCCATAATCTGCTAGTTTTGCATGTACTTATATGAAAACAGTGCAGTAAGTTGAAAACCTCAGTATCTAT
GGAATTGATAAATGTTGATCTGGTGTAGTATATTTTATCCGCAITTTTCTTATATTAAAAATGTTCTGCATGATT
ACATTTTATTTGCCCTTTGT

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FIGURE 745

MKDLGAEHLAGHEGVQLLGLLNLYLEQEERFQPREKGLSLIEATPENDNTLCPGLRNAKVEDLRSLANFFGSCTE
TFVLAVNILDRLALMKVKPKHLSCIGVCSFLLAARIVEEDCNIPSTHDVIRISQCKCTASDIKMEKIISEKLH
YELEATTALNFLHLYHTIILCHTSEKKEILSLDKLEAQLKACNCRLIFSKAKPSVLALCLLNLEVETLKSVELLE
ILLLVKKHISKINDTEFFYWRELVSCLAEYSSPECKPDLKKLVWIVSRRTAQNLHNSYYSPPELPTIPEGGCFD
ESESSEDSCEDMSCGEESLSSSPSDQECTFFNFKVAQTLCFPS

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FIGURE 746

ATGGCCTGGATGCTGTTGCTCATCTTGATCATGGTCCATCCAGGATCCTGTGCTCTCTGGGTGTCCCAGCCCCCT
GAGATTCGTACCCTGGAAGGATCCTCTGCCTTCCTGCCCTGCTCCTTCAATGCCAGCCAAGGGAGACTGGCCATT
GGCTCCGTCACGTGGTTCCGAGATGAGGTGGTTCCAGGGAAGGAGGTGAGGAATGGAACCCAGAGTTCAGGGGC
CGCCTGGCCCCACTTGCTTCTTCCCGTTTCCTCCATGACCACCAGGCTGAGCTGCACATCCGGGACGTGCGAGGC
CATGACGCCAGCATCTACGTGTGCAGAGTGGAGGTGCTGGGCCTTGGTGTCTGGGACAGGGAATGGGACTCGGCTG
GTGGTGGAGAAAGAACATCCTCAGCTAGGGGCTGGTACAGTCCTCCTCCTTCGGGCTGGATTCTATGCTGTCAGC
TTTCTCTCTGTGGCCGTGGGCAGCACCGTCTATTACCAGGGCAAATGCCACTGTCACATGGGAACACACTGCCAC
TCCTCAGATGGGCCCCGAGGRGTGATTCCAGAGCCCAGATGTCCCTTAG

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FIGURE 747

MAWMLLLILIMVHPGSCALWVSQPPEIRTLEGSSAFLPCSFNASQGRLAIGSVTWFRDEVVPGKEVRNGTPEFRG
RLAPLASSRFLHDHQAELHIRDVRGHDASIYVCRVEVLGLGVGTGNGTRLVVEKEHPQLGAGTVLLL RAGFYAVS
FLSVAVGSTVYYQGKCHCHMGTHCHSSDGPRGVIPEPRCP

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FIGURE 748

GGGGAGAATCTGGTGGATGCTGGACCTTGCTGCTGCTGCTACTGCTGTTTCCAGGGGCTGCAGAGCATGGACTGT
TAAATCTTGCACTTCTTCTGAGTGAGCTGAATTCTTGCCGCCAGGATGGGGAAACAGAACAGCAAGCTGCGCCCG
GAGGTCATGCAGGACTTGCTGGAAAGCACAGACTTTACAGAGCATGAGATCCAGGAATGGTATAAAGGCTTCTTG
AGAGACTGCCCCAGTGGACATTTGTCAATGGAAGAGTTTAAGAAAATATATGGGAACTTTTCCCTTATGGGGAT
GCTTCCAAATTTGCAGAGCATGTCTTCCGCACCTTCGATGCAAATGGAGATGGGACAATAGACTTTAGAGAATTC
ATCATCGCCTTGAGTGTAACCTCGAGGGGGAAGCTGGAGCAGAAGCTGAAATGGGCCTTCAGCATGTACGACCTG
GACGGAAATGGCTATATCAGCAAGGCAGAGATGCTAGTGATCGTGAGGCAATCTATAAGATGGTTTCTCTGTGA
ATGAAAATGCCTGAAGATGAGTCAACCCAGAGAAAAGAACAGAAAAGATCTTCCGCCAGATGGACACCAATAGA
GACGGAAAACCTCTCCCTGGAAGAGTTTATCCGAGGAGCCAAAAGCGACCCGTCATTGTGCGCCTCCTGCAGTGC
GACCCGAGCAGTGCCGGCCAGTTCTGAGCCCTGCGCCACCAATCGAATTGTAGAGCTGCTTGTGTTCCCTTTTG
ATTCTTCTTTTTTAACAATTTTTTTTTTTTTTTTGCCAAACAATATCAATGGTGATGCCGTCCCCTGTGCGGTCTGA
TGCGCCTTCTCCGTGACGCCTTCAGCCTCTTTTGTGCTGGATGCTTCGTGGGAATGCCAGAGCCCCAGTGTGC
TTGTGGAGAGCATGGACAGACTTCGTGGTGTTCATTGTTTGATGATTTTTAATCGTTACTATTATTTCTTTTTAT
TCTAATGTCTCTGTCTCTAAAACGTAAGACTCGGGGGTTGGGGCAAAAAGAGGAAACCCATCCAGTCCCTGTGATT
CTATTGCAAGCTTCAAGGGGCTTTTGTGTTGAAAGACAAAACCTCCCCACCTGGGTCTGTTGTACACGTCGCCGTAG
GGGTGATGGATGGCACCGGATGCTGGATTCCCCAAGAACAAGTTACCCCTCTGGGGTGAGGCTATTCCAGCGAGCT
GGGACATTTCCCCATGGGGGCCACTCCCCTCTCTTCCCCAGCAGGCTGTAGTTTCTAAGCTGTGAACATTTCAA
GATAAATTAACAGAGGAGAGGAAAAGATGGCTCAGCTATTTTTTCACAGGTTTACACTAGTTGAGCTAATATGC
GTGTCTTTGGAAATTAACACAAATGGTAACATATTCCAAAACCAGACCCATCTTGTGCTTATTGTGATAAAAT
AAAAGACGGCTGTATATAACATATTGGGTAATGCAGACCAAATTAAGTGTTTTGCCTTGTGTTAAATGAAATGCA
TGTTTAGTGAGCACTAATAACAATCTTATTCAGAAGACTGTTTTTAGTAGCTTATTGTGAAGTAAGACAACATA
ATGAATGTCTGTCTTGTGTTGGAAGTCATATCTGTCTTTGCACAAATGTACCAATCGACAAGTATATTTATATAT
TCCATAAAAATACAAAGTAACCCTGACTAGGGCCCCAACTTTAATTTTGAATGCATTTCCAGAGTGGCCATGCCTA
GAGGGCAGATGCAGAGCAGGTGGTAGTGGGACAGGACAATGGAGCACAGGAATGTTAACATGTATGACAGGGGA
CCAGTAGGGTGGTTTTCCCTCTCAGGCCCAGCAGCCATTGACAGCATTAGACTGGCGGCATGGTGCTTTTCTGAG
CAGATCAATACTCTGCAGACTCGAAAAACATCACATACATTCTTGGAACCTCCAGTGGTTTAAATCTATGTGCA
TGGTTAGGGAGCCAGGCCTGGAATATTCAGTTTTCCCTGCCCCTGTAAAGAATCAGAGGTTGGGCAGTCATCAAA
TTCATCATAAAGACATGGGCAAGTGTGTCTGTGGTTTCCAAGGCCCCCTATGGAGAATCCAAAAGTATTTTCCA
TTGCCGTGCTCTTTGAATGCAGACTTCTATTTCCAGAAGTGACAGCACAAGTCTGAGTTGCTGTTTGGTCTGGTG
ACCTCAGACACACTAATTTGAATTGAAAGCTAAGAGTAAAAATTTGCTGGTTACAGGCGAGTCATACTCTTGCAA
GTAGTTAGCAAAGGGAGGCCCAAATTCTCAAGGTTGTTGATGGGGAACTTGCCACTAAGAGAAGGCAGAGAGGTC
CCTAGTGGGTATATTTGCTGCCAAGCCACTTGCCAAAAGAGGAACCCACAGAAAGAGAGACATCATGACCAGGA
GAAAAATGTGACTAGACATGCTAACCTCCAGGTTTTTATATATGACTTGAGTCTGCTGTAATTGGCAGCAGAAAT
CCAAATTTGTATGGTAGACCAAAAAGAACCAATCCATAGGGTGAAATTTTGAGACCTAGACTCTGTAAAAATAA
TCCTAGTCTTCCCTCCAGGGGTCAGTTCCCTCAGAGTGGTTCTGTACCAAAACTTGCCAAATTCCTCCATGGCCAAG
TGTTAAAACTGTGTTTTGGAAAATAGCGAATTAACCTAAGACACAGAAGGCAGACTGGGTGAGGAGACCTAGCAT
GCCCTATTGGCAGTGCTCAGGAGCTGCATCCCACTTTTCCCTGCTCTGAATCGAAGTCCTAGTTCCTTCCCTTTGA
TTCTCCTTTGGTAGGTGGAATCAGTTAATGTTTTGAGAAACCTGCCTGGGCTCTGCCCTTAGTCATGACATCTCG
CTGAGCCAGACCCACTCTGTTCCCTTGAACCTAGAGCTGGAGTGAGGAGTAGAGGTCTCCGGCTATTCCAGAAAAG
AAAAGTGAGCCACATGCAGGCTGATGAATGCCGACACTTCAGAATGTATAGAAATAGTCCCTGTCTGCGCTGC
CACTGACCCTGTCTGTATTTTCTCGGAGGTTGTTTTCTCCTTCTCCTTCCCAGGAAGGTCTTTGTATGTGCAAT
CCAGTGCACTCAAGTTTGGCCAAGGGACTCCACAGCACCCAGAGGACTGCATGCCTCAAGGTTTATGTCACTCCT
CTGCTGGGCTGTTTCAATTGCTGTTGTTTCAAGGACCTTTGGAAATAAAACCTGTTCTGTCCCAATAAAACC
AGCCTGTGATGTTCAAGGGACTGGAATAAAGTGGCTTACGACCTGAAGGATTCTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 749

MGKQNSKLRPEVMQDLLESTDFTEHEIQEWYKGFLRDCPSGHLSMEEFKKIYGNFFPYGDASKFAEHVFRTFDAN
GDGTIDFREFI IALSVTSRGKLEQKLKWAFSMYDLGNGYISKAEMLVIVQAIYKMVSSVMKMPEDESTPEKRTE
KIFRQMDTNRDGKLSLEEFIRGAKSDPSIVRLLQCDPSSAGQF

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FIGURE 750

CACCTCGCTGCTCCAGCCTCTGGGGCGCATTCCAACCTTCCAGCCTGCGACCTGCGGAGAAAAAAATTACTTAT
TTTCTTGCCCCATACATACCTTGAGGCGAGCAAAAAAATTAAATTTTAAACCATGAGGGAAATCGTGACATCCAG
GCTGGTCAGTGTGGCAACCAGATCGGTGCCAAGTTCTGGGAGGTGATCAGTGATGAACATGGCATCGACCCACC
GGCACCACACGGGGACAGCGACCTGCAGCTGGACCGCATCTCTGTGTACTACAATGAAGCCACAGGTGGCAAA
TATGTTCTCTCGTGCCATCCTGGTGGATCTAGAACCTGGGACCATGGACTCTGTTTCGCTCAGGTCCCTTTGGCCAG
ATCTTTAGACCAGACAACCTTTGTATTTGGTCAGTCTGGGGCAGGTAACAACCTGGGCCAAAGGCCACTACACAGAG
GGCGCCGAGCTGGTTGATTCTGTCTGGATGTGGTACGGAAGGAGGCAGAGAGCTGTGACTGCCTGCAGGGCTTC
CAGCTGACCCACTCACTGGGCGGGGGCACAGGCTCTGGAATGGGCACTCTCCTTATCAGCAAGATCCGAGAAGAA
TACCCTGATCGCATCATGAATACCTTCAGTGTGGTGCCTTCACCCAAAGTGTCTGACACCGTGGTCGAGCCCTAC
AATGCCACCCTCTCCGTCCATCAGTTGGTAGAGAATACTGATGAGACCTATTGCATTGACAACGAGGCCCTCTAT
GATATCTGCTTCCGCACTCTGAAGCTGACCACACCAACCTACGGGGATCTGAACCACCTTGTCTCAGCCACCATG
AGTGGTGTCAACACCTGCCTCCGTTTCCCTGGCCAGCTCAATGCTGACCTCCGCAAGTTGGCAGTCAACATGGTC
CCCTTCCCACGTCTCCATTTCTTTATGCCTGGCTTTGCCCTCTCACCAGCCGTGGAAGCCAGCAGTATCGAGCT
CTCAGAGTGCCGGAACCTACCCAGCAGGTCTTCGATGCCAAGAACATGATGGCTGCCTGTGACCCCCGCCACGGC
CGATACCTCACCGTGGCTGCTGTCTTCCGTGGTCCGATGTCCATGAAGGAGGTCGATGAGCAGATGCTTAACGTG
CAGAACAAGAACAGCAGCTACTTTGTGGAATGGATCCCCAACAATGTCAAGACAGCCGTCTGTGACATCCACCT
CGTGGCCTCAAGATGGCAGTCACCTTCAATTGGCAATAGCACAGCCATCCAGGAGCTCTTCAAGCGCATCTCGGAG
CAGTTCACTGCCATGTTCCGCCGGAAGGCCTTCCCTCACTGGTACACAGGCGAGGGCATGGACGAGATGGAGTTC
ACCGAGGCTGAGAGCAACATGAACGACCTCGTCTCTGAGTATCAGCAGTACCAGGATGCCACCGCAGAAGAGGAG
GAGGATTTCCGTGAGGAGGCCGAAGAGGAGGCCTAAGGCAGAGCCCCCATCACCTCAGGCTTCTCAGTTCCCTTA
GCCGTCTTACTCAACTGCCCCCTTTCCTCTCCCTCAGAATTTGTGTTTGCTGCCTCTATCTTGTTTTTTGTTTTT
CTTCTGGGGGGGGTCTAGAACAGTGCCTGGCACATAGTAGGCGCTCAATAAATACTTGTTTGTGTAATGTCTCCT
CTCTCTTCCACTCTGGGAAACCTAGGTTTCTGCCATTCTGGGTGACCTGTATTTCTTTCTGGTGGCCATTCCA
TTTGTCCAGTTAATACTTCCCTCTTAAAAATCTCCAAGAAGCTGGGTCTCCAGATCCCATTTAGAACCAACCAGGT
GCTGAAAAACACATGTAGATAATGGCCATCATCCTAAGCCCAAAGTAGAAAATGGTAGAAGGTAGTGGGTAGAAGT
CACTATATAAGGAAGGGGATGGGATTTTCCATTCTAAAAGTTTTGGAGAGGGAAATCCAGGCTATTAAAGTCACT
AAATTTCTAAGTATGTCCATTTCCCATCTCAGCTTCAAGGGAGGTGTCAGCAGTATTATCTCCACTTTCAATCTC
CCTCCAAGCTCTACTCTGGAGGAGTCTGTCCCACTCTGTCAAGTGGAAATCCTTCCCTTTCCAACCTCTACCTCCCT
CACTCAGCTCCCTTTCCCCTGATCAGAGAAAGGGATCAAGGGGGTTGGGAGGGGGGAAAGAGACCAGCCTTGGTCC
CTAAGCCTCCAGAAACGTCTTCTTAATCCCCACCTTTTCTTACTCCCCAAAAAGAATGAACACCCCTGACTCTGG
AGTGGTGTATACTGCCACATCAGTGTGTTGAGTCAGTCCCCAGAGGAGAGGGGAACCCCTCCTCCATCTTTTTTGCA
ACATCTCATTTCTTCCCTTTTGCTGTTGCTTCCCCCTCACACACTTGGTTTTGTTCTATCCTACATTTGAGATTT
CTATTTTATGTTGAACCTTGCTGCTTTTTTTTTCATATTGAAAAGATGACATCGCCCCAAGAGCCAAAAATAAATGGG
AATTGAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 751

MREIVHIQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGDSDLQLDRISVYYNEATGGKYVPRAILVDLEPGTMDS
VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDSVLDVVRKEAESCDCLOGFQLTHSLGGGTGSGMGTL
LISKIREEYPDRIMNTFSVVPSPKVSDTVVEPYNATLSVHQLVENTDETYCIDNEALYDICFRTLKLTTPTYGDL
NHLVSATMSGVTTCLRFPQQLNADLRKLAVNMVFFPRLHFFMPGFAPLTSRGSQQYRALTVPELTQQVFDAKNMM
AACDPRHGRYLTVAAVFRGRMSMKEVDEQMLNVQKNSSYFVEWIPNNVKTAVCDIPPRGLKMAVTFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVSEYQQYQDATAEEEEEDFGEEAEEEA

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FIGURE 752

GAATTGAACCACCCATTTTCTTTCTTAGCCAAATCACCAAAATGTCCAGTTAGAACAAGAATTTAGCATTCTGC
AAAAGAAGTTAACAGCTGAGATAACGAGGAAATATTCTGAAATCGATCCCAAATATTTTCATCTTAATTTTGT
GTGGACACCTGAACAATACATTTTTTTCAAAGACAGAGACAATTACAACAGAGAAGCAGTCACAGCCTACCTTAT
TCACATCATCAATGTCACAGGTATTGGCTAATTCTCAAAACACAACAGGGAATCCTTTGGGTCAACCAACACAAT
TCAGCGACACTTTTTCTGGACAATCAATATCACCTGCCAAAGTCACTGCTGGACAACCAACACCAGCTGTCTATA
CCTCTTCTGAAAAACCAGAAGCACATACTTCTGCTGGACAACCACTTGCCCTACAACACCAAAACAACCAACACCAA
TAGCCAAACACCTCCTCCCAGCAAGCCGTGTTACCTCTGCCAGACAACCTACCATCTGCCCCGTACTTCTACCACAC
AACCACCAAAGTCATTTGTCTATACTTTTACTCAACAATCATCATCTGTCCAGATCCCTTCTAGAAAACAAATAA
CTGTTTCATAATCCATCCACACAACCAACATCAACTGTCAAAAATTCACCTAGGAGTACACCAGGATTTATCTTAG
ATACTACCAGTAACAAACAAACCCCAACAAAAACAATTATAATTCAATAGCTGCCATACTAATTGGTGTACTTC
TGACTTCTATGTTGGTAGCTATAATCATCATTGTACTTTGGAAATGCTTAAGGAAACCAGTTTTAAATGATCAAA
ATTGGGCAGGTAGATCTCCATTTGCTGATGGAGAAACCCCTGACATTTGTATGGATAACATCAGAGAAAATGAAA
TATCCACAAAACGTACATCAATCATTTCACTTACACCCTGGAAACCAAGCAAAAGCACACTTTTAGCAGATGACT
TAGAAATTAAGTTGTTTGAATCAAGTGAAGCAATTGAAGACTCCAACAACCCCAAAACAGAGAAAATAAAAGATC
AAGTAAATGGTACATCAGAAGATAGTGCTGATGGTTCAACAGTTGGAAGTCTGCTGTTTCTTCTCAGATGATGCAG
GTCTGCCTCCACCACCTCCCCTTCTGGATTTGGAAGGACAGGAAAGTAACCAATCTGACAAACCCACAATGACAA
TTGTATCTCCTCTTCCAAATGATTCTACTAGTCTCCCTCCATCTCTGGACTGTCTCAATCAAGACTGTGGAGATC
ATAAATCTGAGATAATACAATCATTTCCACCGCTTGACTCACTTAACCTTGCCCCCTGCCACCAGTAGATTTTATGA
AAAACCAAGAAGATTCCAACCTTGAGATCCAGTGTGAGGAGTTCTCTATTCTCCCAACTCTGATCAAGATCTTA
ATGAATCCCTGCCACCTCCACCTGCAGAACTGTTATATAATTACAACCTTGCTTTTTTAGCTGATCTTCCATCCTC
AAATGACTCTTTTTCTTTATATGTTAACATATATAAAATGGCAACTGATAGTCAATTTTGATTTTTATTTCAGGA
ACTATCTGAAATCTGCTCAGAGCCTATGTGCATAGATGAACTTTTTTTTTAAAAAAGTTATTTAACAGTAATCT
ATTTACTAATTATAGTACCTATCTTTAAAGTATAGTACATTTTACATATGTAAATGGTATGTTTCAATAATTTAA
GAACTCTGAAACAATCTACATATACTTATTACCCAGTACAGTTTTTTTTTCCCCTGAAAAGCTGTGTATAAAATTA
TGGTGAATAAACTTTTATGTTTCCATTTCAAAGACCAGGGTGGAGAGGAATAAGAGACTAAGTATATGCTTCAAG
TTTTAAATTAATACCTCAAGTATTAAATAAATATTCCAAGTTTGTGGGAATGGGAGATTAAATGCATGTTTGAG
AGTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 753

MDPKYFILILFCGHLNNTFFSKTETITTEKQSQPTLFTSSMSQVLANSQNTTGNPLGQPTQFSDTFSGQSI SPAK
VTAGQPTPAVYTSSEKPEAHTSAGQPLAYNTKQPTPIANTSSQQAVFTSARQLPSARTSTTQPPKSFVYFTTQQS
SSVQIPSRKQITVHNPSTQPTSTVKNSPRSTPGFILDTTSNKQTPQKNNYNSIAAILIGVLLTSM LV AIIIIVLW
KCLRKPVLNDQNWAGRSPFADGETPDICMDNIRENEISTKRTSIIISLTPWKPSKSTLLADDLEIKLFESSENIED
SNNPKTEKIKDQVNGTSEDSADGSTVGTA VSSDDAGLPPPPPLLDLEGQESNQSDKPTMTIVSPLPNDSTSLPP
SLDCLNQDCGDHKSEIIQSFPPLDSLNLPLPPVDFMKNQEDSNLEIQCEFSIPPNSDQDLNESLPPPPAELL

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FIGURE 754

ATGCGTGAGTGCACTCCATCCACGTTGGCCAGGCTGGTGTCCAGATTGGCAATGCCTGCTGGGAGCTCTACTGC
CTGGAACACGGCATCCAGCCCGATGGCCAGATGCCAAGTGACAAGACCATTGGGGGAGGAGATGATTCCCTTCAAC
ACCTTCTTCAGTGAAACGGGTGCTGGCAAGCATGTGCCCCGGGCAGTGTTTGTAGACTTGGAACCCACAGTCATT
GATGAAGTTCGCACTGGCACTTACCGCCAGCTCTTCCACCCTGAGCAACTCATCACAGGCAAGGAAGATGCTGCC
AATAACTATGCCCCGAGGGCACTACACCATTGGCAAGGAGATCATTGACCTCGTGTTGGACCGAATTGCAAGCTG
GCTGACCAGTGCACCGGTCTTCAGGGCTTCTTGGTTTTCCACAGCTTTGGTGGGGGAAGTGGTTCTGGGTTTACC
TCGCTGCTCATGGAACGTCTCTCAGTTGATTATGGCAAGAAGTCCAAGCTGGAGTTCTCCATTTACCCGGCGCCC
CAGGTTTCCACAGCTGTAGTTGAGCCCTACAACCTCCATCCTCACCACCCACACCACCCTGGAGCACTCTGATTGT
GCCTTCATGGTAGACAATGAGGCCATCTATGACATCTGTTCGTAGAAACCTCGATATCGAGCGCCCAACCTACACT
AACCTTAACCGCCTTATTAGCCAGATTGTGTCTCCATCACTGCTTCCCTGAGATTTGATGGAGCCCTGAATGTT
GACCTGACAGAATTCCAGACCAACCTGGTGGCCTACCCCGCATCCACTTCCCTCTGGCCACATATGCCCCCTGTC
ATCTCTGCTGAGAAAGCCTACCATGAACAGCTTACTGTAGCAGAGATCACCAATGCTTGCTTTGAGCCAGCCAAC
CAGATGGTGAAATGTGACCCTCGCCATGGTAAATACATGGCTTGCTGCCTGTTATACCGTGGTGACGTGGTTCCC
AAAGATGTCAATGCTGCCATTGCCACCATCAAAACCAAGCGTACCATCCAGTTTGTGGATTGGTGCCCCACTGGC
TTCAAGGTTGGCATTAAATTACCAGCCTCCCACTGTGGTGCCTGGCGGAGACCTGGCCAAGGTACAGAGAGCTGTG
TGCATGCTGAGCAATACCACAGCTGTTGCCGAGGCCTGGGCTCGCCTGGACCACAAGTTTGACCTGATGTATGCC
AAGCGTGCCTTTGTTCACTGGTACGTGGGTGAGGGGATGGAGGAAGGCGAGTTTTTCAGAGGCCCGTGAGGACATG
GCTGCCCTTGAGAAGGATTATGAGGAGGTTGGAGCAGATAGTGCTGACGGAGAGGATGAGGGTGAAGAGTATTAA

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FIGURE 755

MRECISIHVGQAGVQIGNACWELYCLEHGIQPDGQMPSDKTIGGGDDSFNTFFSETGAGKHVPRAVFVDLEPTVI
DEVRTGTYRQLFHPEQLITGKEDAANNYARGHYTIGKEIIDLVLDRIKRLADQCTGLQGFLVFHSFGGGTGSGET
SLLMERLSVDYGKKSKLEFSIYPAPQVSTAVVEPYNSILTTHTTLEHSDCAFMDNEAIYDICRRNLDIERPTYT
NLNRLISQIVSSITASLRFDGALNVDLTFQTNLVPYPRIHFPLATYAPVISAEKAYHEQLTVAEITNACFEPAN
QMVKCDPRHGKYMACCLLYRGDVVPKDVNAAIATIKTKRTIQFVDWCPTGFKVGINYQPPTVVPGGDLAKVQRAV
CMLSNTTAVAEAWARLDHKFDLMYAKRAFVHWYVGEGMEEGEFSEAREDMAALEKDYEYVVGADSDADGEDEGEY

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FIGURE 756

GCCACACGGTCTTTGAGCTGAGTCGAGGTGGACCCTTTGAACGCAGTCGCCCTACAGCCGCTGATTCCCCCGCA
TCGCCTCCCGTGGAAGCCCAGGCCGCTTCGCAGCTTTCTCCCTTTGTCTCATAACCATGTCCACCAACGAGAAT
GCTAATACACCAGCTGCCCCGCTTTCACAGATTCAAGAACAAGGGAAAAGACAGTACAGAAATGAGGCGTCGCAGA
ATAGAGGTCAATGTGGAGCTGAGGAAAGCTAAGAAGGATGACCAGATGCTGAAGAGGAGAAATGTAAGCTCATT
CCTGATGATGCTACTTCTCCGCTGCAGGAAAACCGCAACAACCAGGGCACTGTAAATTGGTCTGTTGATGACATT
GTCAAAGGCATAAATAGCAGCAATGTGGAAAATCAGCTCCAAGCTACTCAAGCTGCCAGGAACTACTTTCCAGA
GAAAAACAGCCCCCATAGACAACATAATCCGGGCTGGTTTGATTCCGAAATTTGTGTCTTCTTGCGCAGAACT
GATTGTAGTCCCATTTCAGTTTGAATCTGCTTGGGCACTACTAACATTGCTTCTGGGACATCAGAACAAACCAAG
GCTGTGGTAGATGGAGGTGCCATCCCAGCATTTCATTTCTCTGTTGGCATCTCCCCATGCTCACATCAGTGAACAA
GCTGTCTGGGCTCTAGGAAACATTGCAGGTGATGGCTCAGTGTTCCGAGACTTGGTTATTAAGTACGGTGCAGTT
GACCCACTGTTGGCTCTCCTTGCACTTCCTGATATGTCATCTTTAGCATGTGGCTACTTACGTAATCTTACCTGG
ACACTTTCTAATCTTTGCCGCAACAAGAATCCTGCACCCCCGATAGATGCTGTTGAGCAGATTCTTCTACCTTA
GTTCCGGCTCCTGCATCATGATGATCCAGAAGTGTTAGCAGATACCTGCTGGGCTATTTCTTACCTTACTGATGGT
CCAAATGAACGAATTGGCATGGTGGTGAAGAACAGGAGTTGTGCCCCAACTTGTGAAGCTTCTAGGAGCTTCTGAA
TTGCCAATTGTGACTCCTGCCCTAAGAGCCATAGGGAATATTGTCACTGGTACAGATGAACAGACTCAGGTTGTG
ATTGATGCAGGAGCACTCGCCGCTTTTCCAGCCTGCTCACCAACCCCAAACTAACATTCAGAAGGAAGCTACG
TGGACAATGTCAAACATCACAGCCGGCCGCCAGGACCAGATACAGCAAGTTGTGAATCATGGATTAGTCCCATTC
CTTGTCACTGTTCTCTCTAAGGCAGATTTTAAGACACAAAAGGAAGCTGTGTGGGCCGTGACCAACTATACCAGT
GGTGGAACAGTTGAACAGATTGTGTACCTTGTTCACTGTGGCATAATAGAACCGTTGATGAACCTCTTAACTGCA
AAAGATACCAAGATTATTCTGGTTATCCTGGATGCCATTTCAAATATCTTTCAGGCTGCTGAGAACTAGGTGAA
ACTGAGAACTTAGTATAATGATTGAAGAATGTGGAGGCTTAGACAAAATTGAAGCTCTACAAAACCATGAAAT
GAGTCTGTGTATAAGGCTTCGTAAAGCTTAATTGAGAAGTATTTCTCTGTAGAGGAAGAGGAAGATCAAAACGTT
GTACCAGAACTACCTCTGAAGGCTACACTTTCCAAGTTCAGGATGGGGCTCCTGGGACCTTTAACTTTTAGATC
ATGTAGCTGAGACATAAATTTGTTGTGTACTACGTTTGGTATTTTGTCTTATTGTTTCTCTACTAAGAAGCTCTT
CTTAAATGTGGTTTGTACTGTAGCACTTTTTACACTGAACTATACTTGAACAGTTCCAAGTGTACATACATAC
TGTATGAAGCTTGTCTCTGACTAGGTTTCTAATTTCTATGTGGAATTCCTATCTTGCAGCATCCTGTAAATAA
ACATTCAAGTCCACCCTTAAAAAAA

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FIGURE 757

MSTNENANTPAARLHRFKNKGKDDSTEMRRRRRIEVNVELRKAKKDDQMLKRRNVSSFPDDATSPLQENRNNQGTVN
WSVDDIVKGINSSNVENQLQATQAARKLLSREKQPPIDNIIRAGLIPKFVSFLGRDTCSPIQFESAWALTNIASG
TSEQTKAVVDGGAIPAFISLLASPHAHISEQAVWALGNIAGDGSVFRDLVIKYGAVDPLLALLAVPDMSSLACGY
LRNLTWTLNLCRNKNPAPPIDAVEQILPTLVRLHHDDPEVLADTCWAI SYLTDGPNERIGMVVKTGVVPQLVK
LLGASELPIVTPALRAIGNIVTGTDEQTQVVIDAGALAVFPSLLTNPKTNIQKEATWTMSNITAGRQDQIQQVVN
HGLVPFLVSVLSKADFKTQKEAVWAVTNYTSGGTVEQIVYLVHCGIIEPLMNLLTAKDTKIILVILDAISNIFQA
AEKLGETEKL SIMIEECGGLDKIEALQNHENESVYKASLSLIEKYFSVEEEEDQNVVPETTSEGYTFQVQDGAPG
TFNF

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FIGURE 758

ATGGCGAAATATAACACGGGGGGCAACCCGACAGAGGATGTCTCAGTCAATAGCCGACCCTTCAGAGTCACAGGG
CCAAACTCATCTTCAGGAATACAAGCAAGAAAGAACTTATTCAACAACCAAGGAAATGCCAGCCCTCCTGCAGGA
CCCAGCAATGTACCTAAGTTTGGGTCCCCAAAGCCACCTGTGGCAGTCAAACCTTCTTCTGAGGAAAAGCCTGAC
AAGGAACCCAAGCCCCGTTTCTAAAGCCCACTGGAGCAGGCCAAAGATTTCGGAACACCAGCCAGCTTGACCACC
AGAGACCCCGAGGCGAAAAGTGGGATTTCTGAAACCTGTAGGCCCAAGCCCATCAACTTGCCCAAAGAAGATTCC
AAACCTACATTTCCCTGGCCTCCTGGAAACAAGCCATCTCTTCACAGTGTAAACCAAGACCATGACTTAAAGCCA
CTAGGCCCGAAATCTGGGCCTACTCCTCCAACCTCAGAAAATGAACAGAAGCAAGCGTTTCCCAAATTGACTGGG
GTTAAAGGGAAATTTATGTCAGCATCACAAGATCTTGAACCCAAGCCCTCTTCCCCAAACCCGCTTTGGCCAG
AAGCCGCCCCCTAAGTACCGAGAATCCCATGAAGACGAAAGCCCCATGAAGAATGTGTCTTCATCAAAAGGGTCC
CCAGCTCCCCCTGGGAGTCAGGTCCAAAAGCGGCCCTTTAAAACAGCAAGGGGAAGACTCAGAAAATAAAGACCAT
GCAGGGGAGATTTCAAGTTTGCCCTTTCCTGGAGTGGTTTTGAAACCTGCTGCGAGCAGGGGAGGCCCAGGTCTC
TCCAAAAATGGTGAAGAAAAAAGGAAGATAGGAAGATAGATGCTGCTAAGAACACCTTCCAGAGCAAAATAAAT
CAGGAAGAGTTGGCCTCAGGGACTCCTCCTGCCAGTTCCCTAAGGCCCTTCTAAGCTGACAGTGGGGGGGCCA
TGGGGCCAAAGTCAGGAAAAGGAAAAGGGAGACAAGAATTCAGCCACCCCGAAACAGAAGCCATTGCCTCCCTTG
TTTACCTTGGGTCCACCTCCACCAAAACCCAACAGACCACCAAATGTTGACCTGACGAAATTCACAAAACCTCT
TCTGAAACAGTACTAGCAAAGGCCAGACGTCTTACTCAACAACCTTCCCTGCCACCACCTCCACCATCCCATCCG
GCCAGCCAACCACCATTGCCAGCATCTCACCATCACAACCACCAGTCCCAAGCCTACCTCCCAGAAACATTAA
CCTCCGTTTGACCTAAAAAGTCCTGTCAATGAAGACAATCAAGATGGTGTACGCACTCTGATGGTGTGAAAT
CTAGATGAGGAACAAGACAGTGAAGGAGAAACATATGAAGACATAGAAGCATCCAAAGAAAGAGAGAAGAAAAGG
GAAAAGGAAGAAAAGAGAGGTTAGAGCTGGAGAAAAAGGAACAGAAAGAGAAAGAAAAGAAACAAGAAATA
AAGAAGAAATTTAAACTAACAGGCCCTATTCAAGTCATCCATCTTGCAAAAGCTTGTTGTGATGTCAAAGGAGGA
AAGAATGAAGTGAAGCTTCAAGCAAGGAGAGCAAATTGAAATCATCCGCATCACAGACAACCCAGAAGGAAAATGG
TTGGGCAGAACAGCAAGGGGTTTCATATGGCTATATTAAAACAACCTGCTGTAGAGATTGACTATGATTCTTTGAAA
CTGAAAAAAGACTCTCTTGGTGCCCTTCAAGACCTATTGAAGATGACCAAGAAGTATATGATGATGTTGCAGAG
CAGGATGATATTAGCAGCCACAGTCAGAGTGAAGTGGAGGGATATTCCCTCCACCACCAGATGATGACATTTAT
GATGGGATTGAAGAGGAAGATGCTGATGATGGCTCCACACTACAGGTTCAAGAGAAGAGTAATACGTGGTCTGG
GGGATTTTGAAGATGTTAAAGGGAAAAGATGACAGAAAGAAAAGTATACGAGAGAAACCTAAAGTCTCTGACTCA
GACAATAATGAAGGTTTCATCTTTCCCTGCTCCTCTAAACAATTGGACATGGGAGATGAAGTTTACGATGATGTG
GATACCTCTGATTTCCCTGTTTCATCAGCAGAGATGAGTCAAGGAACTAATTTTGGAAAAGCTAAGACAGAAGAA
AAGGACCTTAAGAAGCTAAAAAAGCAGGAAAAAGAAGAAAAGACTTCAGGAAAAAATTTAAATATGATGGTGAA
ATTAGAGTCCCTATATTCAACTAAAGTTACAACCTTCCATAACTTCTAAAAAGTGGGGAACCCAGAGATCTACAGGTA
AAACCTGGTGAATCTCTAGAAGTTATACAAACCACAGATGACACAAAAGTTCTCTGCAGAAATGAAGAAGGGAAA
TATGGTTATGTCCTTCGGAGTTACCTAGCGGACAATGATGGAGAGATCTATGATGATATTGCTGATGGCTGCATC
TATGACAATGACT**AG**

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FIGURE 759

MAKYNTGGNPTEdVSVNSRPFRVTGPNSSSGIQARKNLFNNQGNASPPAGPSNVPKFGSPKPPVAVKPSSEEKPD
KEPKPPFLKPTGAGQRFGTPASLTTRDPEAKVGFLKPVGPKPINLPKEDSKPTFPWPPGNKPSLHSVNQDHDLP
LGPKSGPTPPTSENEQQAFFPKLTGVKGKFMSASQDLEPKPLFPKPAFGQKPPLSTENSHEDESPMKNVSSSKGS
PAPLGVRSGPLKPAREDSENKDHAGEISSLPFPGVVLKPAASRGGPGLSKNGEEKKEDRKIDAAKNTFQSKIN
QEELASGTTPPARFPKAPSKLTVGGPWGQSQEKEKGDKNSATPKQKPLPPLFTLGPPPPKPNRPPNVDLTkFHKTS
SGNSTSKGQTSYSTTSLPPPPPSHPASQPPLPASHPSQPPVPSLPPRNIKPPFDLKSPVNEDNQDGVTHSDGAGN
LDEEQDSEGETYEDIEASKEREKKREKEKKRLELEKKEQKEKEKKEQEIKKKFKLTGPIQVIHLAKACCDVKGG
KNELSFKQGEQIEIIRITDNPEGKWLGRtARGSYGYIKTTAVEIDYDSLKLKKDSLGApsRPIEDDQEVYDDVAE
QDDISSHSQSGSGGIFPPPPDDDIYDGIEEEDADDGSTLQVQEKsNTWSWgILKMLKGKDDRKKSIREKPKVSDS
DNNEGSSFPAPPKQLDMGDEVYDDVDTSDFPVSSAEMSQGTNFGKAKTEEKDLKKLKKQEKEEKDFRKKFKYDGE
IRVLYSTKVTTsITSKKWGTRDLQVKPGESLEVIQTDDTKVLCRNEEGKYGYVLRsYLADNDGEIYDDIADGCI
YDND

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FIGURE 760

TAGGATGGAAAGGCAGATGTAAAGTCCCTCATGGCGAAATATAACACGGGGGGCAACCCGACAGAGGATGTCTCA
GTCAATAGCCGACCCCTTCAGAGTCACAGGGCCAACTCATCTTCAGGAATACAAGCAAGAAAGAACTTATTCAAC
AACCAAGGAAATGCCAGCCCTCCTGCAGGACCCAGCAATGTACCTAAGTTTGGGTCCCCAAAGCCACCTGTGGCA
GTCAAACTTCTTCTGAGGAAAAGCCTGACAAGGAACCCAAGCCCCCGTTTCTAAAGCCCCTGGAGCAGGCCAA
AGATTGCGAACACCAGCCAGCTTGACCACCAGAGACCCCGAGGCGAAAAGTGGGATTTCTGAAACCTGTAGGCCCC
AAGCCCATCAACTTGCCCAAAGAAGATTCCAAACCTACATTTCCCTGGCCTCCTGGAAACAAGCCATCTCTTCAC
AGTGTAACCAAGACCATGACTTAAAGCCACTAGGCCCCGAAATCTGGGCCTACTCCTCCAACCTCAGAAAATGAA
CAGAAGCAAGCGTTTCCCAAATTGACTGGGGTTAAAGGGGAAATTTATGTCAGCATCACAAGATCTTGAACCCAAG
CCCCCTTTCCCCAAACCCGCTTTGGCCAGAAGCCGCCCCCTAAGTACCGAGAACTCCCATGAAGACGAAAGCCCC
ATGAAGAATGTGTCTTCATCAAAAGGGTCCCCAGCTCCCCTGGGAGTCAGGTCCAAAGCGGCCCTTTAAACCA
GCAAGGAAGACTCAGAAAATAAAGACCATGCAGGGGAGATTTCAAGTTTGCCCTTTCTGGAGTGGTTTTGAAA
CCTGCTGCGAGCAGGGGAGGCCTAGGTCTCTCCAAAATGGTGAAGAAAAAAGGAAGATAGGAAGATAGATGCT
GCTAAGAACACCTTCCAGAGCAAAATAAATCAGGAAGAGTTGGCCTCAGGGACTCCTCCTGCCAGGTTCCCTAAG
GCCCCCTTCTAAGCTGACAGTGGGGGGGCCATGGGGCCAAAGTCAGGAAAAGGAAAAGGGAGACAAGAATTCAGCC
ACCCGAAACAGAAGCCATTGCCTCCCTTGTTTACCTTGGGTCCACCTCCACCAAACCCAACAGACCACCAAAT
GTTGACCTGACGAAATTCACAAAACCTCTTCTGGAAACAGTACTAGCAAAGGCCAGACGTCTTACTCAACAACT
TCCCTGCCACCACCTCCACCATCCCATCCGGCCAGCCAACCACCATTGCCAGCATCTCACCATCACAACCACCA
GTCCCAAGCCTACCTCCCAGAAACATTAAACCTCCGTTTGACCTAAAAAGCCCTGTCAATGAAGACAATCAAGAT
GGTGTACGCACTCTGATGGTGCTGGAAATCTAGATGAGGAACAAGACAGTGAAGGAGAAACATATGAAGACATA
GAAGCATCCAAAGAAAGAGAGAAGAAAAGGGAAAAGGAAGAAAAGAGAGGTTAGAGCTGGAGAAAAGGAACAG
AAAGAGAAAGAAAAGAAAGAACAAGAAATAAAGAAGAAATTTAAACTAACAGGCCCTATTCAAGTCATCCATCTT
GCAAAAAGCTTGTTGTGATGTCAAAGGAGGAAAGAATGAACTGAGCTTCAAGCAAGGAGAGCAAATTGAAATCATC
CGCATCACAGACAACCCAGAAGGAAAATGGTTGGGCAGAACAGCAAGGGGTTTATATGGCTATATTAACAACCT
GCTGTAGAGATTGACTATGATTCTTTGAAACTGAAAAAGACTCTCTTGGTGCCCTTCAAGACCTATTGAAGAT
GACCAAGAAGTATATGATGATGTTGCAGAGCAGGATGATATTAGCAGCCACAGTCAGAGTGGAAAGTGGAGGGATA
TTCCCTCCACCACCAGATGATGACATTTATGATGGGATTGAAGAGGAAGATGCTGATGATGGTTTCCCTGCTCCT
CCTAAACAATTGGACATGGGAGATGAAGTTTACGATGATGTGGATACCTCTGATTTCCCTGTTTCATCAGCAGAG
ATGAGTCAAGGAACTAATTTTGGAAAAGCTAAGACAGAAGAAAAGGACCTTAAGAAGCTAAAAAAGCAGGAAAAA
GAAGAAAAAGACTTCAGGAAAAAATTTAAATATGATGGTGAAATTAGAGTCCATATTCAACTAAAGTTTCAACT
TCCATAACTTCTAAAAAGTGGGGAACCAGAGATCTACAGGTAAACCTGGTGAATCTCTAGAAGTTATACAAACC
ACAGATGACACAAAAGTTCTCTGCAGAAATGAAGAAGGGAAATATGGTTATGTCCTTCGGAGTTACCTAGCGGAC
AATGATGGAGAGATCTATGATGATATTGCTGATGGCTGCATCTATGACAATGACTAGCACTCAACTTTGGTCATT

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FIGURE 761

MAKYNTGGNPTEDVSVNSRPFRVTGPNSSSGIQARKNLFNNQGNASPPAGPSNVPKFGSPKPPVAVKPSSEEKPD
KEPKPPFLKPTGAGQRFGTPASLTTRDPEAKVGFLKPVGPKPINLPKEDSKPTFPWPPGNKPSLHSVNQDHDLP
LGPKSGPTPPTSENEQQAFFPKLTGVKGKFMSASQDLEPKPLFPKPAFGQKPPLSTENSHEDESPMKNVSSSKGS
PAPLGVRKSGPLKPAREDSENKDHAGEISSLPFGVVLKPAASRGGLGLSKNGEEKEDRKIDAAKNTFQSKIN
QEELASGTPPARFPKAPSKLTVGGPWGQSQEKEKGDKN SATPKQKPLPPLFTLGPPPPKPNRPPNVDLTKFHKTS
SGNSTSKGQTSYSTTSLPPPPPSHPASQPPLPASHPSQPPVPSLPPRNIKPPFDLKSPVNEDNQDGVTHSDGAGN
LDEEQDSEGETYEDIEASKEREKKREKEEKKRLELEKKEQKEKEKKEQEIKKKFKLTGPIQVIHLAKACCDVKGG
KNELSFQGEQIEIIRITDNPEGKWLGR TARGSYGYIKTTAVEIDYDSLKLKDSL GAPSRPIEDDQEVYDDVAE
QDDISSHSQSGSGGIFPPPPDDDIYDGIEEEDADDGFPAPPKQLDMGDEVYDDVDTSDFPVSSAEMSQGTNFGKA
KTEEKDLKKLKKQEKEEKDFRKKFKYDGEIRVLYSTKVTTTSITSKKWGTRDLQVKPGESLEVIQTDDTKVLCRN
EEGKYGYVLRSYLADNDGEIYDDIADGCIYDND

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FIGURE 762A

GCCCCAGGGCCTGGAGAGGTCTGAAGAAACCTGGGAGCCAGCAGCCCCGGGGCTCCACTCTGGGTTCTGAAAGCCC
ATTCCCTGCTCTGCGGCTCCTCCCACCCACCTCTTCTCAGCCTTGACAGCTCAAGGGTTGATCTCAGGAGTCCAG
GACCCAGGAGAGGGGAAGAATCTGAGGAACACAGAACAGTGAGCGTTGCCCCACACCCCATCTCCCGTCACCACATC
TCCCCTCACCCCTCACCCCTCCCTGCCTGGCCCTGGACCCCATCCCAGGACCTCCCTATCAGCTGACTTCTTCCAGT
GTCTTGACAGGCCCCCTCTGGGCTCCTCCCTCCCTGGCTTTTCTTACCCTCCCCCTCTATCGGCGTCTATCTGTA
GGTGGCCTGGGATTTATAAACTGGGTTCCGAATGCTGAATAAGAGACGGTAAGAGCCAAGGCAAAGGACAGCAC
TGTCTCTGCCTGCCTGATACCTCACCACCTGGGAACATCCCCCAGACACCTCTTAACCTCCGGGACAGAGATG

GCTGGCGGAGCCTGGGGCCGCCTGGCCTGTTACTTGGAGTTCTTGAAGAAGGAGGAGCTGAAGGAGTTCCAGCTT
CTGCTGCCAATAAAGCGCACTCCAGGAGCTCTTCGGGTGAGACACCCGCTCAGCCAGAGAAGACGAGTGGCATG
GAGGTGGCCTCGTACCTGGTGGCTCAGTATGGGGAGCAGCGGGCCTGGGACCTAGCCCTCCATACCTGGGAGCAG
ATGGGGCTGAGGTCACTGTGCGCCCAAGCCCAGGAAGGGGAGGCGCACTCTCCCTCATTCCCCTACAGCCCAAGT
GAACCCACCTGGGGTCTCCCAGCCAACCCACCTCCACCGCAGTGCTAATGCCCTGGATCCATGAATTGCCGGCG
GGGTGCACCCAGGGCTCAGAGAGAAGGGTTTTGAGACAGCTGCCTGACACATCTGGACGCCGCTGGAGAGAAATC
TCTGCCTCACTCCTCTACCAAGCTCTTCCAAGCTCCCCAGACCATGAGTCTCCAAGCCAGGAGTCACCCAACGCC
CCCACATCCACAGCAGTGCTGGGGAGCTGGGGATCCCCACCTCAGCCAGCCTAGCACCCAGAGAGCAGGAGGCT
CCTGGGACCCAATGGCCTCTGGATGAAACGTGAGGAATTTACTACACAGAAATCAGAGAAAGAGAGAGAGAGAAA
TCAGAGAAAGGCAGGCCCCCATGGGCAGCGGTGGTAGGAACGCCCCCAGGCGCACACCAGCCTACAGCCCCAC
CACCACCCATGGGAGCCTTCTGTGAGAGAGAGCCTCTGTTCCACATGGCCCTGGAAAAATGAGGATTTTAACCAA
AAATTCACACAGCTGCTACTTCTACAAAGACCTCACCCAGAAAGCCAAGATCCCCTGGTCAAGAGAAGCTGGCCT
GATTATGTGGAGGAGAATCGAGGACATTTAATTGAGATCAGAGACTTATTTGGCCCAGGCCTGGATACCCAAGAA
CCTCGCATAGTCATACTGCAGGGGGCTGCTGGAATTGGGAAGTCAACACTGGCCAGGCAGGTGAAGGAAGCCTGG
GGGAGAGGCCAGCTGTATGGGGACCGCTTCCAGCATGTCTTCTACTTCAGCTGCAGAGAGCTGGCCAGTCCAAG
GTGGTGAGTCTCGCTGAGCTCATCGGAAAAGATGGGACAGCCACTCCGGCTCCCATTAGACAGATCCTGTCTAGG
CCAGAGCGGCTGCTCTTCATCCTCGATGGTGTAGATGAGCCAGGATGGGTCTTGACAGGAGCCGAGTTCTGAGCTC
TGTCTGCACTGGAGCCAGCCACAGCCGGCGGATGCACTGCTGGGCAGTTTGCTGGGGAAACTATACTTCCCGAG
GCATCCTTCTGATCACGGCTCGGACCACAGCTCTGCAGAACCTCATTCTTCTTTGGAGCAGGCACGTTGGGTA
GAGTCTTGGGGTTCTCTGAGTCCAGCAGGAAGGAATATTTCTACAGATATTTACAGATGAAAGGCAAGCAATT
AGAGCCTTTAGGTTGGTCAAATCAAACAAGAGCTCTGGGCCCTGTGTCTTGTGCCCTGGGTGTCTGGCTGGCC
TGCACTTGCTGATGCAGCAGATGAAGCGGAAGGAAAACTCACACTGACTTCCAAGACCACCACAACCTCTGT
CTACATTACCTTGCCAGGCTCTCCAAGCTCAGCCATTGGGACCCAGCTCAGAGACCTCTGCTCTCTGGCTGCT
GAGGGCATCTGGCAAAAAAGACCCTTTTCACTCAGATGACCTCAGGAAGCATGGGTTAGATGGGGCCATCATC
TCCACCTTCTTGAAGATGGGTATTCTTCAAGAGCACCCCATCCCTCTGAGCTACAGCTTCAATCACCTCTGTTTC
CAAGAGTCTTTGCAGCAATGTCCTATGCTTGGAGGATGAGAAGGGGAGAGGTAACATTCTAATTGCATCATA
GATTTGAAAAAGACGCTAGAAGCATATGGAATACATGGCCTGTTTGGGGCATCAACCACACGTTTCTATTGGGC
CTGTTAAGTGATGAGGGGGAGAGAGAGATGGAGAACATCTTCACTGCCGGCTGTCTCAGGGGAGGAACCTGATG
CAGTGGGTCCCGTCCCTGCAGCTGCTGCTGCAGCCACACTCTCTGGAGTCCCTCCACTGCTTGTACGAGACTCGG
AACAAAACGTTCTTGACACAAGTGATGGCCCATTTTGAAGAAATGGGCATGTGTGTAGAAACAGACATGGAGCTC
TTAGTGTGCACTTTCTGCATTAAATTCAGCCGCCACGTGAAGAAAGCTTCAGCTGATTGAGGGCAGGCAGCACAGA
TCAACATGGAGCCCCACCATGGTAGTCCTGTTTCAAGGTGGGTCCCACTCACAGATGCCTATTGGCAGATTCTCTTC
TCCGTCTCAAGGTCACCAGAAACCTGAAGGAGCTGGACCTAAGTGGAACTCGCTGAGCCACTCTGCAGTGAAG
AGTCTTTGTAAGACCCTGAGACGCCCTCGCTGCCTCCTGGAGACCTTGGGTTGGCTGGCTGTGGCCTCACAGCT
GAGGACTGCAAGGACCTTGCCCTTTGGGCTGAGAGCCAACCAGACCTTGACCGAGCTGGACCTGAGCTTCAATGTG
CTCACGGATGCTGGAGCCAAACACCTTTGCCAGAGACTGAGACAGCCGAGCTGCAAGCTACAGCGACTGCAGCTG
GTCAGCTGTGGCCTCACGTCTGACTGCTGCCAGGACCTGGCCTCTGTGCTTAGTGCCAGCCCCAGCCTGAAGGAG
CTAGACCTGCAGCAGAAACCTGGATGACGTTGGCGTGCGACTGCTCTGTGAGGGGCTCAGGCATCCTGCCTGC
AAACTCATACGCCTGGGGCTGGACCAGACAACCTCTGAGTGATGAGATGAGGCAGGAAGTGGGGCCTGGAGCAG
GAGAAACCTCAGCTGCTCATCTTACAGACAGGAAACCAAGTGTGATGACCCCTACTGAGGGCCTGGATACGGGA
GAGATGAGTAATAGCACATCCTCACTCAAGCGGCAGAGACTCGGATCAGAGAGGGCGGCTTCCCATGTTGCTCAG

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FIGURE 762B

GCTAATCTCAAACCTCCTGGACGTGAGCAAGATCTTCCCAATTGCTGAGATTGCAGAGGAAAGCTCCCCAGAGGTA
GTACCGGTGGAACCTCTTGTGCGTGCCTTCTCCTGCCTCTCAAGGGGACCTGCATACGAAGCCTTTGGGGACTGAC
GATGACTTCTGGGGCCCCACGGGGCCTGTGGCTACTGAGGTAGTTGACAAAGAAAAGAACTTGTACCGAGTTCAC
TTCCCTGTAGCTGGCTCCTACCGCTGGCCCAACACGGGTCTCTGCTTTGTGATGAGAGAAGCGGTGACCGTTGAG
ATTGAATTCTGTGTGTGGGACCAGTTTCTGGGTGAGATCAACCCACAGCACAGCTGGATGGTGGCAGGGCCTCTG
CTGGACATCAAGGCTGAGCCTGGAGCTGTGGAAGCTGTGCACCTCCCTCCTTTGTGGCTCTCCAAGGGGGCCAT
GTGGACACATCCCTGTTCCAAATGGCCCACTTTAAAGAGGAGGGGATGCTCCTGGAGAAGCCAGCCAGGGTGGAG
CTGCATCACATAGTTCTGGAAAACCCAGCTTCTCCCCCTTGGGAGTCTCCTGAAAATGATCCATAATGCCCTG
CGCTTCATTCCCGTCACCTCTGTGGTGTGCTTTACCACCGCTCCATCCTGAGGAAGTCACCTTCCACCTCTAC
CTGATCCCAAGTACTGCTCCATTGCGAAGGAAGTGGAGCTCTGCTATCGAAGCCCTGGAGAAGACCAGCTGTTT
TCGGAGTTCTACGTTGGCCACTTGGGATCAGGGATCAGGCTGCAAGTGAAAGACAAGAAAGATGAGACTCTGGTG
TGGGAGGCCTTGGTGAAACCAGGAGATCTCATGCCTGCAACTACTCTGATCCCTCCAGCCCGCATAGCCGTACCT
TCACCTCTGGATGCCCCGCAGTTGCTGCACCTTTGTGGACCAGTATCGAGAGCAGCTGATAGCCCGAGTGACATCG
GTGGAGGTTGTCTTGGACAAACTGCATGGACAGGTGCTGAGCCAGGAGCAGTACGAGAGGGTGTGGCTGAGAAC
ACGAGGCCCAGCCAGATGCGGAAGCTGTTGAGCTTGGAGCCAGTCTGGGACCGGAAGTGCAAAGATGGACTCTAC
CAAGCCCTGAAGGAGACCCATCCTCACCTCATTATGGAAGTCTGGGAGAAGGGCAGCAAAAAGGGACTCCTGCCA
CTCAGCAGCTGAAGTATCAACACCAGCCCTTGACCCTTGAGTCTGGCTTTGGCTGACCCTTCTTTGGGTCTCAG
TTTCTTTCTCTGCAAACAAGTTGCCATCTGGTTTGCTTCCAGCACTAAAGTAATGGAAGTTTGATGATGCCTTT
GCTGGGCATTATGTGTCCATGCCAGGGATGCCACAGGGGGCCCCAGTCCAGGTGGCCTAACAGCATCTCAGGGAA
TGTCCATCTGGAGCTGGCAAGACCCCTGCAGACCTCATAGAGCCTCATCTGGTGGCCACAGCAGCCAAGCCTAGA
GCCCTCCGGATCCCATCCAGGCGCAAAGAGGAATAGGAGGGACATGGAACCATTTGCCTCTGGCTGTGTACAGG
GTGAGCCCCAAAATTGGGGTTTACGCTGGGAGGCCACGTGGATTCTTGGCTTTGTACAGGAAGATCTACAAGAGC
AAGCCAACAGAGTAAAGTGGAAGGAAGTTTATTTCAGAAAAATAAAGGAGTATCACAGCTCTTTTAGAATTTGTCTA
GCAGGCTTTCCAGTTTTTTACCAGAAAACCCCTATAAATTAAAAATTTTTTACTTAAATTTAAGAATTAATAAAAAAT
ACAAAAAAGAAAAATGAAAATAAAGGAATAAGAAGTTACCTACTCCAAAAA

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FIGURE 763

MAGGAWGRLACYLEFLKKEELKEFQLLLANKAHSRSSSGETPAQPEKTS GMEVASYLVAQYGEQRAWDLALHTWE
QMGLRSLCAQAQEGAGHSPSFPYSPSEPHLGSPSQPTSTAVLMPWIHELPAGCTQGSERRVLRQLPDTSGRRWRE
ISASLLYQALPSSPDHESP SQESPNAPTSTAVLGSWGSPQPQSLAPREQEAPGTQWPLDETSGIYYTEIRERERE
KSEKGRPPWAAVVGTPPQAHTSLQPHHHPWEPSVRESLCSTWPWKNEFDNQKFTQLLLLQRP HPRSQDPLVKRSW
PDYVEENRGHLIEIRDLFGPGLDTQEPRIVILQGAAGIGKSTLARQVKEAWGRGQLYGDRFQHVFYFSCRELAQS
KVVSLAELIGKDGATATPAP IRQILSRPERLLFILDGVDEPGWVLQEPSSELCLHWSQPQPADALLGSLLGKTI LP
EASFLITARTTALQNLIPSLEQARWVEVLGFSESSRKEYFYRYFTDERQAIRAFRLVKS NKELWALCLVPWVSWL
ACTCLMQMKRKEKLTLTSTKTTTTLCLHYLAQALQAQPLGPQLRDLCSLAAEGIWQKKT LFSRDDLRKHGLDGAI
ISTFLKMGILQEHP IPLSYSFIHLCFQEFFAAMS YVLEDEKGRGKHSNCI IDLEKTLEAYGIHGLFGASTTRFL L
GLLSDEGEREMENIFHCRLSQGRNLMQWVPSLQLLLQPHSLES LHCLYETR NKTFLTQVMAHFEEMGMCVETDME
LLVCTFCIKFSRHVKKLQLIEGRQHRSTWSP TMVVLFRWVPVTDAYWQILFSVLKVTRNLKELDLSGNSLSHSAV
KSLCKTLRRPRCLLET LRLAGCGLTAEDCKDLAFGLRANQTLTELDLSFNVLTDAGAKHLCQRLRQPSCKLQRLQ
LVSCGLTSDCCQDLASVLSASPSLKELDLQNNLDDVGVRLLC EGLRHPACKLIRLGLDQTTLSDEMRQELRALE
QEKPQLLIFSRRKPSVMTPTEGLDTGEMSNSTSSLKRQRLGSERAASHVAQANLKLLDVSKIFFIAETAEESSPE
VVPVELLCVPSPASQGD LHTKPLGTDDDFWGPTGFPVATEVVDKEKNLYRVHFPVAGSYRWPN TGLCFVMREAVTV
EIEFCVWDQFLGEINPQHSMVAGPLLD IKAEPGAVEAVHLP HFVALQGGHVDTS LFQMAHFKEEGMLLEKPARV
ELHHIVLENPSFSPLGVLLKMIHNALRFIPVTSVVL LYHRVHP EEVTFHLYLIPSDCSIRKELELCYRSPGEDQL
FSEFYVGH LGSGIRLQVKDKKDETLVWEALVKPGDLMPATTLIPPARI AVPSPLDAPQLLHFVDQYREQLIARVT
SVEVLDKLGQVLSQE QYERVLAENTRPSQMRKLFSLSQSWDRCKDGLYQALKETHPHLIMELWEKGSKKGLL
PLSS

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FIGURE 764

AACGTTCTGACACAAGTGATGGCCCATTTTGAAGAAATGGGCATGTGTGTAGAAACAGACATGGAGCTCTTAGT
GTGCACTTTCTGCATTAAATTCAGCCGCCACGTGAAGAAGCTTCAGCTGATTGAGGGCAGGCAGCACAGATCAAC
ATGGAGCCCCACCATGGTAGTCCTGTTTCAGGTGGGTCCCAGTCACAGATGCCTATTGGCAGATTCTCTTCTCCGT
CCTCAAGGTCACCAGAAACCTGAAGGAGCTGGACCTAAGTGGAAACTCGCTGAGCCACTCTGCAGTGAAGAGTCT
TTGTAAGACCCTGAGACGCCCTCGCTGCCTCCTGGAGACCCTGCGGTTGGCTGGCTGTGGCCTCACAGCTGAGGA
CTGCAAGGACCTTGCCTTTGGGCTGAGAGCCAACCAGACCCTGACCGAGCTGGACCTGAGCTTCAATGTGCTCAC
GGATGCTGGAGCCAAACACCTTTGCCAGAGACTGAGACAGCCGAGCTGCAAGCTACAGCGACTGCAGCTGGTCAG
CTGTGGCCTCACGTCTGACTGCTGCCAGGACCTGGCCTCTGTGCTTAGTGCCAGCCCCACCTGAAGGAGCTAGAC
CTGCAGCAGAACAACCTGGATGACGTTTCGCGTGGGACTGCTCTGTGAGGGGCTCAGGCATCCTGCCTGCAAACTC
ATACGCTTGGGGCTGGACCAGACAACCTCTGAGTGATGAGATGAGGAGGCAGGAACTGAGGGCCCTGGAGCAGGAGAAA
CCTCAGCTGCTCATCTTCAGCAGACGGAACCAAGTGTGATGACCCCTACTGAGGGCCTGGATACGGGAGAGATG
AGTAATAGCACATCCTCACTCAAGCGGCAGAGACTCGGATCAGAGAGGGCGGCTTCCCATGTTGCTCAGGCTAAT
CTCAAACTCCTGGACGTGAGCAAGATCTTCCCAATTGCTGAGATTGCAGGCAAGAGCCACGAGGAAAGCTCCCCA
GAGGTAGTACCGGTGGAACCTTGTGCGTGCCTTCTCCTGCCTCTCAAGGGGACCTGCATACGAAGCCTTTGGGG
ACTGACGATGACTTCTGGGGCCCCACGGGGCCTGTGGCTACTGAGGTAGTTGACAAAGAAAAGAACTTGTACCGA
GTTCACTTCCCTGTAGCTGGCTCCTACCGCTGGCCCAACACGGGTCTCTGCTTTGTGATGAGAGAAGCGGTGACC
GTTGAGATTGAATTCTGTGTGTGGGACCAGTTTCTGGGTGAGATCAACCCACAGCACAGCTGGATGGTGGCAGGG
CCTCTGCTGGACATCAAGGCTGAGCCTGGAGCTGTGGAAGCTGTGCACCTCCCTCACTTTGTGGCTCTCCAAGGG
GGCCATGTGGACACATCCCTGTTCCAAATGGCCCACTTTAAAGAGGAGGGGATGCTCCTGGAGAAGCCAGCCAGG
GTGGAGCTGCATCACATAGTTCTGGAAAACCCAGCTTCTCCCCCTTGGGAGTCCCTCCTGAAAATGATCCATAAT
GCCCTGCGCTTCATTCCCGTCACCTCTGTGGTGTGCTTTACCACCGCGTCCATCCTGAGGAAGTCACCTTCCAC
CTCTACCTGATCCCAAGTGACTGCTCCATTTCGGAAGGCCATAGATGATCTAGAAATGAAATTCCAGTTTGTGCGA
ATCCACAAGCCACCCCGCTGACCCCACTTTATATGGGCTGTGCTTACACTGTGTCTGGGTCTGGTTTCAGGGATG
CTGGAAATACTCCCCAAGGAACCTGGAGCTCTGCTATCGAAGCCCTGGAGAAGACCAGCTGTTCTCGGAGTTCTAC
GTTGGCCACTTGGGATCAGGGATCAGGCTGCAAGTGAAAGACAAGAAAGATGAGACTCTGGTGTGGGAGGCCTTG
GTGAAAACCAGGAAGGAACACCAGCCAGCCGTGGAACCTCAGGTGCAACAGAGACGCCAGGAGATACTAGTGCCCA
GCAGCCTGCGGCAGTACCAATGAAGCCAGAGAGGGCTTGGTGGATGACAAGGAGGCCTGAGTAGACCGCAGGTGG
GTCTGAGAAATGGGCTTAGGTGAGGCAGGTCTTTGAAGGATTTGTTCTTAATCATATGCGAGATGCTCAAAAGGC
TGGATGCTGCTTTTGTGGGTGAAGAGCAAGAAGAGAAAACAGGTTGTACACATACAGATGCAGATGGAGAGACA
GAGAAAAAAAAGGAAGAAGGCAGAGAAATGCACCAATTCTTGAGCTGTATTATCTCTGGACCTTGGGATTGTGGG
AGGCTTTATTTTACTACTGATTTTGCCTACACTGTTTTCTCAATTCTAGTTTTCTACAAAGATGATGTGTTAGC
TTTTTCACGCAAAAAGATTAAATTTAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 765

MRQELRALEQEKPOLLI FSRRKPSVMTPTEGLDTGEMSNSTSSLKRQRLGSEARAASHVAQANLKLLDVSKIFPIA
EIAGKSHEESSPEVVPVELLCVPSPASQGD LHTKPLGTDDDFWGPTGPVATEVVDKEKNLYRVHFPVAGSYRWP
TGLCFVMREAVTVEIEFCVWDQFLGEINPQHSWMVAGPLLDIKAEPGAVEAVHLPHFVALQGGHVDTSLFQMAHF
KEEGMLLEKPARVELHHIVLENPSFSPLGVLLKMIHNALRFIPVTSVLLYHRVHPPEEVTFLYLYLIPSDCSIRKA
IDDLEMKFQFVRIHKPPPLTPLYMGCRYTVSGSGSGMLEILPKELELCYRSPGEDQLFSEFYVGH LGSGIRLQVK
DKKDETLVWEALVKPGRNTSQPWNLR CNRDARRY

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FIGURE 766

GAATTCCCAAACGTGCACAGGGGAGTGAGGGCAGGGCGCTCGCAGGGGGCACGCAGGGAGGGCCCAGGGCGCCAG
GGAGGCCGCGCCGGGCTAATCCGAAGGGGCTGCGAGGTGAGGCTGTAAACGGGTCAATGTGTGGAATATTGGGGG
GCTCGGCTGCAGACTTGGCCAAATGGACGGGACTATTAAGGAGGCTCTGTCGGTGGTGAGCGACGACCAAGTCCCT
CTTTGACTCAGCGTACGGAGCGGCAGCCCATCTCCCCAAGGCCGACATGACTGCCTCGGGGAGTCTTGACTACGG
GCAGCCCCACAAGATCAACCCCTCCACCACAGCAGGAGTGGATCAATCAGCCAGTGAGGGTCAACGTCAAGCG
GGAGTATGACCACATGAATGGATCCAGGGAGTCTCCGGTGGACTGCAGCGTTAGCAAATGCAGCAAGCTGGTGGG
CGGAGGCGAGTCCAACCCCATGAACACAACAGCTATATGGACGAGAAGAATGGCCCCCTCCTCCCAACATGAC
CACCAACGAGAGGAGAGTCACTCGTCCCCGACAGCCCCACACTGTGGACACAGGAGCATGTGAGGCAATGGCTGGA
GTGGGCCATAAAGGAGTACAGCTTGATGGAGATCGACACATCCTTTTTCCAGAACATGGATGGCAAGGAAGTGTG
TAAATGAACAAGGAGGACTTCTCCGCGCCACCACCTCTACAACACGGAAGTGTGTTGTACACCTCAGTTA
CCTCAGGGAAAGTTCACTGCTGGCCTATAATACAACCTCCCACACCGACCAATCCTCAGATTGAGTGTCAAAGA
AGACCTTCTTATGACTCAGTCAGAAGAGGAGCTTGGGGCAATAACATGAATTCTGGCCTCAACAAAAGTCTCC
CCTTGGAGGGGCACAAACGATCAGTAAGAATACAGAGCAACGGCCCCAGCCAGATCCGTATCAGATCCTGGGCCC
GACCAGCAGTCGCCTAGCCAACCTGGAAGCGGGCAGATCCAGCTGTGGCAATTCTCCTGGAGCTGCTCTCCGA
CAGCGCCAACGCCAGCTGTATCACCTGGGAGGGGACCAACGGGGGAGTTCAAAATGACGGACCCCGATGAGGTGGC
CAGGCGCTGGGGCGAGCGGAAAAGCAAGCCCAACATGAATTACGACAAGCTGAGCCGGGCCCTCCGTTATTACTA
TGATAAAAAACATTATGACCAAAGTGCACGGCAAAAGATATGCTTACAAATTTGACTTCCACGGCATTGCCAGGC
TCTGCAGCCACATCCGACCGAGTCGTCCATGTACAAGTACCCTTCTGACATCTCCTACATGCCTTCTTACCATGC
CCACCAGCAGAAGGTGAACTTTGTCCCTCCCCATCCATCCTCCATGCCTGTCACTTCTCCAGCTTCTTTGGAGC
CGCATCACAATACTGGACCTCCCCACGGGGGAATCTACCCCAACCCCAACGTCCCCGCCATCCTAACACCCA
CGTGCTTCACACTTAGGCAGCTACTACTAGAAAGCTTCTTCTAGCTGAAGCCCATCCTGCACACTTACTGGATGC
TTTGGACTCAACAGGACATATGTGGCCTTGAAGGGAAGACAAAACCTGGATGTTCTTTCTTGTGGATAGAACCTT
TGTATTGTCTTTTAAAAACATTTTTTTTTAATGTTGGTAACTTTTGCTTCTCTACCTGAACAAAGAGATGAATA
ATTCCATGGGCCAGTATGCCAGTTTGAATTCTCAGTCTCCTAGCATCTTGTGAGTTGCATATTAAGATTACTGGA
ATGTTAAGTCATGGTTCTGAGAAAGAAGCTGTACGTTTTCTTTATGTTTTTATGACCAAAGCAGTTTCTTGTCA
ATACACGGGGTTCAGTATGACACAGAATCATGGACTTAACCCGTCATGTTCTGGTTTGAGATTTAGTGACAAATA
GAGGTGGGAAGCTTATAATCTAATTTTAGGAGGACCAAATTCAGCGGATGGCAACTGGAACATTGATTGTAAGGC
CAGTGAAGTTTTACCCAACTGGAATTTGATGGAAAGAAGGTTTGTGTGTTAAGACGCCAAGGGCATTGCAGAA
TCCCTCTCAGTGGACAGTATGCACTCAGCTGACCACTCTCTCTAGAAATAGTCAAGATATGAACAAAGAAATTT
AATGCAAATACATAACATTCTGAAAGACGGGGAATTAATTAATAATTTTAAATGATGACAGTGGTC
CCAGAACTTGAAAAGTTGTAGGGATTTCTAAACTCAAGCAGATTCGCAAGTGTGTGCGCTTGTGACACCATCA
GACCAGGGCCAACCAATCAGAAGGCAACTTACTGTATAAATTATGCAGAGTTATTTTCTATATCTCACAGTATT
AAAAATAAATAATTAATAAATAAATAAACGAGTTGACCTCGGTCACAAAAGCAGTTTTACTATCGAAT
CAATCGCTGTTATTTTTTTTTAATGTAATTTGTACATCTTTTTCAATCTGTACATTTGGGCTGTCTTGTATGTT
TTTATGCTCCTTTTTTAAAAGCATAATATGCCTATAGCTGAAAAGGAAACAGGGCTGTTTAAAGTCACTGACTTAT
GAGAAAGCAAAGCACTGGTACAGTTATTTAACAGGCATACACAAGCAGGGAAGATAATCCATTTAGATCTTTA
ATGCTTTGGAAATGCGTGTAACAGTACTGCAATAATCACAGCTCTGGGAAAAACAACGAACTTTCCCTTGTGGA
GAGGAGGGATTTTCTGCTCTATATAAGCAACATATTTTAGACATTAAATATATATAATTTTGCAGGTAATTG
TTGACTTTTTTAATAATTAAGTGTAAAGCTGACAACTGTCAAAGAAGACCATGTTGTAAATAATTTGACTAA
ATAATGGTTCCTTCTCTCAAAAAAAAAAAAAA

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FIGURE 767

MDGTIKEALSVVSDDQSLFDSAYGAAHLPKADMTASGSPDYGQPHKINPLPPQQEWINQPVRVNVKREYDHMNG
SRESPVDCSVSKCSKLVGGGESNPMNYSYMDEKNGPPPPNMTTNERRVIVPADPTLWTQEHVRQWLEWAIKEYS
LMEIDTSFFQNMDGKELCKMNKEDFLRATTLYNTEVLLSHLSYLRESSLLAYNTTSHTDQSSRLSVKEDPSYDSV
RRGAWGNMNSGLNKSPPLGGAQTISKNTEQRPQPDYQILGPTSSRLANPGSGQIQLWQFLLELLSDSANASCI
TWEGTNGEFKMTDPDEVARRWGERKSKPNMNYDKLSRALRYYYDKNIMTKVHGKRYAYKFDFHGIAQALQPHPT
SSMYKYPSDISYMP SYHAHQKVNFVPPHPSSMPVTSSSFFGAASQYWTSPYGGIYPNPVPRHPNTHVPSHLGS
YY

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FIGURE 768

GTTTGTGGCTGCGGCAGCAGGTAGCAAAGTGACGCCGAGGGCCTGAGTGCTCCAGTAGCCACCGCATCTGGAGA
ACCAGCGGTTACCATGGAGGGGATCAGTATATACACTTCAGATAACTACACCGAGGAAATGGGCTCAGGGGACTA
TGACTCCATGAAGGAACCCTGTTTCCGTGAAGAAAATGCTAATTTCAATAAAATCTTCCTGCCACCATCTACTC
CATCATCTTCTTAAGTGGCATTGTGGGCAATGGATTGGTCATCCTGGTCATGGGTTACCAGAAGAACTGAGAAG
CATGACGGACAAGTACAGGCTGCACCTGTCTAGTGGCCGACCTCCTCTTTGTCATCACGCTTCCCTTCTGGGCAGT
TGATGCCGTGGCAAAGTGGTACTTTGGGAACTTCCTATGCAAGGCAGTCCATGTCTATACACAGTCAACCTCTA
CAGCAGTGTCTCATCCTGGCCTTCATCAGTCTGGACCGCTACCTGGCCATCGTCCACGCCACCAACAGTCAGAG
GCCAAGGAAGCTGTTGGCTGAAAAGGTGGTCTATGTTGGCGTCTGGATCCCTGCCCTCCTGCTGACTATTCCCGA
CTTCATCTTTGCCAACGTCTAGTGAGGCAGATGACAGATATATCTGTGACCGCTTCTACCCCAATGACTTGTGGGT
GGTTGTGTTCCAGTTTCAGCACATCATGGTTGGCCTTATCCTGCCTGGTATTGTCTATCCTGTCTCTGCTATTGCA
TATCATCTCCAAGCTGTCTACACTCCAAGGGCCACCAGAAGCGCAAGGCCCTCAAGACCACAGTCATCCTCATCCT
GGCTTTCTTCGCCTGTTGGCTGCCTTACTACATTGGGATCAGCATCGACTCCTTCATCCTCCTGGAAATCATCAA
GCAAGGGTGTGAGTTTGAGAACACTGTGCACAAGTGGATTTCCATCACCGAGGCCCTAGCTTTCTTCCACTGTTG
TCTGAACCCCATCCTCTATGCTTTCTTGGAGCCAAATTTAAACCTCTGCCCAGCACGCACTCACCTCTGTGAG
CAGAGGGTCCAGCCTCAAGATCCTCTCCAAAGGAAAGCGAGGTGGACATTCTCTGTTTCCACTGAGTCTGAGTC
TTCAAGTTTTCACTCCAGCTTAACACAGATGTAAAAGACTTTTTTTTATACGATAAATAACTTTTTTTTAAGTTAC
ACATTTTTTCAGATATAAAAGACTGACCAATATTGTACAGTTTTTTATTGCTTGTGGATTTTTGTCTTGTGTTTCT
TTAGTTTTTGTGAAGTTTAATTGACTTATTTATATAAATTTTTTTTGTTCATATTGATGTGTGTCTAGGCAGGA
CCTGTGGCCAAGTTCTTAGTTGCTGTATGTCTCGTGGTAGGACTGTAGAAAAGGGAAGTGAACATTCCAGAGCGT
GTAGTGAATCACGTAAAGCTAGAAATGATCCCCAGCTGTTTATGCATAGATAATCTCTCCATTCCCGTGGAACGT
TTTTCTGTCTTAAAGACGTGATTTTGCTGTAGAAGATGGCACTTATAACCAAAGCCCAAAGTGGTATAGAAATG
CTGGTTTTTCAGTTTTTCAGGAGTGGGTTGATTTTCAGCACCTACAGTGTACAGTCTTGTATTAAGTTGTTAATAAA
AGTACATGTTAACTTACTTAGTGTTATG

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FIGURE 769

MEGISIYTS DNYTEEMGSGDYDSMKEPCFREENANFNKIFLPTIYSIIFLTGIVGNGLVILVMGYQKKLRSMTDK
YRLHLSVADLLFVITL PFWAVDAVANWYFGNFLCKAVHVIYTVNLYSSVLILAFISLDRYLAI VHATNSQRPRKL
LAEKV VYVGWIPALLLTIPDFIFANVSEADDRYICDRFYPNDLWVVVFQFHIMVGLILPGIVILSCYCIISK
LSHSGHQRKALKTTVILILAFFACWLPYYIGISIDSFILLEI IKQGEFENTVHKWISITEALAFFHCCLNPI
LYAFLGAKFKTSAQHALTSVSRGSSLKILSKGKRGGHSSVSTESESSSFHSS

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FIGURE 770

TGCCTGCTGAGGGTGGAGACCCACGAGCCGAGGCCTCCTGCAGTGTTCTGCACAGCAAACCGCACGCTATGGGCTG
ACAGCCGGGATCCCGCCAGCGACCAGATGCAGCACTGGAAGGAGCAGCGGGCCGCGCAGAAAGCTGATGTCCTGA
CCACTGGAGCTGGTAACCCAGTAGGAGACAACTTAATGTTATTACAGTAGGGCCCCGTGGGCCCCCTTCTTGTTT
AGGATGTGGTTTTCTACTGATGAAATGGCTCATTTTTGACCGAGAGAGAATTCCTGAGAGAGTTGTGCATGCTAAAG
GAGCAGGGGGCCTTTGGCTACTTTGAGGTACACATGACATTACCAAATACTCCAAGGCAAAGGTATTTGAGCATA
TTGGAAGAAGACTCCCATCGCAGTTCGGTTCTCCACTGTTGCTGGAGAATCGGGTTCAGCTGACACAGTTTCGGG
ACCTTCGTGGGTTTGAGTGAAATTTTACACAGAAGATGGTAACCTGGGATCTCGTTGGAAATAACACCCCCATTT
TCTTCATCAGGGATCCCATATTGTTTCCATCTTTTATCCACAGCCAAAAGAGAAATCCTCAGACACATCTGAAGG
ATCCGGACATGGTCTGGGACTTCTGGAGCCTACGTCTGAGTCTCTGCATCAGGTTTCTTTCTTGTTTCAGTGATC
GGGGGATTCCAGATGGACATCGCCACATGAATGGATATGGATCACATACTTTCAAGCTGGTTAATGCAATGGGG
AGGCAGTTTATTGCAAATTCATTATAAGACTGACCAGGGCATCAAAAACCTTTCTGTTGAAGATGCGGCGAGAC
TTTCCCAGGAAGATCCTGACTATGGCATCCGGGATCTTTTAAACGCCATTGCCACAGGAAAGTACCCCTCCTGGA
CTTTTACATCCAGGTCATGACATTTAATCAGGCAGAACTTTTCCATTTAATCCATTTCGATCTCACCAAGGTTT
GGCCTCACAAGGACTACCCTCTCATCCAGTTGGTAAACTGGTCTTAAACCGGAATCCAGTTAATTACTTTGCTG
AGGTTGAACAGATAGCCTTCGACCCAAGCAACATGCCACCTGGCATTGAGGCCAGTCTGACAAAATGCTTCAGG
GCCGCTTTTTGCCTATCCTGACACTACCGCCATCGCTGGGACCCAATTATCTTCATATACCTGTGAAGTGTG
CCTACCGTGCTCGAGTGGCCAACTACCAGCGTGATGGCCGATGTGCATGCAGGACAATCAGGGTGGTGCTCCAA
ATTACTACCCCAACAGCTTTGGTGCTCCGGAACAACAGCCTTCTGCCCTGGAGCACAGCATCCAATATTCTGGAG
AAGTGCGGAGATTCAACACTGCCAATGATGATAACGTTACTCAGGTGCGGGCATTCTATGTGAACGTGCTGAATG
AGGAACAGAGGAAACGTCTGTGTGAGAACATTGCCGGCCACCTGAAGGATGCACAAATTTTCATCCAGAAGAAAG
CGGTCAAGAACTTCACTGAGGTCCACCCTGACTACGGGAGCCACATCCAGGCTCTTCTGGACAAGTACAATGCTG
AGAAGCCTAAGAATGCGATTACACCTTTGTGCAGTCCGGATCTCACTTGGCGGCAAGGGAGAAGGCAAATCTGT
GAGGCCGGGGCCCTGCACCTGTGCAGCGAAGCTTAGCGTTTATCCGTGTAACCCGCTCATCACTGGATGAAGATT
CTCCTGTGCTAGATGTGCAATGCAAGCTAGTGGCTTCAAAAATAGAGAATCCCACTTTCTATAGCAGATTGTGTA
ACAATTTTAAATGCTATTTCCCCAGGGGAAAATGAAGGTTAGGATTAAACAGTCATTTAAAAAAAATTTGTTTT
GACGGATGATTGGATTATTCATTTAAAATGATTAGAAGGCAAGTTTCTAGCTAGAAATATGATTTTATTTGACAA
AATTTGTTGAAATTATGTATGTTTACATATCACCTCATGGCCTATTATATTAATAATGGCTATAAATATATAAA
AAGAAAAGATAAAGATGATCTACTCAGAAATTTTTATTTTCTAAGGTTCTCATAGGAAAAGTACATTTAATACA
GCAGTGTATCAGAAGATAACTTGAGCACCGTCATGGCTTAATGTTTATTCCTGATAATAATTGATCAAATTCAT
TTTTTTTCACTGGAGTTACATTAATGTTAATTCAGCACTGATTTCAACACAGATCAATTTGTAATTGCTTACATTT
TTACAATAAATAATCTGTACGTAAGAACA

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FIGURE 771

MADSRDPASDQM QHWKEQRAAQKADVLTTGAGNPVGDKLNVITVGPRGPELLVQDVVFTDEMAHFDRERIPERVVH
AKGAGAFGYFEVTHDITKYSKAKVFEHIGKKTPIAVRFSTVAGESGSADTVRDPRGFAVKFYTEDGNWDLVGNNT
PIFFIRDPILEPSEFIHSQKRNPQTHLKDPDMVWDFWSLRPESLHQVSFLFSDRGIPDGHHRMNGYGSHTFKLVNA
NGEAVYCKFHYKTDQGIKNLSVEDAARLSQEDPDYGIRDLFNAIATGKYPSWTFYIQVMTFNQAETFPFNPFDLT
KVWPHKDYPLIPVGKLVNLRNPVNYFAEVEQIAFDPSNMPPGIEASPDKMLQGRLFAYPDTHRHRLGPNYLHIPV
NCPYRARVANYQRDGPMMQDNQGGAPNYYPNSFGAPEQQPSALEHSIQYSGEVRRFNTANDDNVTQVRAFVYVNV
LNEEQRKRLCENIAGHLKDAQIFIQKKAVKNFTEVHPDYGSHIQALLDKYNAEKPKNAIHTFVQSGSHLAAREKA
NL

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FIGURE 772A

ACAGCACAGACAGATTGACCTATTGGGGTGTTCGCGAGTGTGAGAGGGAAGCGCCGCGGCCTGTATTTCTAGAC
CTGCCCTTCGCCTGGTTCTGTGGCGCCTTGTGACCCCGGGCCCCCTGCCGCTGCAAGTCGGAATTCGCTGTGCT
CCTGTGCTACGGCCTGTGGCTGGACTGCCTGCTGCTGCCCAACTGGCTGGCAAGATGAAGCTCTCCCTGGTGGCC
GCGATGCTGCTGCTGCTCAGCGCGGCGCGGGCCGAGGAGGAGGACAAGAAGGAGGACGTGGGCACGGTGGTGGC
ATCGACCTGGGGACCACCTACTCCTGCGTCGGCGTGTTCAGAAGCGCCGCTGGAGATCATGCCAACGATCAG
GGCAACCGCATCACGCCGTCCTATGTCGCCTTCACTCCTGAAGGGGAACGTCTGATTGGCGATGCCGCAAGAAC
CAGCTCACCTCCAACCCCGAGAACACGGTCTTTGACGCCAAGCGGCTCATCGGCCGCACGTGGAATGACCCGTCT
GTGACGACGACATCAAGTTCTTGGCGTTCAAGGTGGTTGAAAAGAAAACATAACCATACTTCAAGTTGATATT
GGAGGTGGGCAAACAAAGACATTTGCTCCTGAAGAAATTTCTGCCATGGTTCTCACTAAAATGAAAGAAACCGCT
GAGGCTTATTTGGGAAAGAAGGTTACCCATGCAGTTGTTACTGTACCAGCCTATTTTAATGATGCCCAACGCCAA
GCAACCAAAGACGCTGGAACATATTGCTGGCCTAAATGTTATGAGGATCATCAACGAGCCTACGGCAGCTGCTATT
GCTTATGGCCTGGATAAGAGGGAGGGGGAGAAGAACATCCTGGTGTGTTGACCTGGGTGGCGGAACCTTCGATGTG
TCTCTTCTCACCATTGACAATGGTGTCTTCGAAGTTGTGGCCACTAATGGAGATACTCATCTGGGTGGAGAAGAC
TTTGACCAGCGTGTATGGAACACTTCATCAAACTGTACAAAAAGAACGCGGCAAAGATGTCAGGAAAGACAAT
AGAGCTGTGCAGAACTCCGGCGCGAGGTAGAAAAGGCCAAACGGGCCCTGTCTTCTCAGCATCAAGCAAGAATT
GAAATTGAGTCCTTCTATGAAGGAGAAGACTTTTCTGAGACCTGACTCGGGCCAAATTTGAAGAGCTCAACATG
GATCTGTTCCGGTCTACTATGAAGCCCGTCCAGAAAGTGTGGAAGATTCTGATTTGAAGAAGTCTGATATTGAT
GAAATTGTTCTTGTGGTGGCTCGACTCGAATTCCAAAGATTGAGCAACTGGTTAAAGAGTTCTTCAATGGCAAG
GAACCATCCCGTGGCATAAACCCAGATGAAGCTGTAGCGTATGGTGTGCTGTGTCAGGCTGGTGTGCTCTCTGGT
GATCAAGATACAGGTGACCTGGTACTGCTTGATGTATGTCCCTTACACTTGGTATTGAACTGTGGGAGGTGTC
ATGACCAAACCTGATTCCAAGGAACACAGTGGTGCCTACCAAGAAGTCTCAGATCTTTTCTACAGCTTCTGATAAT
CAACCAACTGTTACAATCAAGGTCTATGAAGGTGAAGAGCCCTGACAAAAGACAATCATCTTCTGGGTACATTT
GATCTGACTGGAATTCCTCCTGCTCCTCGTGGGGTCCACAGATTGAAGTCACCTTTGAGATAGATGTGAATGGT
ATTCTTCGAGTGACAGCTGAAGACAAGGGTACAGGGAACAAAAATAAGATCACAAATCACCAGTACGAGTACGC
CTGACACCTGAAGAAATCGAAAGGATGGTTAATGATGCTGAGAAGTTTGTGAGGAAGACAAAAGCTCAAGGAG
CGCATTGATACTAGAAATGAGTTGGAAGCTATGCCTATTCTCTAAAGAATCAGATTGGAGATAAAGAAAAGCTG
GGAGGTAAACCTTCTCTGAAGATAAGGAGACCATGGAAGAAAGCTGTAGAAGAAAGATTGAATGGCTGGAAAGC
CACCAGATGCTGACATTGAAGACTTCAAAGCTAAGAAGAAGGAAGTGAAGAAATGTTCAACCAATTATCAGC
AAACTCTATGGAAGTGCAGGCCCTCCCCAACTGGTGAAGAGGATACAGCAGAAAAAGATGAGTTGTAGACACTG
ATCTGCTAGTGCTGTAATATTGTAATACTGGACTCAGGAACCTTTGTTAGGAAAAAATTGAAAGAACTTAAGTC
TCGAATGTAATTGGAATCTTACCTCAGAGTGGAGTTGAACTGCTATAGCCTAAGCGGCTGTTTACTGCTTTTC
ATTAGCAGTTGCTCACATGTCTTTGGGTGGGGGGGAGAAGAAGAAATTGGCCATCTTAAAAAGCAGGTAAAAAACC
TGGGTAGGGTGTGTGTTACCTTCAAATGTTCTATTTAACTGGGTGATGTGCATCTGGTGTAGGAAGTTT
TTTCTACCATAAGTGACACCAATAAATGTTTGTTATTTACACTGGTCTAATGTTTGTGAGAAGCTTCTAATTAGA
TCAATTACTTATTTTAGGAAATTTAAGACTAGATACTCGTGTGTGGGGTGAGGGGAGGGAGTATTGGTATGTTG
GGATAAGGAAACACTTCTATTTAATGCTTCCAGGGATTTTTTTTTTTTTTTTTTTTAAACCCTCCTGGGCCCAAGTGA
TCCTTCCACCTCAGTCTCCAGCTAATTGAGACCACAGGCTTGTTACCACCATGCTCGGCTTTTGCATTAATCTA
AGAAAAGGGGAGAGAAGTTAATCCACATCTTTACTCAGGCAAGGGGCATTTACAGTGCCCAAGAGTGGGGTTTT
CTTGAACATACTTGGTTTCCTATTTCCCTTATCTTTCTAAACTGCCTTTCTGGTGGCTTTTTTTTAAATTATT
ACTAATGATGCTTTTATAGCTGCTTGGATTCTCTGAGAAATGATGGGGAGTGAGTGATCACTGGTATTAACTTTA
TACACTTGGATTTCAATTTGTAACCTTTAGGATGTAAAGGTATATTGTGAACCTAGCTGTGTGAGAATCTCCATCC
CTGAAATTTCTCATTAGTGGTACTGGGGTGGGATCTTGGATGGTGACATTGAACTACACTAAATCCCTCACTA
TGAATGGGTGTTTAAAGGCAATGGTTTGTGTCAAACCTGGTTTAGGATTACTTAGATTGTGTTCTGAAGAAAAG
AGTCCAGGTAAATGGTATGATCAATAAAGGACAGGCTGGTGCTAACATAAAATCCAATATTGTAATCCTAGCACT
TTGGGAGGCCAAGGCGGGTGGATCACAAGGTCAAGAGATAGAGACCATCTTGCCAAACATGGTGAAGTCCATCT
CTACTGAAAAATACAAAAATTAGCTGGGCGTGGTAGTGCAAGCTGAAGGCTGAGGCAGGAGAATCACTCGAACCCG
GGAGGCAGAGGTTGCAGTGAGCCGAGATCACACCACTGTACTCCAGCCCGGCACTCCAGCCTGGCGACAAGAGTG
AGACTCCACCTCAAAAAAAAAAAAAAGAATCCAATACTGCCAAGGATAGGTATTTTATAGATGGGCAACTGGCT

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FIGURE 772B

GAAAGGTTAATTCTCTAGGGCTAGTAGAACTGGATCCCAACACCAAACCTCTTAATTAGACCTAGGCCTCAGCTGC
ACTGCCCCGAAAAGCATTGTTGGGCAGACCCTGAGCAGAATACTGGTCTCAGGCCAAGCCCAATACAGCCATTAAAGA
TGACCTACAGTGCTGTGTACCCTGGGGCAATAGGGTTAAATGGTAGTTAGCAACTAGGGCTAGTCTTCCCTTACC
TCAAAGGCTCTCACTACCGTGGACCACCTAGTCTGTAACTCTTTCTGAGGAGCTGTTACTGAATATTAAAAAGAT
AGACTTCAAAAAAAAAAAAAAAAAAAAA

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FIGURE 773

MKLSLVAAMLLLLSAARAEEDKKEDVGTVVGIDLGTTYSCVGVFKNGRVEI IANDQGNRITPSYVAFTPEGERL
IGDAAKNQLTSNPENTVFDKRLIGRTWNDPSVQQDIKFLPFKVVEKKTOPYIQVDIGGGQTKTFAPEEISAMVL
TKMKETAAYLGKKVTHAVVTPAYFNDAQRQATKDAGTIAGLNMRI INEPTAAAIAYGLDKREGEKNIILVFDL
GGGTFDVSLTIDNGVFEVVATNGDTHLGGEDFDQVRMEHFIKLYKKKTGKDVRKDNRAVQKLRREVEKAKRALS
SQHQARIEIESFYEGEDFSETLTRAKFEELNMDLFRSTMKPVQKVLEDSDLKKSDIDEIVLVGGSTRIPKIQQLV
KEFFNGKEPSRGINPDEAVAYGAAGVLSGDQDTGDLVLLDVCPLTLGIETVGGVMTKLIPRNTVVPTTKKSQI
FSTASDNQPTVTIKVYEGERPLTKDNHLLGTFDLTGIPPAPRGVPQIEVTFEIDVNGILRVTAEDKGTGNKNKIT
ITNDQNRLTPEEIERMVNDAEKFAEEDKKLKERIDTRNELESYAYSLKNQIGDKEKLGGKLSSSEDKETMEKAVEE
KIEWLESHQDADIEDFKAKKKELEEIVQPIISKLYGSAGPPPTGEEDTAEKDEL

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FIGURE 774A

TCTCACTATAGGGCTCGAGCGGCCGCGGGCAGGTCTGACCACAGTGGTTCCGGGGAGAAGCCTTCCAGGACCC
ATGTGTAGGCACAACCTGTTTTCCCTGATCAGGATACTTCCGGCACTCAACAGAGGAAAGAAATTCCTAAGGGAAC
ACTGCTCAGAAAGTACTGCAGCATGTCTTCAAATGCCTGAGGATCAAGTTGGAAAACCTAGAAGCAACAGAAAACA
CAATAAGCGCAATGGCGGCGGCCGCGGGCAGGAGCAGCAACAGTTCTACCTGCTGCTGGGAAACCTGCTCAGCCCCG
ACAATGTGGTCCGGAAACAGGCAGAGGAAACCTATGAGAATATCCCAGGCCAGTCAAAGATCACATTCTCTTAC
AAGCCATCAGAAATACAACAGCTGCTGAAGAGGCTAGACAAATGGCCGCCGTTCTCCTAAGACGTCTCTTGTCTT
CTGCATTTGATGAAGTCTATCCAGCACTTCCCTCTGATGTTTCTGAGCTGCCATCAAGAGTGAGCTACTCATGATTA
TTCAGATGGAAACACAATCTAGCATGAGGAAAAAGTTTGTGATATTGCGGCAGAACTGGCCAGGAATTTAATAG
ATGAGGATGGCAATAACCAGTGGCCGAAGGTTTGAAGTTCCCTTTTTGATTAGTCAGCTCTCAAATGTGGGAC
TGCGGGAAGCTGCCCTTCACATTTTCTGGAACCTTCTGGAATTTTTGGGAACCAGCAACAACACTATTTAGATG
TCATCAAACGAATGTTAGTTTCTGAGTATGCAAGATCAGGAACACCCGTCGATCAGGACGTTATCTGCTAGAGCTA
CAGCTGCATTTATACTTGCAAATGAGCATAATGTTGCTCTGTTCAAACATTTTGCAGACTTGCTACCGGGATTCC
TACAGGCGGTAAATGACTCGTGCTACCAGAATGATGATTCTGTCTAAATCCCTCGTTGAGATTGCAGATACTG
TTCCAAAGTATTTGCGTCTCACTTGGAAAGCAACTCTACAGCTAAGTCTAAAGTTGTGTGGAGACACTAGCCTCA
ACAATATGCAACGCCAGCTTGCCCTTGAAGTGATCGTCAACCTCTCTGAGACTGCAGCTGCTATGTTAAGAAAAC
ATACCAATATTGTTGCACAGACTATTCTCAGATGTTAGCAATGATGGTTGATTGGAAGAAGATGAGGACTGGG
CAAATGCAGATGAAGTAGAAGATGATGATTTTGACAGCAATGCAGTTGCAGGCGAGAGTGCTCTAGATCGAATGG
CTTGCGGACTTGGTGGAAAGCTCGTTCTGCCGATGATCAAGGAACACATTATGCAAATGCTTCAAATCCTGACT
GGAAATACCGGCATGCAGGATTGATGGCCTTATCTGCCATTGGTGAAGGTTGCCACCAGCAAATGGAAGGAATTC
TAAATGAGATCGTAAATTTTGTCTTACTTTTTCTCCAGGATCCTCATCCAAGAGTAAGGTATGCAGCCTGTAATG
CCGTGGGACAGATGGCTACAGATTTTGCACCTGGTTTTCCAAAAGAAATTCATGAGAAGGTGATTGCAGCTCTGC
TGCAGACCATGGAAGACCAAGGCAATCAACGTGTGCAGGCCCCATGCAGCTGCTGCCCTCATTAACTTTACTGAAG
ACTGTCCCAAGTCACTACTTATTCCATACTTGGATAATTTGGTGAAACATCTGCATTCCATTATGGTACTGAAGC
TTCAAGAGCTGATTTCAGAAAGGCACCAAGTTAGTTTTGGAACAAGTTGTGACATCCATTGCATCAGTTGCCGATA
CTGCAGAAGAAAAATTTGTCCCTACTATGATTTTATTTATGCCATCACTGAAGCACATCGTTGAGAATGCGGTTT
AAAAAGAACTGAGACTTCTGAGAGGAAAAACTATTGAATGCATTAGCCTCATTGGTCTGGCTGTTGGGAAGGAAA
AATTCATGCAGGATGCATCAGATGTGATGCAGCTTTTGTAAAGACCCAGACAGACTTCAATGATATGGAAGATG
ATGATCCTCAGATCTCTTACATGATCTCAGCATGGGCCAGAATGTGCAAAATCCTTGGAAAAGAAATTCAGCAAT
ACCTTCCAGTGGTTATGGGGCCTTTAATGAAGACGGCTTCAATTAAGCCCGAAGTAGCCCTTTTAGATACCCAAG
ACATGGAGAATATGAGTGATGATGATGGTTGGGAATTTGTGAACCTTGGAGATCAGCAAAGCTTTGGTATTAAAA
CTGCAGGACTAGAAGAAAAATCAACTGCTTGCCAGATGTTGGTTTGTCTATGCTAAGGAGTTAAAGGAAGGCTTTG
TGGAGTACACCGAACAGGTTGTCAAACCTGATGGTCCCTTTACTGAAATTTTATTTCCACGATGGTGTTCGAGTGG
CAGCAGCGGAATCCATGCCTCTTCTCTGGAGTGTGCAAGAGTCCGTGGTCTGAGTATCTCACACAGATGTGGC
ATTTTATGTGTGATGCTCTAATTAAGGCCATTGGTACAGAACCAGATTTCAGACGTCCCTCTCAGAAATAATGCATT
CTTTTGCAAAGTGCAATGAAGTAATGGGAGATGGATGCCTTAATAATGAACACTTTGAAGAAGCTGGGAGGTATAT
TGAAAGCAAAGCTTGAAGAACATTTTAAAAATCAAGAATTACGACAAGTTAAAAAGACAAGATGAAGACTATGATG
AACAGGTGCAAGAGTCACTACAAGATGAGGATGATAATGATGTTTATATTCTGACCAAAGTGTGAGATATTTTAC
ACTCAATATTTCAGTAGCTACAAAGAAAAGGTGTTACCATGGTTTGAACAGCTGCTTCCATTAAATGTCAACCTCA
TTTGTCCACATAGACCATGGCCAGACAGACAATGGGGATTATGCATCTTTGATGATGTCATAGAACTGTAGTC
CAGCCTCATTTAAATACGCAGAAATATTTCTTAAGACCAATGCTCCAATATGTATGTGACAACAGCCCAGAAGTCA
GGCAAGCAGCTGCATATGGCCTGGGAGTTCATGGCACAGTACGGTGGAGATAATTATCGCCCTTTTTGTACAGAAG
CACTTCCCCTGCTGGTAAGAGTTATTTCAGTCTGCGGATTCTAAGACCAAAGAAAATGTCAATGCTACAGAGAACT
GCATCTCAGCAGTAGGGAAAAATCATGAAGTTCAAGCCTGACTGTGTAAACGTTGAAGAGGTCTTCCACACTGGT
TGTCTTGGCTTCCACTACATGAAGATAAAGAAGAAGCTGTTTCAGACTTTCAATTATCTGTGTGACCTGATTGAAA
GTAATCATCCAATTGTTCTTGGCCCAAACAATACCAATCTGCCCAAATATTTAGTATAATTGCGGAAGGAGAAA
TGCACGAGGCAATTAACATGAAGATCCTTGTGCCAAACGCTCTGGCCAATGTCGTTGCGCAAGTACAGACTTCTG
GAGGACTGTGGACTGAGTGCATAGCACAGCTCAGTCTGAGCAGCAGGCCGCCATTTCAGGAGCTCCTGAACTCTG
CGTGAAGGGCCTTAATGTCAACCCACCAGAAAATAACTCCAATAAACGCTTACCCTTTCTTTAGGTTTCTTTG

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FIGURE 774B

TTTTGTTTTTGAGCAAAAGAGATCGGTAGTGTGTGTGTAGGCCATTCTTCTGGAGAGCCACAAGCAGGAAGAGC
AGCGCTGTGTTGCAGAATGGAGTTTCCATGGATTCTACCAGACCACTGAAGGAGTTCCTGGAAGCCCTGCGTAC
GTAGCACTGAAGACTATTTTTCTATTGGTATAACCCGCCACCTGAAGGGGAAAGGGAAATCAAATTAATTTTC
TCGTTAGACATAAGGAAATTTAAGGAAAAACAGCTTTAAGAACAGTTACTCAGCGTAGATGTGTGTTTCACACAAA
TTGCCTTGCAATTCAGTGTTCATTGTGAATTGGGAGTGTGAGTCTTTCTGTAGGGTACAAAGAAGCCTCCTACCCA
GCAAACCAGTAGACCCAAAAGTTGAAAAAACTGGATGACAGACAACAAGCATGAAGATGGCATATTTGATGTCA
CTTTGGTTCTTTTTCCCAGAAGGCTTATACAGTGAAGTCACTCGGGAAGCTTTCCAGCTTCAGCCCTTGAATGTGA
AGTGTCAATTGGCATGTCTGGCAGTAGTCTCTCATTCACTCCCAATAACAACATTGAATACAAAAGAGGCTTGTG
TAAAAACTCAGTACTGTCTGGCTTGGATTCAATTCATGTTTTTTAATATAAGAATGATCTAATATTTTTTTAAAG
TAATAGCTATCAGTAATAGCTGAGTGTTTTTTCCCCTAATATTTTCCTTGTGCAATTCAGACTTAAGCATCGAGT
TTTTACCATCTTCCACTTTAAGCTAAGTTATGATACCTATTCATTCAACAATTGGTGTCTTTTTAAGGTTTGCA
AATTTCAAGCAATTTTGTAGCTAAGATTGTTCTGATCAGCTCAAAAAGATTGGCTTAGTGTTCATTGCAAAAT
TATAATTGCTGTAGAGCCACACACAACTTTTGAACTTTTAATTATAAGTGTATGGCTAAAGTTATTTACTGAAA
ATTTCAAGTAAAATGTGTGAATGTTTCTTTATGTATTAACCTCATAGCAGTAAATGACTTGCTGTTGTTAATTTT
TCTAAGGCATCTTAATAGACTTCTCTTGGAAAAACCTTTCCAAGGTGTTAACATTTTTATAGTTTGTACTAAATT
TAACCGTGATATAAAAATGAATTTTATGCATAGATCAGAATTTTAAATTAAAGGTTTTTTCTTTAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 775

MAAAAAEQQQFYLLLGNNLLSPDNVVRKQAEETYENIPGQSKITFLLQAIRNTTAAEEARQMAAVLLRRLSSAFD
EVYPALPSDVQTAIKSELLMI IQMETQSSMRKKVCDIAAELARNLIDEDGNNQWPEGLKFLFDSVSSQNVGLREA
ALHIFWNFPGIFGNQQQHYLDVIKRLVQCMQDQEHPSIRTL SARATAAFILANEHNVALFKHFADLLPGFLQAV
NDSCYQND DSVLKS LVEIADTVPKYLRPHLEATLQLSLKLCGDTSLNNMQRQLALEVIVTLSETAAAMLRKHTNI
VAQTIPQMLAMMVDLEEDWDANADELEDDDDFDSNAVAGESALDRMACGLGGKLVLP MIKEHIMQMLQNP DWKYR
HAGLMALSAIGEGCHQQMEGILNEIVNFVLLFLQDPHPRVRYAACNAVGMATDFAPGFQKKFHEKVIAALLQTM
EDQGNQRVQAHAAAALINFTEDCPKSLLIPYLDNLVKHLHSIMVLKLQELIQKGTKLVLEQVVTSTIASVADTAE
KFVPYYDLFMPSLKHIVENAVQKELRLLRGKTIECISLIGLAVGKEKFMQDASDVMQLLLKTQTD FNDMEDDDPQ
ISYMISAWARMCKILGKEFQQYLPVVMGPLMKTASIKPEVALD TQDMENMSDDD GWEFVNLGDQQSFGIKTAGL
EEKSTACQMLVCYAKELKEGFVEYTEQVVKLMVPLLKFYFHDGVRVAAAESMPLLECARVRGPEYLTQMWHFMC
DALIKAIGTEPDS DVLSEIMHSFAKCI EVMGDGCLNNEHFEELGGILKAKLEEHFKNQELRQVKRQDEDYDEQVE
ESLQDEDDNDVYILTKVSDILHSIFSSYKEKVL PWFEQLLPLIVNLICPHRPWPD RQWGLCIFDDVIEHCSPASF
KYAEYFLRPM LQYVCDNSPEVRQAAAYGLGVMAQYGGDN YRPFCTEALPLLVRVIQSADSKTKENVNATENCISA
VGKIMKFKPDCVNVEEVLPHWLSWLPLHEDKEEAVQTFNYLCDLIESNHP IVLGPNNNTNLPKIFSIIAEGEMHEA
IKHEDPCA KRLANVVRQVQTSGGLWTECIAQLSPEQQAATQELLNSA

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FIGURE 776A

CGAAGGACCTGAAGGAAAGTGAAAAAGTCCAAAGTTTAAGATGCCAGAGATGCATTTTAAGACTCCAAAGATATC
CATGCCAGATATTGACCTGAATCTCACAGGTCCAAAAATAAAAGGAGATGTGGATGTTACAGGCCCTAAGGTAGA
GGGAGATCTGAAAGGTCTGAAGTTGACCTCAAAGGCCCCAAAGTGGACATTGATGTCCCAGATGTTAATGTTCA
GGGTCCAGACTGGCACCTGAAGATGCCCAAGATGAAAATGCCTAAGTTCAGTATGCCTGGCTTCAAAGGAGAGGG
CCCAGATGGTGGATGTGAAGCTGCCCATAGGCTGACATTGATGTCTCAGGACCAAAGTGGACATTGAAGGCCCTG
ATGTTAACATTGAAGGACCAGAGGGGAAAGTTGAAAGGGCCTAAGTTCAGATGCCAGAGATGAATATCAAAGCCC
CCAAGATCTCCATGCCTGATATTGACTTAAACCTGAAAGGACCCAAGTGAAGGGTGTGTGGATGTTTCCCTTCC
TAAAGTGGAAAGGTGACCTCAAGGGCCCCAGAAGTTGACATCAAGGGCCCCAAAGTGGACATTGACGCACCTGATGT
TGATGTTTCATGGCCCAGACTGGCACCTAAAGATGCCCAAGATGAAAATGCCCAAGTTCAGCATGCCTGGCTTCAA
AGCAGAGGGGCCCTGAAGCTGGAATGTGAACCTGCCCAAGGCTGACGTTGATGTCTCAGGCCCCAAAGTGGATATT
AATGCCCCAGATGTGGGTGTTCAAGGCCCAGACTGGCACCTGAAGATGCCCAAGGTGAAAATGCCAAAGTTCAGC
ATGCCTGGCTTCAAAGGAGAGGGGCCAGATGGGGATGTGAAGCTGCCCAAGGCTGACATTGATGTCTCAGGACCC
AAAGTGGACATTGAAGGCCCTGATGTTAACATTGAAGGACCAGAGGGGAAAGTTGAAAGGGCCTAAGTTCAGATG
CCAGAGATGAATATCAAAGCCCCAAGATCTCCATGCCTGATATTGACTTAAACCTGAAAGGACCCAAAGTGAAG
GGTGTGTGGATGTTTCCCTTCTTAAAGTGGAAAGGTGACCTCAAGGGCCCCAGAAGTTGACATCAAGGGCCCCAAA
GTGGACATTGACGCACCTGATGTTGATGTTTCATGGCCCAGACTGGCACCTAAAGATGCCCAAGATAAAAAATGCC
AAGATCAGCATGCCTGGCTTCAAAGGAGAAGGTCCAGATGTGGACGTGAACCTGCCCAAGGCTGACATTGATGTC
TCAGGACCGAAAGTGGATGTTGAATGTCCCGATGTGAATATCGAAGGACCTGAAGGAAAGTGGAAAAGTCCAAAG
TTTAAGATGCCAGAGATGCATTTTAAGACTCCAAAGATATCCATGCCAGATATTGACCTGAATCTCACAGGTCCA
AAAATAAAAGGAGATGTGGATGTTACAGGCCCTAAGGTAGAGGGAGATCTGAAAGGTCTGAAGTTGACCTCAA
GGCCCCAAAGTGGACATTGATGTCCCAGATGTTAATGTTTCAGGTCCAGACTGGCACCTGAAGATGCCCAAGATG
AAAATGCCCAAGTTCAGCATGCCTGGCTTCAAAGCAGAGGGGCCCTGAAGTGGATGTGAACCTGCCCAAGGCTGAC
GTTGATGTCTCAGGCCCCAAAGTGGACGTTGAAGGCCCTGATGTTAACATTGAAGGACCAGAGGGGAAAGTTGAAA
GGGCCCCAAGTTCAGATGCCAGAGATGAATATCAAAGCCCCAAGATCCCATGCCTGACTTTGATTTGCATCTG
AAAGGTCCCAAGGTGAAGGGCGATGTGGATATTTCTCTGCCCAAGTGGAAAGGTGACCTCAAGGGCCCTGAAGTT
GACATCAGGGGTCCCAAAGTGGACATTGATGTCCCGATGTGGCGTTCAAGGCCCAGACTGGCACCTAAAAATG
CCCAAAGTGAATAATGCCCAAATTCAGCATGCCTGGCTTCAAAGGAGAGGGGCCAGATGTGGATGTGAACCTGCC
AAGGCTGACCTTGATGTCTCAGGACCCAAGGTGGACATTGATGTTCCAGATGTGAATATCGAAGGCCCAGAGGGA
AAGTTGAAAGGTCCCAAATTCAAATGCCTGAGATGAACATCAAAGCCCCCAAGATCTCCATGCCTGACATTGAT
CTTAACCTGAAAGGTCCCAAAGTGAAGGGTGACATGGATGTGTCTCTGCCAAAAGTGGAAAGGTGACATGAAAGTT
CCTGACGTGGATATTAAAGGCCCCAAAGTGGATATTAATGCCCCAGATGTGGATGTTCAAGGCCCAGACTGGCAC
CTGAAGATGCCCTAAAATAAAAATGCCCAAGATCAGCATGCCTGGCTTCAAAGGAGAAGGTCCAGAAGTGGACGTG
AACCTGCCCAAGGCTGACCTTGACGTCTCAGGACCCAAGGTGGACGTTGATGTTCCAGATGTGAATATTGAAGGT
CCAGATGCCAAACTGAAGGGCCCTAAATTCAAGATGCCAGAGATGAACATCAAAGCCCCCAAGATCTCCATGCCT
GACTTTGATTGTCATCTGAAAGGCCCTAAGGTGAAAGGAGATGTGGATGTTTCTCTGCCTAAGATGGAAGGTGAT
CTAAAGGGTCTGAAGTTGACATCAAGGGCCCCAAAGTGGACATTAATGCTCCAGATGTGGATGTTCAAGGCCCA
GACTGGCACCTGAAGATGCCCAAGGTGAAAATGCCCAAGTTCAGCATGCCTGGCTTCAAAGGAGAGGGGCCAGAT
GTGGATGTGAACCTGCCCAAGGCTGACCTTGATGTCTCAGGACCCAAGGTGGACATTGATGTTTCTGATGTGGAT
ATCCGAAGGTCCAGAAGGGGAACTGAAAGGTCCCAAATTCAGATGCCTGAGATGAGCATCCAAGCCCCCAAGAT
CTCCATGCCTGATATTGACTTAAACCTGAAAGGACCCAAAGTGAAGGGCGATGTGGATGTTACCCTTCTTAAAGT
GGAAGGTGACCTCAAGGGGCCAGAAGCTGACATCAAGGGCCCCAAAGTGGACATCAACACCCCTGATGTGGATGT
TCATGGCCCAGACTGGCACCTGAAGATGCCCAAGGTGAAAATGCCCAAATTCAGCATGCCTGGCTTCAAAGGAGA
AGGTCCAGATGTGGATGTGAACCTGCCCAAGGCTGACATTGATGTCTCAGGACCCAAGTGGACGTTGATGTTCC
TGATGTGAATATCGAAGGTCCAGATGCGAACTAAAGGGCCCCAAGTTCAAGATGCCTGAGATGAGCATCAAAGC
CCCCAAGATCTCCATGCCTGATATTGACTTAAACCTGAAAGGACCCAAAGTGAAGGGCGATGTGGATGTTACCCT
TCTTAAAGTGGAAAGGTGACCTCAAGGGGCCAGAAGCTGACATCAAGGGCCCCAAAGTGGACATCAACACCCCTGA
TGTGGATGTTTCATGGCCCAGACTGGCACCTGAAGATGCCCAAGGTGAAAATGCCCAAATTCAGCATGCCTGGCTT
CAAAGGAGAAGGTCCAGATGTGGATGTGAGCCTGCCCAAGGCCGACATCGATGTCTCGGGACCCAAGGTGGACGT

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FIGURE 776B

TGATATTCCAGATGTGAATATCGAAGGTCCAGACGCAAACTGAAGGGCCCCAAGTTCAAGATGCCTGAAATAAA
TATCAAAGCTCCCAAGATCTCCATACCTGATGTTGACCTGGATTTGAAAGGACCCAAAGTAAAAGGAGATTTTGA
TGTGTCCTGTCCTTAAGGTTGAAGGGACTTTGAAAGGCCCAAGTAGATCTTAAAGGTCCACGTCTGGATTTCTGA
AGGCCCTGATGCCAACTCAGTGGCCCATCTTTGAAGATGCCATCGCTGGAGATATCTGCTCCTAAAGTAACTGC
TCCTGATGTTGATTGTCATCTCAAGGCACCAAAAATTGGATTTTCAGGTCCGAAGTTAGAAGGTGGTGAAGTGGGA
CCTCAAGGGACCCAAAGTTGAAGCTCCAAGCTTAGATGTACACATGGACAGCCAGATATTAACATCGAAGGGCC
AGATGTTAAAATCCCCAAATTTAAGAAACCCAAAGTTTGGATTTGGGGCAAAAAGCCCCAAAGCTGACATCAAGTC
ACCTTCACTGGATGTCACTGTTTCTGAGGCAGAGCTGAACCTTGAGACTCCTGAAATTAGTGTGGTGGCAAGGG
CAAGAAAAGTAAGTTTAAAATGCCTAAAATTATATGAGTGGTCTTAAGATTAAGGCCAAAAAACAGGGATTTG
ACCTGAATGTTCTGGGGGTGAAATTGATGCCAGCCTCAAGGCTCCGGATGTAGATGTCAACATCGCAGGGCCCGG
ATGCTGCACTCAAAGTCGACGTGAAATCGCCCAAAACCAAGAAAACGATGTTTGAAAAATGTACTTCCCAGATG
TAGAGTTTGACATTAAATCACCTAAATTTAAAGCTGAGGCCCTCTCCCTAGCCCCAACTGGAGGGTGAACCTCC
AGGCACCTGATCTGGAACCTTTCTTTGCCAGCGATTACGTCTGAAGGTCTTGACATCAAGGCGAAGGCTCCCAAGG
TCAAGATGCCAGATGTGGACATCTCAGTGCCAAAAATAGAGGGTGACCTGAAAGGCCCAAGTGCAGGCCAACT
TGGGTGCACCTGACATCAACATCGAAGGCCTAGATGCTAAAAGTCAAAACACCGTCTTTCGGCATTCTGCCCCCTC
AAGTCTCCATCCCTGATGTGAATGTAACTTGAAAGGACCAAGATAAAGGGTGATGTCCCAGCGTGGGACTGG
AAGGACCAGATGTAGATCTGCAAGGTCCAGAAGCAAAAATTAAGTTCCCAAGTTTTCCATGCCCAAGATCGGCA
TCCCAGGTGTGAAATGGAGGGTGGGGGAGCCGAGGTCCATGCCAGCTACCCTCTCTTGAAGGAGACTTGAGAG
GACCAGATGTTAAGCTCGAAGGGCCCGATGTTTCTCTAAAGGGGCCAGGAGTAGACTTGCTTCAGTGAACCTCT
CTATGCCAAAAGTCTCTGGGCCTGACCTTGATCTGAACTTGAAAGGACCAAGTTTGAAGGGAGACCTGGATGCAT
CTGTTCCCAGCATGAAGGTGCATGCTCCAGGGCTCAACCTCAGTGGTGTGCGGTGGCAAAATGCAGGTGGGAGGAG
ACGGTGTGAAAGTGCCAGGGATCGATGCCACAACAAAGCTTAACGTTGGGGCACCAGATGTGACACTGAGGGGAC
CAAGCCTGCAGGGAGATCTGGCTGTCTCTGGTGACATCAAATGCCCTAAAGTATCCGTAGGAGCTCCTGATCTAA
GCTTGAGGCATCCGAAGGCAGCATTAAACTTCCCAAAATGAAGCTGCCCAATTTGGCATCTCTACTCCGGGGT
CCGACTTGCACGTCAATGCCAAGGGGCCACAGGTTTCTGGCGAACTGAAGGGGCCAGGTGTGGATGTGAACCTGA
AAGGGCCTCGGATTTTCAGCACCGAATGTGGACTTTAACTTGGAAGGACCAAAAGTGAAGGGAGCCTTGGGGCCA
CTGGTGAGATCAAAGGCCCACTGTGCGAGGAGGTCTTCCAGGCATTGGTGTTCAGGCCTAGAAGGAAACCTCC
AGATGCCTGGAATTAAGTCTCTGGATGTGATGTGAACCTGCCAGGCGTGAATGTGAACTCCCAACTGGGCAGA
TTTCTGGGCCTGAAATCAAAGGTGGTCTGAAAGGTTTCAAGAGTAGGTTTCCATGGGGCTGCTCCTGATATCAGTG
TGAAGGGGCCCTGCCCTTAAATATGGCATCTCTGAGTCAGATTTTGGCATCAACTTGAAGGGGCCAAAAATCAAAG
GAGGTGCGGATGTTTCAGGGGGTGTGAGTCCCCAGACATCAGCCTTGGTGAAGGGCATTGAGTGTAAAGGTT
CCGGGGGTGAGTGAAGGGACCCCAAGTCTCCTCTGCTCTCAACTTGACACATCTAAGTTTGGTGGGGGCCCTTC
ATTTCTCAGGACCAAGGTGGAAGGAGGTGTGAAAGGAGGTGAGATTGGACTCCAGGCTCCTGGGCTGAGTGTGT
CTGGGCCTCAAGGTCACTTGGAAGTGGATCTGGAAGTAACATTCCCTAAAATGAAGATCCCCAAATTTACCT
TCTCTGGCCGTGAGCTGGTTGGCAGAGAAATGGGGGTGGATGTTCACTTCCCTAAAGCAGAGGCCAGCATCCAAG
CTGGTGCTGGAGACGGCGAGTGGGAAGAGTCTGAAGTCAAAGTGAAGAAAGTCCAAGATCAAATGCCCAAGTTTA
ATTTTCCAAACCTAAAGGGAAAGGTGGTGTCACTGGCTCACCAGAAGCATCAATTTCTGGGTCCAAGGTGACC
TGAAAAGTTCAAAGGCCAGCCTGGGCTCTCTGGAAGGAGAGGCAGAGGCCGAAGCCTCTTACCCGAAAGGCAAA
TCTCCTTATTTAAAAGTAAGAAGCCACGGCACCGCTCAAATTCATTAGTGATGAAAGAGAGTTCTCTGGACCTT
CCACCCCGACGGGGACGCTGGAGTTTGAAGGTGGGGAAGTGTCTCTGGAAGGTGGGAAAGTTAAAGGGAAACACG
GGAAGCTGAAATTCGGTACCTTTGGTGGATTGGGGTCAAAGAGCAAAGGTCAATTATGAGGTGACTGGGAGCGATG
ATGAGACAGGCAAGTTACAGGGGAGTGGGGTGTCCCTGGCCTCTAAGAAGTCCCGACTGTCTCTCTCTTAGCA
ATGACAGTGGGAATAAGGTTGGCATCCAGCTTCCCAGGTGGAGCTGTGAGTTCCACAAAGAAAGAGTAGCAGG
CCTTTGTATGTGTGTACATATATATATATAACAAAACATCAGCCTTGGGTGGTGTGTTCTATATAAACTCCA
AAGGGAAACACACCGACTGCCTCAGCAATCATGCAAAGACCTTGCTGGCCCGGTGGCAAGCGCTGAAAAACCGA
CCGCCTGTAGGCTCCTGGAACATATACAGATAGGTAAAGAGTTCCAAGTTCGTCCAGCCCATGTGCAAAGTCAACA
GTATTTGCCCTTAAGATTTTATATATATATATTTTTTGCATTGACTGCTGAGAGCTCCTGTTTACTAAGCAAGCT
TTTGTGTTTATTATCTCATTTTTTACTGAACATTGTTAGTTTTTGGGGTAATGGAAACCCACTTTTTTCATTGTAAT

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FIGURE 776C

GACTTTGGGGGCTTTTGTAGTAAGGGTGGGTGGGGTGATGGGTTGCAGACGGAGGTCAGGTCTTCCTCTTTCCT
GAGACTGGATCTGTTCAAACAGCAAACGCCCACAGATGGCCCAGAGGTGGTGGTAGTCAGGGTGTGTGGGTGTTT
TTAGGGTTCTTTAGTGTTGTTTCTTTCACCCAGGGGTGGTGGTCCCAGCCAGTTTGGTGCTGACGGTGAGAGGAA
ATTAGAATCTGTTTGCAAATTGTCCAACCCACCCCTCAACATGAGGGGCTTCCATTTTCTGTGTTTTGTAAGGG
AACTGTTTCCTTCATGCCGCCATGTTCCCTGATATTAGTTCTGATTTCTTTTAAACAAATGTTATCATGATTAAGA
AAATTTCCAGCACTTTAATGGCCAATTAAGTGAAGAAATTGATGCTGTACAAGGCAAATAAGCTGT
TTATTAACCTCCGAAAAAAATCTATGTCGGGTGCGGAGAAAGAGGTAATGAAATGGCA

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FIGURE 777

MPKVKMPKFSMPGFKGEGPDGDVCLKPKADIDVSGPKVDIEGPDVNIEGPEGKLGPKFKMPEMNIKAPKISMPDI
DLNLKGPKVKGDVDVSLPKVEGDLKGPEVDIKGPKVDIDAPDVDVHGPDPWHLKMPKIKMPKISMPGFKGEGPDVD
VNLPKADIDVSGPKVDVECPDVNIEGPEGKWKSPKFKMPEMHFKTPKISMPDIDLNLGTGPKIKGDVDVTGPKVEG
DLKGPEVDLKGPKVDIDVPDVNVQGPDPWHLKMPKMKMPKFSMPGFKAEGPEVDVNLPKADVDSGPKVDVEGPDV
NIEGPEGKLGPKFKMPEMNIKAPKIPMPDFDLHLKGPKVKGDVDISLPKVEGDLKGPEVDIRGPKVDIDVPDVG
VQGPDPWHLKMPKVKMPKFSMPGFKGEGPDVDVNLPKADLDVSGPKVDIDVPDVNIEGPEGKLGPKFKMPEMNIK
APKISMPDIDLNLKGPKVKGDMVSLPKVEGDMKVPDVIDKGPKVDINAPDVDVQGPDPWHLKMPKIKMPKISMPG
FKGEGPEVDVNLPKADLDVSGPKVDVDPDVNIEGPDALKGPKFKMPEMNIKAPKISMPDFDLHLKGPKVKGDV
DVSLPKMEGDLKGPEVDIKGPKVDINAPDVDVQGPDPWHLKMPKVKMPKFSMPGFKGEGPDVDVNLPKADLDVSGP
KVDIDVPDVIDRRSRRETERSQIQDAEMSIQAPKISMPDIDLNLKGPKVKGDVDVTLPKVEGDLKGPEADIKGPK
VDINTPDVDVHGPDPWHLKMPKVKMPKFSMPGFKGEGPDVDVNLPKADIDVSGPKVDVDPDVNIEGPDALKGPK
FKMPEMSIKAPKISMPDIDLNLKGPKVKGDVDVTLPKVEGDLKGPEADIKGPKVDINTPDVDVHGPDPWHLKMPKV
KMPKFSMPGFKGEGPDVDVSLPKADIDVSGPKVDVDIPDVNIEGPDALKGPKFKMPEINIKAPKISIPDVDLDL
KGPKVKGDFDVSVPKVEGTLKGPEVDLKGPRLDIEGPDALSGPSLKMPSEISAPKVTAPDVLHLKAPKIGFS
GPKLEGGEVDLKGPKVEAPSLDVHMDSPDINIEGPDVKIPKFKPKFGFGAKSPKADIKSPSLDVTVPEAEINLE
TPEISVGGKGKSKFKMPKIHMSGPKIKAKKTGIDLNVPGGEIDASLKAPDVDVNIAGPDAALKVDVKSPKTKKT
MFGKMYFPDVEFDIKSPKFKAEAPLPSPKLEGELOAPDLELSLPAIHVEGLDIKAKAPVKMPDVIDISVPKIEGD
LKGPKVQANLGAAPDINIEGLDAKVKTPSFGISAPQVSIPDVNVNLKGPKIKGDVPSVLEGPVDLQGPPEAKIKF
PKFSMPKIGIPGVKMEGGGAEVHAQLPSLEGLRGPDKLEGPVSLKGPVLDLPSVNLMPKVSAGPDLDLNLKG
PSLKGDLDASVPSMKVHAPGLNLSGVGGKMVGGDGVKVPIDATTKLNVGAPDVTLRGPSLQGD LAVSGDIKCP
KVSAGAPDLSLEASEGSIKLPKMKLPQFGISTPGSDLHVNAKGPQVSGELKGPVVDVNLKGPRISAPNVDFNLEG
PKVKGSLGATGEIKGPTVGGGLPGIGVQGLEGNLQMPGIKSSGCDVNLPGVNVKLPTGQISGPEIKGGLKGSEVG
FHGAAPDISVKGPAFNMA SPESDFGINLKGPKIKGGADVSGGVSAPDISLGEHLSVKSGGEGWKGPQVSSALNL
DTSKFAGGLHFSGPKVEGGVKGGQIGLQAPGLSVSGPQGHLES GSKVTFPKMKIPKFTTSGRELVGREMGVDVH
FPKAEASIQAGAGDGEWEESEVKLKKSKIKMPKFNFSKPKGKGGVTGSPEASISGSKGDLKSSKASLSLEGEAE
AEASSPKGKFSLFKSKKPRHRSNSFSDEREFSGPSTPTGTLEFEGGEVSLEGGKVKGKHGKLKFGTFGGLGSKSK
GHYEVTGSDDDETGLQSGSVSLASKKSRLSSSSSSNDSGNKVGIQLPEVELSVSTKKE

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FIGURE 778

GTGCGGTTGGGAACGCGGAGCGGACGGATTTCGATTCAACGGGGTTCCGGACCGCGCTGCGCTATGGAGCAGGTCA
ATGAGCTGAAGGAGAAAGGCAACAAGGCCCTGAGCGTGGGTAAACATCGATGATGCCTTACAGTGCTACTCCGAAG
CTATTAAGCTGGATCCCCACAACCACGTGCTGTACAGCAACCGTTCTGCTGCCTATGCCAAGAAAGGAGACTACC
AGAAGGCTTATGAGGATGGCTGCAAGACTGTCGACCTAAAGCCTGACTGGGGCAAGGGCTATTACGAAAAGCAG
CAGCTCTAGAGTTCTTAAACCGCTTTGAAGAAGCCAAGCGAACCTATGAGGAGGGCTTAAACACGAGGCCAAATA
ACCCCTCAACTGAAAGAGGGTTTACAGAATATGGAGGCCAGGTTGGCAGAGAGAAAATTTCATGAACCCCTTCAACA
TGCCTAATCTGTATCAGAAGTTGGAGAGTGATCCCAGGACAAGGACACTACTCAGTGATCCTACCTACCGGGAGC
TGATAGAGCAGCTACGAAACAAGCCTTCTGACCTGGGCACGAACTACAAGATCCCCGGATCATGACCACTCTCA
GCGTCTCCTTGGGGTTCGATCTGGGCAGTATGGATGAGGAGGAAGAGATTGCAACACCTCCACCACCACCCCTC
CCAAAAGGAGACCAAGCCAGAGCCAATGGAAGAAGATCTTCCAGAGAATAAGAAGCAGGCACTGAAAGAAAAAG
AGCTGGGGAACGATGCCTACAAGAAGAAAGACTTTGACACAGCCTTGAAGCATTACGACAAAGCCAAGGAGCTGG
ACCCCACTAACATGACTTACATTACCAATCAAGCAGCGGTATACTTTGAAAAGGGCGACTACAATAAGTGCCGGG
AGCTTTGTGAGAAGGCCATTGAAGTGGGGAGAGAAAACCGAGAAGACTATCGACAGATTGCCAAAGCATATGCTC
GAATTGGCAACTCCTACTTCAAAGAAGAAAAGTACAAGGATGCCATCCATTTCTATAACAAGTCTCTGGCAGAGC
ACCGAACCCCGAGATGTGCTCAAGAAATGCCAGCAGGCAGAGAAAATCCTGAAGGAGCAAGAGCGGCTGGCCTACA
TAAACCCCGACCTGGCTTTGGAGGAGAAGAACAAGGCAACGAGTGTTTTTCAGAAAGGGGACTATCCCCAGGCCA
TGAAGCATTATACAGAAGCCATCAAAAGGAACCCGAAAGATGCCAAATTATACAGCAATCGAGCTGCCTGCTACA
CCAAACTCCTGGAGTTCCAGCTGGCACTCAAGGACTGTGAGGAATGTATCCAGCTGGAGCCGACCTTCATCAAGG
GTTATACACGGAAAGCCGCTGCGCTGGAAGCGATGAAGGACTACACCAAGCCATGGATGTGTACCAGAAAGGCGC
TAGACCTGGACTCCAGCTGTAAGGAGGCGGCAGACGGCTACCAGCGCTGTATGATGGCGCAGTACAACCGGCACG
ACAGCCCCGAAGATGTGAAGCGACGAGCCATGGCCGACCCTGAGGTGCAGCAGATCATGAGTGACCCAGCCATGC
GCCTTATCCTGGAACAGATGCAGAAGGACCCCCAGGCACTCAGCGAACACTTAAAGAATCCTGTAATAGCACAGA
AGATCCAGAAGCTGATGGATGTGGGTCTGATTGCAATTCGGTGATGACTTGTTTCATCCCCCTTCCCTTCGCCCT
CATGTGGAAGAGGAGCTGGGACCGCGGCGAGCAGCACGGAGCGGAAGGGAGAGCAGGGGAGAGAAGGCCTCATC
TCTCTATATTTATACATAACCCCGGGGAAGACACAGAGACTCGTACCTGCGCTGTTTGTGCCCGCTGCCTCTG
GGCCCTCCCAGCACACGCATGGTCTCTTACCGCTGCCCTCGAGTTCATGTCTCTTCCCTGCCCTAGTTGC
TGTCTCGGCTGCTCTCCCATAGTTGGTTTTTTTTTTTATTTGGGGCAGTGGGCATGTTATGGGGAGGGGAGGGGT
TCTTCCAGCCTCAGGTCCCAGCTGTCTACGTTGTTTATTCTGCGTCCCCTTCTCCAATAAAACAAGCCAGTTGG
GCGTGGTTATAAC

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FIGURE 779

MEQVNELKEKGNKALSVGNIDDALQCYSEAIKLDPHNHVLYSNRSAAYAKKGDYQKAYEDGCKTVDLKPDWGKGY
SRKAAALEFLNRFEEAKRTYEEGLKHEANNPQLKEGLQNMEARLAERKFMNPFNMPNLYQKLESDPRTRTLLSDP
TYRELIEQLRNKPSDLGTLQDPRIMTTLSVLLGVDLGSMDEEEEIATPPPPPPPKKETKPEPMEEDLPENKKQA
LKEKELGNDAYKKKDFDTALKHYDKAKELDPTNMTYITNQAAVYFEKGDYNKCRELCEKAIEVGRENREDYRQIA
KAYARIGNSYFKEEKYKDAIHFYNKSLAEHRTPDVLKKCQQA EKILKEQERLAYINPDLALEEKNGNECFQKGD
YPQAMKHYTEAIKRNP KDAKLYSNRAACYTKLLEFQLALKDCEECIQLEPTFIKGYTRKAAALEAMKDYTKAMDV
YQKALDLDSSCKEADGYQRCMMAQYNRHDSPEDEVKRRAMADPEVQQIMSDPAMRLILEQMOKDPQALSEHLKNP
VIAQKIQKLMDVGLIAIR

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FIGURE 780

GCTAGATGAGACTGAAGAGTCTTCTTTACTTTAAGTGATTGATTTCAATTTAGGACTCCTTGTGGGTTTTTTGTAA
AAAGCCATTAACCATTTCCCTGCCCTGATCTCCATATCAGCCTTTATATATATTTCATTGTCTCTCAACAGCCCC
AATTTTTTTTATTTAACAGATGGGGAACAGAGGCTCTGAGCGGTTAACAAAGCTTTCTTTCTGTGGAAACCTAGTA
AATGGCAAAGCTGGAATATGAAACTGCAAAGCCTATGTGCTTAAGTAAGTAAACCCAACCACCTGGGACCACCATA
TCTTACTGTGCAGTTTGTGTGTGTGAGGGGATCAGAACATCTAAGAACTGCCATTACGTTGAGGACAACATA
GGGATTTATATATTAATACATGCTGGTGTAAATACAGGCCGCTGTCTGTAAATATTAGTATATTAGGACAGTTTG
CCATACCATAGGGGAAAAGCCACTTTATTCTAATTCACCCAAAGGTACTGTAAGTGCTGATGGCTCTGGGTCTGT
CTTTCTGTCAAGTTGCCAAGTCACATAAGTAATGAATCCGCAGCTGGAGGAGCTGCTGCTGGAGGACAGGCATGT
TTTCAGACAGGAGCATGGCCTTTAGCTCATGACCATAAGAGGGCGCTACAGCAAAGAGTACTAAATACCAATCAA
AGTGAGCTCAGAGTACAAGAGGGTAACTTGCTTTTCTCCAAAGTAAAAGAGAAGACATAGTCTCAAACACTTGC
CCTGTGCCCTGTCCCTGAACCTCTCCATGGAGGAATTTTTTCTGTTGTTTAGTGTTAGCAGAATTTAGGAAGGGCT
TGTAATAAGGAAGGTTGAGGGTTGGGTGGGGTCACACTGTGTTGTGTGAGGATCATTTTCATGTTAATGAAATGT
TTAGTTCTTTAAGGGGAATGTGGTAGAGCCTTTATCTCCCCCTGCCCTTTTTTTTAACTGCACAGGCTCTGGCA
CAATGTTTATTGTGTCATAATAACCAAGAAATGGGTTTCTACAAAAGATGCAAAGACTGTGCTTCTGGAATTCC
CTACCACAGCGAGGTCCCTGTGAGTTTGAAAGAAGCTGTCTGCGAAGTGGCCCTTGATTACAAAAAGAAGAAACA
CGTATTCAAGCTAAGACTAAATGATGGCAATGAGTACCTCTTCCAAGCCAAAGACGATGAGGAAATGAACACATG
GATCAAGGAAAAATTACTGCAGTTGACGGAAGAGGAAAGAAATGATCGGTCCTTACAGCCGCTCGTCAGACTC
CAGCAACCTGGGATGAGAGGTTCTCTGCCCTGGAAGGCTGACTACATTGGAGTTACTGGAAGTGCGCAGACAGC
AAGAGGAAGAGGAGAGGAAGAGGCGGCCCTTCTCCCGAGCCGAGCACGAAGGTTTCAGAGGAAGCCGAGTCCC
AGCAGCAGTGGGATACTTCAAAGGAGAACAAGTTTCCCCAAACGGTTTGCCAGCTGAACAGGGATCTCCACGGA
TGGCAGAAACGGTGGACACAAGCGAAATGGTCAACGGCGCTACAGAACAAAGGACGAGCTCTAAAGAGTCCAGCC
CCATCCCCCTCCCCGACCTCTGATCGTAAAGCCAAGACTGCCCTCCCAGCCCAGAGTGCCGCCACCTTACCAGCCA
GAACCCAGGAGACACCTTCGGCCCAGATGGAAGGCTTCTCTCAATCGGAAACACGAGTGGGAGGCCACAATAAGA
AAGCCTCAAGCAGGTCCTGGCACAATGTTTATTGTGTGTCATAATAACCAAGAAATGGGTTTCTACAAAGATGCAA
AGACTGCTGCTTCTGGAATTCCCTACCACAGCGAGGTCCCTGTGAGTTTGAAAGAAGCTGTCTGCGAAGTGGCCC
TTGATTACAAAAAGAAGAAACACGTATTCAAGCTAAGACTAAATGATGGCATGAGTACCTCTTCCAAGCCAAAGA
CAAAGAGAACC GGTTTCAGCCTTTTTGGCCAAAAGAAATGAAGTCTCTTCTCACCTCCTGCCCTTCTCTTACC
CTTTTCAGTGAAATTTCCCGCATGCAAGCTCAGAACCCACACAGTACTCTCTGTGCCCAAAGTTCGCCAAAGTGGTT
GAANNNNNNNNNNNNNNNNNNNNNAGAGCATTTCGGGGGGGGTGGGGGAAACACACCTAAACACTTTATCTCCCA
GTTACCAAAGTTTGAGGTGCAGAGGGAAGGCCAGATTTTTTTTTTAAATGAAATTATATAGATTAGATCTCAGTAT
TTAAACTGTTCCCTCAATTTTGTGAGGCTGTGTTGGAAATAACCCGCTCTAGTGCTGTTGGTATGCAAGGCAGCG
GTGCTTAATCAATATTTCTGTGCTCACCAGAGGCCAAATGTACCAATATCCTGACACCATTCTCTCTCCATTTA
CTTCTTGGTGGTTACCCTGACTCTTGACTCTTAGAAGTGCCGAGATGGGGCTAACCTTTATTAAACAGATCGCA
TATTATGATCTTGCTGCAGCCACAGTGCAGCTCCACATTAAGTCTACAGACCAAACCTTTGTATCTGGCATCAC
TTACTAACACACGACATGCGGCTTTTCTGCATCAACTGCTATGACGGTTAAGAATGTCAGTATACAAGAAGGAAT
AGAAAACGTACTGTTTTAAATAATCTGTAATTTCAATTTTTTTTTTTTTTGTGAAATACATTATATTGTACGT
TTGAGATAATTCTAGTACAAAGTATAATAAACTAGATGTATAATAAACCTTTAAATCATTGGTAAGTGTACAA
GTGGTGGAACTGAAGCATTACTGGACAAAGTAATGTTACTCTAATGGTTACTTGCTCGTGCGTTGCCACACTG
TGTTATAATTTGCTTCATTTCTTGCTATTTGATACATAGTGTGATTTCTCTGTCACTGTAAGTATTGTAATGA
CAAATTTTCATCTTACTGCACAATCAAATGACATTGATAGGAATGAACTCCAGAGGCTGGGCTGAACAGGGAG
GTGGTCGCTCAGGCCTGGTGCTCAGTCGTACGACCTGTACCTCTCAACTTTTGCCCTATCTGTTAAATATATGCT
ATGTCATTAAATGCTTTTTAAATCTAGCACGGTGACTAGTTGTTGTTCTTCTCTGCTGCGTGTGCATGCCAGTA
GGGAACTGCAAAGGGAGAAATGACAAACAAGAAACATTTTACAACAGTCTGGGCTCACTTTTGCAATTTTTAT
GCATGTCTGGTGCACAAGCTTTGAAAACCTACAGCAAACAGTAATAAATGTGACTGTTTTGTAGT

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FIGURE 781

MAETVDTSEMVNGATEQRTSSKESP IPSPTSDRKAKTALPAQSAATLPARTQETPSAQMEGFLNRKHEWEAHNK
KASSRSWHNVYCVINNQEMGFYKDAKTAASGIPYHSEVPVSLKEAVCEVALDYKKKKHVFKLRLNDGMSTSSKPK
TKRTGSAFLAKKK

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FIGURE 782A

CGCGTGTCTACGCGGACGCACCGGCTAAGCTGCTTCTGCGCGCCGCGCCGCTGGGACCTTGCGGTGAGGCTGC
GCGGGGCGGAGGCCGCTCCGAGCGCCAGGTTTATTAGTCACCATGAAGCTGCTGCTGCTGCACCCGGCCTTCC
AGAGCTGCCTCCTGCTGACCCTGCTTGGCTTATGGAGAACCACCCCTGAGGCTCACGCTTCATCCCTGGGTGCAC
CAGCTATCAGCGCTGCCTCCTTCTGAGGATCTAATACATCGGTATGGCGAGGGTGACAGCCTCACTCTGCAGC
AGCTGAAGGCCCTGCTCAACCACCTGGATGTGGGAGTGGGCCGGGGTAATGTCACCCAGCAGCTGCAAGGACACA
GGAACCTCTCCACGTGCTTTAGTTCTGGAGACCTCTTCACTGCCCACAATTTAGCGAGCAGTCGCGGATTGGGA
GCAGCGAGCTCCAGGAGTTCTGCCCCACCATCCTCCAGCAGCTGGATTCCCGGGCCTGCACCTCGGAGAACCAGG
AAAACGAGGAGAATGAGCAGACGGAGGAGGGGGCGGCCAAGCGCTGTTGAAGTGTGGGGATACGGTCTCCTCTGTG
TGACCGTCATCTCCCTCTGCTCCCTCCTGGGGGCCAGCGTGGTGCCCTTCATGAAGAAGACCTTTTACAAGAGGC
TGCTGCTCTACTTCATAGCTCTGGCGATTGGAACCTCTACTCCAACGCCCTCTTCCAGCTCATCCCGGAGGCAT
TTGGTTTCAACCCTCTGGAAGATTATTATGTCTCCAAGTCTGCAGTGGTGTGTTGGGGGCTTTTATCTTTTCTTTT
TCACAGAGAAGATCTTGAAGATTCTTCTTAAGCAGAAAAATGAGCATCATCATGGACACAGCCATTATGCCTCTG
AGTCGCTTCCCTCCAAGAAGGACCAGGAGGAGGGGGTGATGGAGAAGCTGCAGAACGGGGACCTGGACCACATGA
TTCTCAGCACTGCAGCAGTGAGCTGGACGGCAAGGCGCCCATGGTGGACGAGAAGGTCATTGTGGGCTCGCTCT
CTGTGCAGGACCTGCAGGCTTCCAGAGTGCTTGCTACTGGCTGAAAGGTGTCCGCTACTCTGATATCGGCACTC
TGGCCTGGATGATCACTCTGAGCGACGGCCTCCACAATTTTCATCGATGGCTGGCCATCGGTGCTTCCTTCACTG
TGTCAGTTTTTCCAAGGCATCAGCACCTCGGTGGCCATCCTCTGTGAGGAGTCCACATGAGCTAGGAGACTTTG
TCATCCTGCTCAACGCTGGGATGAGCATCCAACAAGCTCTCTTCTCAACTCCTTTCTGCCTGCTGCTGCTACC
TGGGCTGCGCCTTTGGCATCCTGGCCGGCAGCCACTTCTCTGCCAACTGGATTTTTGCGCTAGCTGGAGGAATGT
TCTTGATATATTTCTCTGGCTGATATGTTCCCTGAGATGAATGAGGTCTGTCAAGAGGATGAAAGGAAGGGCAGCA
TCTTGATTCCATTTATCATCCAGAACCTGGGCCTCCTGACTGGATTACCATCATGGTGGTCTCACCATGTATT
CAGGACAGATCCAGATTGGGTAGGGCTCTGCCAAGAGCCTGTGGGACTGGAAGTCGGGGCCTGGGCTGCCCGATC
GCCAGCCCGAGGACTTACCATCCACAATGCACCACGGAAGAGGCCGTTCTATGAAAACTGACACAGACTGTATT
CCTGCATTCAAATGTCAGCCGTTTGTAAATGCTGTATCCTAGGAATAAGCTGCCCTGGTAACCAGTCTCTAGCT
AGTGCCCTCTTGCCCTCTCCTCACCTCCTTTTCTCTCAGTGACTCTGGAACCTGAATGCAGCTTACAAGACAAGCC
TGACTTTTTTCTCTGATTACCTTGGCCTCCTCTTGGAAACAGTGCTGAAAGGTTTTGAATCCTTTACCCAACAAT
GCAAAAATAGAGCCAATGGTTATAACTTGGCTAGAAATATCAAGAGTTGAATCCATAGTGTGGGGCCCATGACTC
TAGCTGGGCACCTTGGACCTCCAGCTGGCCAATAGAAGAGACAGGAGACAGGAAGCCTTCCCATTTTTTCAAAGT
CTGTTTAATTGCCTATTACTTCTCTCAAAGAGAACCTGAAGTCAGAACACATGAGCAGGGTGAGAGGTGAGGCAA
GGTTCATCCTGAATGGGAGAGGAAGTCAACCACTGCTGTGTGTCTTGTGAGGATGCTCATTGTTCTACTGAG
ATGCTGGATATTGATTTTGTAAACAGCACCTGGTGTTCACGGCTGTCCGAGTGAGCTAACGTGGCGGTGTGGCTG
CCTGGACCTCCTCTTTCAGGTTAACGCTGACAGAATGGAGGCTCAGGCTGTCTGCAAGAAAACAGTTGGTTTTGGC
TGTGATTTTGACCTCCTCTTCCCCACTGCCATCTTCTAAGAGACTTTGTAGCTGCCTCCTAGAAGCACATTCTGA
GCACATTTGAGACCTCTGTGTTAGAGGGGAGACTGCACAACTATCCTCCCCCAGGTTGAGACGTCTGCAGAGTG
GCAAGCTGACTTGTAGAAATGGGGTGCCATTTATGCTCTACTTAGACAAGGGTAATCAGAAATGGAATCAGTGCA
GGCAAAATTTAGGATTTGCCGCTTCCATAAATCAAAGCATGACTAATAGGGGGTCTCTGAAATGTAAGGGCACAA
ACTTCACTTAGGGCATCGCAGATGTTTGCAGAATGGTTGGCCTAATGATTATGCTACAGATGGGTTTTAAATGAC
CCGTCTAGGTTACTGCTTCCTTGCAAAAAAAGTCGAATCCTGCATTGAATTGAATATGAATTTCTCTAACTCTCT
CCAGAAAATGGATGGAGATAACTTGTCTTTAAACTGTAGGCCAGCCTTAGCCACTGTGGAGCCCTTGCCCTCCGA
GCTCTGGCTTCAAGGGGAGCTCTTCTCCAGGTTCACTAGGTGAATTGATTTATTATTATCATATTGATAATGTGA
GATTTCTTTAGCCACTTTGGGGAGCCTGTCTCTCCAGAAGCCTTTCTTAGTGGTGCCACAGTTGGAGCCCAGGGG
CCATGTTTGCAAACTGATTATGTGCATGGCTGACAGGAGTACTGGTTCACTACCAATGCCTGAGCTTTTCTCTT
ACATAGAAAACTGTCCACTCTCAGTAATCACAAGCAGCATCCGTTTTGTTTTCTCTTCTTGGGAGACATCTGTC
AAACCAGGAATATTCTTGAAAAGAACGTGAGCAGGAAAACTGCTGGTGATACTTTTTTTAAGTTTTGTTTTAT
CTTGCTGTTGGCTTCAATACATTTGAGAATACGCTGAAGAGGGAAAAATTCAGTGATGGAGATTCTAGATTAA
TATCAGGACTGATTTCTGGTGGGATTATGGTCCAGTTTTACCAAAGAACCAATTCCTTGAATGTGGAATCTAA
CTTTTTATATTGTCAATTATTATTGTTGTTTTTAAACGGTCTTTGTCTTTTCTGTTTTATTTTTCTCAAGCTGCT
TTCAGGAGCTAGCAGAAAAATACTCAAAGTTGAAGACTCTGGAAGATTTTGCTTTAACCTAACTCGCATTGATGT

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FIGURE 782B

ATTAAATTTATAATTTTAGCATTCCCAATAGATCCTATCATTCCCTTAAACATAATACCCTTTGTCTTGGAGTAGA
ATACTAAGTTAGAGTTAGTGGATTTCTAGTTTAGGAGAGGAGCTCAAAACTATAATCTTTAACAAATTGAAAAAT
GAAATAGGGTGTTCCTTTTGTGCACACCTATATTACCTTAAGAAATTTCCCTCCATAGACAGCTGCCTCAA
AGGGAAATCCTCTTTAAACCGTAGTTGGCGCAGAGGTCAGTCCTAGTCGGAGCTTAGGAGGGGCGGAGACGCTCA
CATCGTCTGACTTGAGTCGCCACTGATTGTGGCAACAGCTTTGCCTCATGAGTCAAAAATTGGCAATTTCTTTTG
ATTTTAGTTGTTGAATTTGCTGTTTCAAGCATTTGTACATATTAGAAGTCTAAGGAGTAGCAAGTCAGTGGGAG
GACTTTTTCACCCCTGGCATTAGCAGCTTCGACCTCATTTTCCAGATGCACCAGCTCCTATTAATAAGTTAGCAA
GGAAAGTGTATGTCACGTGCAGGAACAGTGAGGCAGGGACAGGGGTTCGTCTCCTTCTCACTTCACCACCGGCAC
ACAGCTTGCCCCGTCTTTGCCCCCAAAGGTATTTTGTGTCTAGTGTCAAATTGGAGCTATTCTTCACTGGTCCT
TAACCTTGGGTTTTAAAAAGAAGGCTTCTCTGTTTGGGTAGCGTAAGAGCTGAGTATAGTAAGTCCTCTTCCAAA
GAGATGGCAATATGCTGGGCATCTACTTTAAACAAAGTTGTCTGATTTTGAAGAGAGGTTAGGATTTTATTG
TTCTTATTTCCCTTTACAGTTCTGCAGTTCCATCACAGTATTTTTTAAATAACTCAGGTGTATGAGCAGAAATT
AGAAAAGAAAATTAACCTTATGTGGACTGTAAATGTTTTATTTGTAAGATTCTATAAATAAGCTATATTCTGT

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FIGURE 783

RVYADAPAKLLLPPPAAWDLAVRLRGAEAAASERQVYSVTMKLLLLHPAFQSCLLLTLLGLWRTTPEAHASSLGAP
AISAASFLQDLIHRYGEGDSLTLQQLKALLNHLDVGVGRGNVTQHVQGHRNLSTCFSSGDLFTAHNFSEQSRIGS
SELQEF CPTILQQLDSRACTSENQENEENEQTEEGRPSAVEVWGYGLLCVTVISLCSLLGASVVPFMKKTIFYKRL
LLYFIALAIGTLYSNALFQLIPEAFGFNPLEDYVSKSAVVFGGFYLFFFTEKILKILLKQKNEHHHGHSHYASE
SLPSKKDQEEGVMEKLQNGDLDMIPQHCSSELDGKAPMVDEKVIVGSLSVQDLQASQSACYWLKGVRYSDIGTL
AWMITLSDGLHNFIDGLAIGASFTVSVFQGISVAILCEEFPHELGD FVILLNAGMSIQQALFFNFLSACCCYL
GLAFGILAGSHFSANWIFALAGGMFLYISLADMFPFMNEVCQEDERKGSILIPFI IQNLGLLTGFTIMVVLTMYS
GQIQIG

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FIGURE 784

GAATTCGGCACGAGCGAGTCGCGACGTCGTCGGCAAGCGGCCCTTCCACGTAACGCGCGCCGGCGGGGGAGGG
CGTTGGCGCGGAGCCGACGGGAACGTCCGCGCTGCGGAGCAGGGCAGGGAAGCCGGGAGGCGGGCCCGGCCGAG
CTTGTCCTTGTCGCGCAGGTACTCCGAGCACTATGTCGTCCCCGGCGTCGACCCCGAGCCGCGCGGCAGCCGGC
GTGGAAGGGCCACCCCGCCAGACGCCTCGGAGTGAGGATGCCAGGTCATCTCCCTCTCAGAGACGTAGAGGCG
AGGATTCACCTCCACGGGGGAGTTGCAGCCGATGCCAACCTCGCCTGGAGTGGACCTGCAGAGCACTGCTGCGC
AGGACGTGCTGTTTTCCAGCCCTCCCCAAATGCATTCTTCAGCTATCCCTCTTGACTTTGATGTTAGTTCACCAC
TGACATACGGCACTCCCAGCTCTCGGGTAGAGGGAACCCCAAGAAGTGGTGTAGGGGACACCTGTGAGACAGA
GGCCTGACCTGGGCTCTGCACAGAAGGGCCTGCAAGTGGATCTGCAGTCTGACGGGGCAGCAGCAGAAGATATAG
TGGCAAGTGAGCAGTCTCTAGGCCAAAACTTGATCTGGGGAACAGATGTAAATGTGGCAGCATGCAAAGAAA
ACTTTCAGAGATTTCTTCAGCGTTTTATTGACCCTCTGGCTAAAAGAAGAAGAAAATGTTGGCATAGATATTACTG
AACCTCTATACATGCAACGACTTGGGGAGATTAATGTTATTGGTGAGCAATTTTTAAATGTGAAGTGTGAACACA
TCAAATCATTGACAAAAATTTGTACAGACAACCTCATCTCTTACCCACAGGAAGTTATTCCAACCTTTTGACATGG
CTGTCAATGAAATCTTCTTTGACCGTTACCCTGACTCAATCTTAGAACATCAGATTCAAGTAAGACCATTCAACG
CATTGAAGACTAAGAATATGAGAAACCTGAATCCAGAAGACATTGACCAGCTCATCACCATCAGCGGCATGGTGA
TCAGGACATCCCAGCTGATTCCCGAGATGCAGGAGGCCTTCTTCCAGTGCCAAGTGTGTGCCACACGACCCGGG
TGGAGATGGACCGCGCGCCGATTGCAGAGCCAGTGTGTGCGGGCGCTGCCACACCACCACAGCATGGCACTCA
TCCACAACCGCTCCCTCTTCTCTGACAAGCAGATGATCAAGCTTCAGGAGTCTCCGGAAGACATGCCTGCAGGGC
AGACACCACACACAGTTATCCTGTTTGCTCACAATGATCTCGTTGACAAGGTCCAGCCTGGGGACAGAGTGAATG
TTACAGGCATCTATCGAGCTGTGCCTATTTCGAGTCAATCCAAGAGTGAGTAATGTGAAGTCTGTCTACAAAACCC
ACATTGATGTCAATTCATTATCGGAAAACGGATGCAAAACGCTCTGCATGGCCTTGATGAAGAAGCAGAACAGAAAC
TTTTTTCAGAGAAACGTGTGGAATTGCTTAAGGAACCTTCCAGGAAACCAGACATTTATGAGAGGCTTGCTTCAG
CCTTGGCTCCAAGCATTATGAACATGAAGATATAAAGAAGGGAATTTTGCTTCAGCTCTTTGGCGGGACAAGGA
AGGATTTTAGTCACACTGGAAGGGGCAAATTTCCGGCTGAGATCAACATCTTGCTGTGTGGCGACCCCTGGTACCA
GCAAGTCCCAGCTGCTGCAGTACGTGTACAACCTCGTCCCCAGGGGCCAGTACACGTCTGGGAAGGGCTCCAGTG
CAGTTGGCCTCACTGCGTACGTAATGAAAGACCCTGAGACAAGGCAGCTGGTCCTGCAGACAGGTGCTCTTGTC
TGAGTGACAACGGCATCTGCTGTATCGATGAGTTCGACAAGATGAATGAAAGTACAAGATCGGTATTGCATGAAG
TCATGGAACAGCAGACTCTGTCCATTGCAAAGGCTGGGATCATCTGTCTAGCTCAATGCGCGCACCTCTGTCTGG
CAGCAGCAAATCCCATTGAGTCTCAGTGGAATCCTAAAAAACAACCATGAAAAATCCAGCTGCCTCATACTT
TATTATCAAGGTTTGATTTGATCTTCTCATGCTGGACCCTCAGGACGAAGCCTATGACAGGCGTCTGGCTCACC
ACCTGGTCGCACTGTACTACCAGAGCGAGGAGCAGGCAGAGGAGGAGCTCCTGGACATGGCGGTGCTAAAGGACT
ACATTGCCTACGCGCACAGCACCATCATGCCGCGGCTAAGTGAGGAAGCCAGCCAGGCTCTCATCGAGGCTTATG
TAGACATGAGGAAGATTGGCAGTAGCCGGGGAATGGTTTTCTGCATACCCCTCGACAGCTAGAGTCATTAATCCGCT
TAGCAGAAGCCCATGCTAAAGTAAGATTGTCTAACAAAGTTGAAGCCATTGATGTGGAAGAGGCCAAACGCCTCC
ATCGGGAAGCTCTGAAGCAGTCTGCAACTGATCCCCGACTGGCATCGTGGACATATCTATTCTTACTACGGGGA
TGAGTGCCACCTCTCGTAAACGGAAAGAAGATTAGCTGAAGCATTGAAAAAGCTTATTTTATCTAAGGGCAAAA
CACCAGCTCTAAAAATACCAGCAACTTTTTGAAGATATTCCGGGACAATCTGACATAGCAATTACTAAAGATATGT
TTGAAGAAGCACTGCGTGCCCTGGCAGATGATGATTTCTGACAGTGAAGTGGGAAGACCGTGCGCTTGCTCTGA
GCCTTGAGCAAGGAAGGCTCCCTGCATGTCTATGCAATTCTGCACGCCACATGGGTGTGGTCATGCAATCATCA
GTTGGCCGCCATCAGTGTAATAAGAGCTTAAAGTCATGGTTTGCTGCATAAAAAATTTCTAACTTGGGTTCAA
TATTTGTAGTGAAGTATCTGTTTTTCACTTTTTTACGTTATAAATAAAAAATACTATGCTGGCCGGGCGCGGTGGC
TCACACCTGTAATCCCAGCACTTTGGGAGGCCAATGTGGGTGGATCATGAGGTGAGGAGTTCAAGACCAGCCTAG
CCAAGATGGTGAAACCCCGTCTCTAGTAAAGATAACAAAAAATTAGCTGGGCTTGATGGCATGCGCCTGTAATCC
CAGCTACTCGGGAGGTTGAGGCAGGAGATCGCTTAAACCCAGGCGGCAGAGGTTGCAGTGAGCCAAGATCGCGCC
ACTGCACTCCAGCCTCAGCAATAGAGTGAGACTGTCTCAAAAAAAAAA

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FIGURE 785

IRHERVATSSASGRLPRNARRRGRALARSRRERPRCAGQGSREAGPARACPCRAGTPSTMSSPASTPSRRGSRR
GRATPAQTPRSEDARSSPSQRRRGEDSTSTGELQPMPTSPGVDLQSTAAQDVLFSPPQMHSIAIPLDFDVSSPL
TYGTPSSRVEGTPRSGVRGTPVRQRPDLGSAQKGLQVDLQSDGAAAEDIVASEQSLGQKLVIWGTDVNVAACKEN
FQRFLQRFIDPLAKEEENVGIDITEPLYMQRLGEINVIGEQLNVNCEHIKSFDKNLYRQLISYPQEVIPTFDMA
VNEIFFDRYPDSILEHQIQVRPFNALKTKNMNRNLNPEDIDQLITISGMVIRTSQLIPEMQEAFQCQVCAHTTRV
EMDRGRIAEP SVCGRCHTTTHSMALIHNRSLFSDKQMIKLQESPEDMPAGQTPHTVILFAHNDLVDKVQPGDRVNV
TGIYRAVPIRVNPRVSNVKSVMYKTHIDVIHYRKTDKRLHGLDEEAEQKLFSEKRVELLKELSRKPDYERLASA
LAPSIYEHEDIKKGILLQLFGGTRKDFSHTRGKGFRAEINILLCGDPGTSKSQLLYVYNLVPRGQYTSKGKSSA
VGLTAYVMKDPETRLVLQTGALVLSDNIGCCIDEFDKMNESTRSVLHEVMEQQTLIAKAGIICQLNARTSVLA
AANPIESQWNPKKTTIENIQLPHTLLSRFDLIFLMLDPQDEAYDRRLAHLVALYYQSEEQAEELLDMAVLKDY
IAYAHSTIMPRLSEEASQALIEAYVDMRKIGSSRGMVSAYPRQLESIRLAEAHAKVRLSNKVEAIDVEEAKRLH
REALKQSATDPRTGIVDISILTTGMSATSRKRKEELAEALKKLILSKGKTPALKYQQLFEDIRGQSDIAITKDMF
EEALRALADDDFLTVTGKTVRL

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FIGURE 786

GAATTCGGCACGAGCGAGTCGCGACGTCGTCGGCAAGCGGCCGCTTCCACGTAACGCGCGCCGGCGGGGGAGGG
CGTTGGCGCGGAGCCGACGGGAACGTCCGCGCTGCGGAGCAGGGCAGGGAAGCCGGGAGGCGGGCCCGGCCGAG
CTTGCTCTTGTCGCGCAGGTACTCCGAGCACTATGTCGTCCCCGGCGTCGACCCCGAGCCGCGCGGCAGCCGGC
GTGGAAGGGCCACCCCGCCAGACGCCTCGGAGTGAGGATGCCAGGTCATCTCCCTCTCAGAGACGTAGAGGCG
AGGATTCCACCTCCACGGGGGAGTTGCAGCCGATGCCAACCTCGCCTGGAGTGGACCTGCAGAGCACTGCTGCGC
AGGACGTGCTGTTTTCCAGCCCTCCCAAATGCATTCTTCAGCTATCCCTCTTGACTTTGATGTTAGTTACCCAC
TGACATACGGCACTCCCAGCTCTCGGGTAGAGGGAACCCCAAGAGTGGTGTAGGGGCACACCTGTGAGACAGA
GGCCTGACCTGGGCTCTGCACAGAAGGGCCTGCAAGTGGATCTGCAGTCTGACGGGGCAGCAGCAGAAGATATAG
TGGCAAGTGAGCAGTCTCTAGGCCAAAACTTGTGATCTGGGGAACAGATGTAAATGTGGCAGCATGCAAAGAAA
ACTTTCAGAGATTTCTTCAGCGTTTTATTGACCCTCTGGCTAAAGAAGAAGAAAATGTTGGCATAGATATTACTG
AACCTCTATACATGCAACGACTTGGGGAGATTAATGTTATTGGTGAGCAATTTTTAAATGTGAAGTGTGAACACA
TCAAATCATTGACAAAAATTTGTACAGACAACCTCATCTCTTACCCACAGGAAGTTATTCCAACCTTTTGACATGG
CTGTCAATGAAATCTTCTTTGACCGTTACCCTGACTCAATCTTAGAACATCAGATTCAAGTAAGACCATTCAACG
CATTGAAGACTAAGAATATGAGAAACCTGAATCCAGAAGACATTGACCAGCTCATCACCATCAGCGGCATGGTGA
TCAGGACATCCCAGCTGATTCCCGAGATGCAGGAGGCCTTCTTCCAGTGCCAAGTGTGTGCCACACGACCCGGG
TGGAGATGGACCGCGGCCGATTGCAGAGCCAGTGTGTGCGGGCGCTGCCACACCACCCACAGCATGGCACTCA
TCCACAACCGCTCCCTCTTCTCTGACAAGCAGATGATCAAGCTTCAGGAGTCTCCGGAAGACATGCCTGCAGGGC
AGACACCACACACAGTTATCCTGTTTGCTCACAATGATCTCGTTGACAAGGTCCAGCCTGGGGACAGAGTGAATG
TTACAGGCATCTATCGAGCTGTGCCTATTTCAGTCAATCCAAGAGTGAGTAATGTGAAGTCTGTCTACAAAACCC
ACATTGATGTCAATTCATTATCGGAAAACGGATGCAAAACGCTCTGCATGGCCTTGATGAAGAAGCAGAACAGAAAC
TTTTTTCAGAGAAACGTGTGGAATTGCTTAAGGAACCTTCCAGGAAACCAGACATTTATGAGAGGCTTGCTTCAG
CCTTGGCTCCAAGCATTTATGAACATGAAGATATAAAGAAGGGAATTTTGCTTCAGCTCTTTGGCGGGACAAGGA
AGGATTTTAGTCACACTGGAAGGGGCAAATTTCCGGCTGAGATCAACATCTTGCTGTGTGGCGACCCCTGGTACCA
GCAAGTCCCAGCTGCTGCAGTACGTGTACAACCTCGTCCCCAGGGGCCAGTACACGTCTGGGAAGGGCTCCAGTG
CAGTTGGCCTCACTGCGTACGTAATGAAAGACCCTGAGACAAGGCAGCTGGTCCTGCAGACAGGTGCTCTTGTC
TGAGTGACAACGGCATCTGCTGTATCGATGAGTTTCGACAAGATGAATGAAAGTACAAGATCGGTATTGCATGAAG
TCATGGAACAGCAGACTCTGTCCATTGCAAAGGCTGGGATCATCTGTCAGCTCAATGCGCGCACCTCTGTCTCTGG
CAGCAGCAAAATCCCATGAGTCTCAGTGGAATCCTAAAAAACAACCATTGAAAACATCCAGCTGCCTCATACTT
TATTATCAAGGTTTGATTGATCTTCTCATGCTGGACCCCTCAGGACGAAGCCTATGACAGGCGTCTGGCTCACC
ACCTGGTGCAGCTGTACTACCAGAGCGAGGAGCAGGCAGAGGAGGAGCTCCTGGACATGGCGGTGCTAAAGGACT
ACATTGCCTACGCGCACAGCACCATCATGCCGCGGCTAAGTGAGGAAGCCAGCCAGGCTCTCATCGAGGCTTATG
TAGACATGAGGAAGATTGGCAGTAGCCGGGGAATGGTTTTCTGCATACCCCTCGACAGCTAGAGTCATTAATCCGCT
TAGCAGAAGCCCATGCTAAAGTAAGATTGTCTAACAAAGTTGAAGCCATTGATGTGGAAGAGGCCAAACGCCTCC
ATCGGGAAGCTCTGAAGCAGTCTGCAACTGATCCCCGGACTGGCATCGTGGACATATCTATTCTTACTACGGGGA
TGAGTGCCACCTCTCGTAAACGGAAAGAAGAAATTAGCTGAAGCATTGAAAAGCTTATTTTATCTAAGGGCAAAA
CACCAGCTCTAAAAATACCAGCAACTTTTTGAAGATATTCCGGGACAATCTGACATAGCAATTACTAAAGATATGT
TTGAAGAAGCACTGCGTGCCCTGGCAGATGATGATTTCCTGACAGTGAAGTGGGAAAGACCGTGCCTTGCTCTGAA
GCCCTTGAGCAAGGAAGGCTCCCTGCATGTGATGCAATTCTGCACGCCACATGGGTGTGGTCATGCAATCATCA
GTTGGCCGCCATCAGTGTAATAGAGCTTAAAGTCATGGTTTGCTGCATAAAAAATTTTCTAAGTTGGGTTCAA
TATTTGTAGTGAAGTATCTGTTTTTATTTTTTACGTTATAAATAAAAAATACTATGCTGGCCGGGCGCGGTGGC
TCACACCTGTAATCCCAGCACTTTGGGAGGCCAATGTGGGTGGATCATGAGGTCAGGAGTTCAAGACCAGCCTAG
CCAAGATGGTGAAACCCCGTCTCTAGTAAAGATAACAAAAAATTAGCTGGGCTTGATGGCATGCGCCTGTAATCC
CAGCTACTCGGGAGGTTGAGGCAGGAGATCGCTTAAACCCAGGCGGCAGAGGTTGCAGTGAGCCAAGATCGCGCC
ACTGCACTCCAGCCTCAGCAATAGAGTGAGACTGTCTCAAAAAA

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FIGURE 787A

GCTAAGAGGAGTCCCTGTGTGGGCAGCTGGAGCCTTCAGATTCTCTTCAGGGGAAGAGTCCACATCCCACCTCAT
CATGTCCCGAAGAAGCCAGCGCCTCAGCGCTACTCCAGGGTGACGATGACGGCAGCAGCAGCAGCGGAGGGAG
CTCGGTGGCTGGGAGTCAGAGCACCTGTTTAAAGACAGTCCCTCTCAGGACCTTGAAGAGGAAATCCAGCAACAT
GAAGCGCCTGTCCCCAGCGCCACAGCTGGGCCCGTCTCTGATGCACACACCTCCTACTACAGTGAGTCGCTGGT
CCACGAGTCTGTGTTCCACCCAGGAGCTCCCTGGAGGAAC TGATGGTGACGCCAACTGGGGTGAGGACCTGCG
GGTGCGGAGGAGGAGAGGCACGGGTGGCTCAGAGAGCAGCAGGGCCAGCGGGCTTGTTGGGGCGCAAGGCCACCGA
GGACTTCCTGGGCTCTTCTCGGGCTACTCCTCTGAGGACGACTACGTGGGCTACTCGGATGTGGACCAGCAGAG
TTCCAGCTCGCGGCTCCGAAGCGCGTCTCACGGGCGGGCTCCTTACTCTGGATGGTGCCACTTCGCCAGGCCG
GCTCTTCAGACTTCTCTACTGGTGGGCTGGCACCACCTGGTACCGCCTGACCACAGCTGCCTCCCTCCTTGACGT
CTTCGTTTTAAACCAGGCGCTTCTCGTCCCTGAAGACGTTCTCTGGTTCCTGCTGCCGCTGCTCTTGCTGACGTG
CCTGACGTATGGTGCTTGGTATTTCTACCCCTATGGGCTGCAGACATTCCACCCTGCTTTGGTTTCTGGTGGGC
AGCGAAGGACAGCAGGAGGCCGGATGAGGGCTGGGAAGCCAGAGACTCATCGCCACATTTCCAGGCTGAGCAGCG
TGTTATGTCCCGGTACACTCTCTGGAGCGCGCTCTGGAAGCTCTTGCTGCTGAATTTTCTCCAACCTGGCAGAA
GGAGGCCATGCGGCTGGAACGTCTGGAGCTGCGGCAAGGGGCTCCTGGCCAGGGAGGTGGTGGTGGCCTGAGCCA
CGAGGACACCCTGGCGCTGCTGGAGGGGCTAGTGAGCCGCCGTGAAGCTGCCCTGAAGGAGGATTTCCGCAGGGA
AACTGCTGCTCGCATCCAGGAAGAACTGTCTGCCCTGAGAGCAGAGCATCAGCAAGACTCAGAAGACCTCTTCAA
GAAGATCGTCCGGGCCTCCAGGAGTCCGAGGCTCGCATCCAGCAGCTGAAGTCAGAGTGGCAAAGCATGACCCA
GGAGTCTTCCAGGAGAGCTCTGTGAAGGAGCTGAGGCGGCTGGAGGACCAGCTGGCCGGCCTGCAGCAGGAGCT
GGCGGCTCTGGCACTGAAGCAGAGCTCGGTGGCGGAAGAAAGTGGGCTGCTGCCCCAGCAGATCCAGGCCGTGCG
GGACGACGTGGAATCTCAGTTCCCGGCTGGATCAGTCAGTTCTTGCCCCAGGTGGAGGGGGCCGCGTGGGGCT
CCTTCAGAGAGAGGAGATGCAAGCTCAGCTGCGAGAGCTGGAGAGCAAGATCCTCACCCATGTGGCAGAGATGCA
GGGCAAGTCGGCCAGGGAAGCCGCGGCTCCCTGAGCCTGACGCTGCAGAAAGAAAGGTGTGATTGGAGTGACAGA
GGAGCAGGTGCACCACATCGTGAAGCAGGCCCTGCAGCGCTACAGTGAGGACCGCATCGGGCTGGCAGACTACGC
CCTGGAGTCAGGAGGGGCCAGCGTCATCAGCACCCGATGTTCTGAGACCTACGAGACCAAGACGGCCCTCCTCAG
CCTCTTCGGCATCCCCCTGTGGTACCACTCCAGTCACCCCGAGTCATCCTCCAGCCAGATGTGCACCCAGGCAA
CTGCTGGGCTTCCAGGGGCCACAGGGCTTCGCCGTGGTCCGCCTCTCTGCCCGCATCCGCCCCACAGCCGTTAC
CTTAGAGCATGTGCCCAAGGCCTGTACCCAAACAGCACTATCTCCAGTGCCCCCAAGGACTTCGCCATCTTTGG
GTTTGACGAAGACCTGCAGCAGGAGGGGACACTCCTTGGCAAGTTCACTTACGATCAGGACGGCGAGCCTATTCA
GACGTTTCACTTTCAGGCCCCACGATGGCCACGTACCAGGTGGTGGAGCTGCGGATCCTGACTAACTGGGGCCA
CCCCGAGTACACCTGCATCTACCGCTTCAGAGTGATGGGGAGCCCGCCCTAGCCCTGCTTACTGGTGCCTGC
TGCCAGCCATCTGGGAGTGGGTGAACAGCACCCCGCCGCTTCCCCCACACGCTTGCTCGGCGCTCTGACTTCTAG
GAGCACAAGAGAGGAGCCTGTGGCCCCATGCAGATGAAAAGGACGGGCAGGGTCTCCTGAGCAGCAGGTGGCTCG
AGGCGGTTAGCAGGCTCCAGCAGCTCCCTTCTTCTTCCCTCTGTGCCCGTGGCGTCTGCTTCCCATCTGGGAG
TGTGTATATATGTAGCATATCATGGGGGACTGGGAAGTTGGGAGAGGTAGGACCTGACTGGTCTTGGCTGGGGTC
AGGGGCTGGTGCTGGGAGCTGATGAAGCAGGTGCCAGGGCTGTGGGAGGGGCAAGCTACGGCCTGGGCTAGGTG
AGCTGCCTCTGCCCCCTGGGCAAGGAAGCGAGGCCCTCTGGGAGGAGGGTGCTTAGCTCCAGAGCAGGATGGGACT
TCCCCAGGCAGGAAGCACTTGATGGAGAGCTGCCAGCTCTCCTACAAGGTTAGTGCCCTCCACCTAGGGAAGCC
TGAACCACAGGGTCCCTGAGGGCCTTCGACAAAAGTGTGTATTTGTCCCGGGGAGGGTAGCAGTGGGCCATGGGG
CTTCTTGTGCCCTAAAGGGGACTGGCTGCTGTGATCTTCTAAGGGGCCAGGGCCAACCCTGTAGGCTTCCCCTC
TGCTGGGGACGGTAGTTGCTTTTCTCTCTCTCTGATGCTAGGTTGGGGCCACCCTGCTCCCTGTTCTGCTAGGG
CCTGCCAGTGCCCTGAGCTTGCTTTCCACATTCTCCAGGGTATGGAGACCTAGACCTGTCTTGGGGCCATTA
GCATCTGGGGTTATAGCAAGAAGAGTGGGGAGCATGGAACCTCTGGGCTCTTGTGGGGACGTTACAGGGTATCGGG
GTGCGAGGTCTGTCTGCACCGGCCCCCACATCTAACCAGGCCCTGATGTAGGGGTCGTCCGCTCAGGCTGCCCC
TTGGGCTCTTGACGCTCTTGTTACAGGTAGTCGCCCTTCTGGTTTGTCTCTGTGGGGCAGTTGGTGGGGGCTGGG
GGAAGAGGCTGGCAGAAGTTACCCTGGATAGGGAAGGGGGAGGAGGGGACTTTTAGAGCCAGCAGGCCCCACTGT
ATTATGTATATATTTTCAAGGTCTGTTTTTCTAAGTGAAGGCTAAGGGCTTGATTCTAGCCCCGTTCTGTGG
GGCACTGGGTGATACTCAGTTTCTTGTTTCTGGCCGTGGAGAGGGGCTGGGGCACTGGTTCCGGCTGTGTCTGG
TGGTCCGGCTGCAGGGAAGGGGCAAGAAGCGGGCAGGCCTTCACTGCAGCACTGAGCCTCAAATCCGCTCTGGA

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FIGURE 787B

GCATGAGGCTGGATGCAGTGGTGGTGAGGCCGCCCCGCTCCATCCCGAGGCAGCCAGGCTTTGTTTTGCGCTCTC
CTGTCACAAATGCTGCACTATTGGTTCTTAAGTTTTTTATCTCCAGATCCTAATTTATGCCTATGCAAAAAATAA
ATGACGCCCAAGAGCTG

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FIGURE 788

AGTTCTCACTGAGACCTGTCACCCCGACTCAACGTGAGACGCACCGCCCGGACTCACCATGCGTGAATGCATCTC
AGTCCACGTGGGGCAGGCAGGTGTCCAGATGGGCAATGCCTGCTGGGAGCTCTATTGCTTGGAACATGGGATTCA
GCCTGATGGGCAGATGCCAGTGACAAGACCATTGGTGGAGGGGACGACTCCTTCACCACCTTCTTCTGTGAAAC
TGGTGTGGAAAACACGTACCCCGGGCAGTTTTTGTGGATCTGGAGCCTACGGTCATTGATGAGATCCGAAATGG
CCCATACCGACAGCTCTTCCACCCAGAGCAGCTCATCACTGGGAAAGAGGATGCTGCCAACAACTATGCCCGTGG
TCACTATACCATTGGCAAGGAGATCATTGACCCAGTGCTGGATCGGATCCGCAAGCTGTCTGACCAGTGCACAGG
ACTTCAGGGCTTCCTGGTGTTCACAGCTTTGGTGGGGGCACTGGCTCTGGCTTCACCTCACTCCTGATGGAGCG
GCTCTCTGTTGACTATGGCAAGAAATCCAAGCTGGAATTCTCCATCTACCCAGCCCCCAGGTGTCTACAGCCGT
GGTCGAGCCCTACAACCTCTATCCTGACCACCCACACCACCCTGGAGCACTCAGACTGTGCCTTCATGGTGGACAA
CGAAGCAATCTATGACATCTGCCGCCGCAACCTAGACATCGAGCGCCCAACCTACACCAACCTCAATCGCCTCAT
TAGCCAAATTGTCTCCTCCATCACAGCTTCTCTGCGCTTTGACGGGGCCCTCAATGTGGACCTGACAGAGTTCCA
GACCAACCTGGTGGCCCTACCCTCGCATCCACTTCCCCCTGGCCACCTATGCACCAGTCATCTCTGCAGAAAAGGC
ATACCACGAGCAGCTGTGGTGGCAGAGATACCAATGCCTGCTTTGAGCCTGCCAACCAGATGGTAAAGTGTGA
TCCCCGGGCACGGCAAGTACATGGCCTGCTGCCTGCTGTACCGTGGAGATGTGGTGCCCAAGGATGTCAACGCTGC
CATTGCCGCCATCAAGACCAAGCGCAGCATTTCAGTTTGTGGACTGGTGCCCCACAGGCTTCAAGGTTGGTATCAA
CTACCAGCCTCCCCTGTGGTGCCTGGGGGTGACCTGGCCAAGGTGCAGCGTGCCGTGTGCATGCTGAGCAACAC
GACCGCCATCGCCGAGGCCTGGGGCCGCTGGACCACAAGTTTCGACCTGATGTATGCCAAGAGGGCGTTTGTGCA
CTGGTATGTGGGTGAGGGCATGGAGGAGGGTGAGTTCTCCGAGGCCCCGTGAGGATATGGCTGCCCTGGAGAAGGA
TTATGAGGAGGTGGGCATCGACTCCTATGAGGACGAGGATGAGGGAGAAGAATAAAGCAGCTGCCTGGAGCCTAT
TCACTATGTTTATTGCAAAATCCTTTCGAAATAAACAGTTTCCTTGACGCGTTAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAA

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FIGURE 789

MRECISVHVGQAGVQMGNACWELYCLEHGIQPDGQMPSDKTIGGGDDSFITFFCETGAGKHVPRAVFVDLEPTVI
DEIRNGPYRQLFHPEQLITGKEDAANNYARGHYTIGKEIIDPVLDRIKRLSDQCTGLQGFLVFHSFGGGTGSGFT
SLLMERLSVDYGKKSLEFSIYPAPQVSTAVVEPYNSILTHTTLEHSDCAFMVDNEAIYDICRRNLDIERPTYT
NLNRLISQIVSSITASLRFDGALNVDLTEFQTNLVPYPRIHFPLATYAPVISAEKAYHEQLSVAEITNACFEPAN
QMVKCDPRHGKYMACECLLYRGDVVPKDVNAAIAAIKTKRSIQFVDWCPTGFKVGINYQPPTVVPGGDLAKVQRAV
CMLSNTTAIAEAWARLDHKFDLMYAKRAFVHWYVGEGMEEGEFSEAREDMAALEKDYEYEVGIDSYEDEDEGEE

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FIGURE 790

GACCGAAGCAAGAGCTGGTTCAGGTGGCAGCCACAGCAGCCTCAGGGACCTCAGCAACTATGGCCTCCTGCCCAG
ACTCTGATAATAGCTGGGTGCTTGCTGGCTCCGAGAGCCTGCCAGTGGAGACACTGGGCCCCGGCATCCAGGATGG
ACCCAGAATCTGAGAGAGCCCTGCAGGCCCCCTCACAGCCCCCTCCAAGACAGATGGGAAAGAATTAGCTGGGACCA
TGGATGGAGAAGGGACGCTCTTCCAGACTGAAAGCCCTCAGTCTGGCAGCATTCTAACAGAGGAGACTGAGGTCA
AGGGCACCCCTGGAAGGTGATGTTTGTGGTGTGGAGCCTCCTGGCCCAGGAGACACAGTAGTCCAGGGGAGACCTGC
AGGAGACCACCGTGGTGACAGGCCTGGGACCAGACACACAGGACCTGGAAGGCCAGAGCCCTCCACAGAGCCTGC
CTTCAACCCCCAAAGCAGCTTGGATCAGGGAGGAGGGCCGCTGCTCCAGCAGTGACGATGACACCGACGTGGACA
TGGAGGGTCTGCGGAGACGGCGGGGGCCGGGAGGCCGGCCCCACCTCAGCCCATGGTGCCCTGGCTGTGGAGAACC
AGGCTGGGGGTGAGGGTGCAGGCGGGGAGCTGGGCATCTCCCTCAACATGTGCCTCCTTGGGGCCCTGGTTCTGC
TTGGCCTGGGGGTCTCTCTCTTCTCAGGTGGCCTCTCAGAGTCTGAGACTGGGCCCATGGAGGAAGTGGAGCGGC
AGGTCTCTCCAGACCCCAGGTGCTGGAAGCTGTGGGGGACAGGCAGGATGGGCTAAGGGAACAGCTGCAGGCCC
CAGTGCCTCCTGACAGTGTCCCCAGCCTGCAAAACATGGGTCTTCTGCTGGACAAGCTGGCCAAGGAGAACCAGG
ACATCCGGCTGCTGCAGGCCAGCTGCAGGCCCAAAAGGAAGAGCTTCAGAGCCTGATGCACCAGCCCCAAAGGGC
TAGAGGAGGAGAATGCCAGCTCCGGGGGGCTCTGCAGCAGGGCGAAGCCTTCCAGCGGGCTCTGGAGTCAGAGC
TGCAGCAGCTGCGGGCCCCGGCTCCAGGGGCTGGAGGCCGACTGTGTCCGGGGCCAGATGGGGTGTGCCTCAGTG
GGGGTAGAGGCCACAGGGTGACAAGGCCATCAGGGAGCAAGGCCCCAGGGAGCAGGAGCCAGAATCAGCTTCC
TGAAGCAGAAGGAACAGCTGGAGGCTGAGGCACAGGCATTAAGGCAAGAGTTAGAGAGGCAGCGACGGCTGCTGG
GGTCTGTACAGCAGGATCTGGAGAGGAGCTTGCAAGATGCCAGCCGCGGGGACCCAGCTCATGCTGGCTTGGCTG
AGCTGGGCCACAGATTGGCCCCAGAACTGCAGGGCCTGGAGAATGGGGCCAGGACCCCTGGGGTCTCTGCCAATG
CCTCAAAGGCCTGGCACCAGAAGTCCCACTTCCAGAATTCTAGGGAGTGGAGTGGAAAGGAAAAGTGGTGGGATG
GGCAGAGAGACCCGAAGGCTGAGCACTGGAACATAAGAAGGAAGAATCTGGCCGGGAAAGGAAGAAGAACTGGG
GAGGTACAGGAGACAGGGAGCCAGCAGGAAGGTGGAAGGAGGGCAGGCCAAGGGTGGAGGAGTCGGGGAGCAAGA
AGGAGGGCAAGCGACAGGGCCCCGAAGGAACCCCCAAGGAAAAGTGGTAGCTTCCACTCCTCTGGAGAAAAGCAGA
AGCAACCTCGGTGGAGGGAAGGGACTAAGGACAGCCATGACCCCTGCCATCCTGGGCAGAGCTGTTGAGGCCCA
AGTACCGGGCACCCAGGGCTGCTCAGGTGTGGACGAGTGTGCCCGGCAGGAGGGCCTGACTTCTTTGGCACAG
AGCTAGCCCCAGTGCGGCAACAGGAGCTGGCCTCTCTGCTAAGAACATACTGGCACGGCTGCCCTGGGCTGGGC
AGCTGACCAAGGAGCTACCCCTCTCACCTGCTTTCTTTGGTGAGGATGGCATCTTCCGTCATGACCGCCTCCGCT
TCCGGGATTTTGTGGATGCCCTGGAGGACAGCTTGGAGGAGGTGGCTGTGCAACAGACAGGTGATGATGATGAAG
TAGATGACTTTTGGAGACTTCATCTTCAGCCACTTCTTTGGAGACAAAGCACTGAAGAAGAGGTCAGGGAAGAAGG
ACAAGCACTCACAGAGCCCCAAGAGCTGCGGGGCCAGGGAGGGGCACAGCCATAGCCACCACCACCACCACCGGG
GCTGACACCCTGCCCCACAGGGAATGGCCTTGGCCTGGCCCAGCCCCAAGATCCAGCGTTATCTAACTCCTGGAG
GGTGGACTCTGTCTCTGGCTTGTGTTGGTGTCTCAGATATCTTTACACAGTAGAGCAAAATCACCAGCCCTGCAC
TGATGTCACTTTATGTAGAAAAAGGCCTTAGCTGGACCTGCGTTGCCGTCTATGCAAAATGCATGCAAAATCTCCA
GGCCCTGGGATGTGGGCTTGTGTTTGTCACTGTGAAGGGGGAGATGGGAGAGGAGCCTGTTTTGGGGTGGGGTC
TGGGGAAGGCAATCTGATTCTGAAGCTAAAGAGCTTTCATCCTCTTGAGTGTATGTCCCCATAGTGGGCCCCCTTG
ACCCACATGCTGACCGGTGCCTTGGGATTTGACTAGAGTTGCTGGCTCGAGGCCCAGCACGAGGACTTACCCTGG
GGTTTTGTTAGGTTTGAAGCAGCTGTCCCTAGGGGGTGAAGTCCCCCCCCCTTTTTTTTTTTTACCCTGCTTCTC
CCACGGCTTACCTCCCTATGTGAAGTGTAGACTCAGATCCCAATAAAGTGCTGTTGCAGCTATGATGCTAGGTG
GTTTCTAAGCACAGGGGACACCCACACCCCTGCCGTAATGGATGGGTCCATCCCAGGCACTGGTACTTGCCCC
CTTGTTCTGTATCCCCCTTTGCCCTTGCCCTTCCAACAAACCCTAGGCCCTTGAGAAGCTGATACTTCTC
CTTTTGCTCACAGCTGCCTTGGCCCCACCCCTGGGAGATGTAGCAAATTGAGTGTGGGTTTTGGAGTCTGAGCCT
CAGGCTCAAATCCAGGCCAAGTGATCTTGGGCAAGTTAATCTCTGGGAACCTTGGGTTTCTTATCCTCAAAAAAG
GCGATGGAAGGGCTGGGGAAGTGATTAAATAAAAGCAACGCAAGAAAAA

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FIGURE 791

MASCPDSDNSWVLAGESESLPVETLGPASRMDPESERALQAPHSPSKTDGKELAGTMDGEGTLFQTESPQSGSILT
EETEVKGTLEGDVCGVEPPGPGDTVVQGD LQETT VVTGLGPD TQDLEGQSPPQSLPSTPKAAWIREEGRCSSDD
DTDVDMEGLRRRRRGREAGPPQPMVPLAVENQAGGEGAGGELGISLNMCLLGALVLLGLGVLLFSGGLSESETGPM
EEVERQVLPDPEVLEAVGDRQDGLREQLQAPVPPDSVPSLQNMGLLLDKLAKENQDIRLLQAQLQAQKEELQSLM
HQP KGLEEENAQLRGALQQGEAFQRALESELQQLRARLQGLEADCVRGPDGVCLSGGRGPQGDKAIREQGPREQE
PELSFLKQKEQLEAEQAALRQELERQRRLLGSVQQDLERSLQDASRGDPAHAGLAELGHRLAQKLQGLENWGQDP
GVSANASKAWHQKSHFQNSREWSGKEKWWDGQRDRKAEHWKHKKEESGRERKKNWGGQEDREPAGRWKEGRPRVE
ESGSKKEGKRQGPKEPPRKSGSFHSSGEKQKQPRWREGTKDSHDPLPSWAELLRPKYRAPQGCSGVDECARQEG
TFFGTELAPVRQQELASLLR TYLARLPWAGQLTKELPLSPAFFGEDGIFRHDRLRFRDFVDALEDSLEEVAVQQT
GDDDEVDDFEDFIFSHFFGDKALKKRSGKKDKHSQSPRAAGPREGHSHSHHHHHRG

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FIGURE 792

CTCTTCTCACATCAGCGGGTCCAGGCCCAACCGACAGACTATGGGGGCTCCTTCACCAGGCGCTGCGTGAGTGG
CTGCTGGGCCTCTACTTCCTCAGCCACATCCCCATCACCCCTGTTTCATGGACCTGCAGGCGGTGCTGCCGCGGAG
CTCTACCCAGTCGAGTTTAGAAACCTGCTGAAGTGGTATGCTAAGGAGTTCAAAGACCCACTGCTACAGGAGCCC
CCAGCCTGGTTTAAAGTCCTTTCTGTTTTGCGAGCTTGTGTTTCAGCTGCCTTTCTTTCCATTGCAACGTATGCC
TTCTCTCAAAGGAAGCTGCAAGTGGATTGCAACTCCTGCAATCATCTACTCTGTTTCACACCATGACAACCTTAATT
CTGATACTCTCCACATTTCTGTTTGAGGATTTCTCCAAAGCCAGTGGTTTCAAGGGACAAAGACCTGAGACTTTG
CATGAACGGTTAACCTTGTGTCTGTCTATGCCCCCTACTTACTCATCCCATTTCATACTTTTAATTTTCATGTTG
CGGAGCCCCTACTACAAGTATGAAGAGAAAAGAAAAAAAAAATGAAGGAAACAACCACTGGCCCAGGGTAGAGAT
GCCTACAGGGTGGTTGCTTGTGGATACATACAGGAACACTGCTCAGAACCCACGTCTTCAGCAGCATTGAAAC
ACTGGCAGCAATGCACAAGAGCAAGATGGTGTGAGGAACCATGTCAAACCCCTCACCTTCTTCCATTTTTTTTTTT
TTTTTGAGACAGTCTCACTCTGTTGCCAGGCTGGAGTAAAGGGCAGTGGCATGATCTCGGCTCACTGCAACCTCC
GCCTCCTGGGCTCAAGCCATCTTCCTTAGCCTCCCAAGTAGCTAGAACTACAGGTGTGTACCAACACGTATGGCT
AATTTGTTTTGTTTTTTTTTGTGTGTGTGGAGACAGGGTTTTGCCATGTTGCCAGGTTGGTCTCGAACGCCTAGG
CTCAAGTGATCTGCCCACCTCAGTCTCCCTAAGTGCTGGGATTACAGACGTGAACCACTGGGCCCAGCCCCAAACC
TTCACCTTCTAAGGGCACTGGGATGAACAGACCGATCGGCTTGAGGGTGGGCAAAGGGGTGTGGGCTAGGTTATA
AGGAAGTGGTACCAAATAACTGTGTTGCCTGAGTTCCACCGCAAGATTACTAAAAGCAGGACCAGACCAGAACT
GCTAAAGAACATGGCCTGTTTGACATGTTTCATGAGTCACCTGACCCACAGCATATATGCTTATGACTAAACCCCTC
CACTCCTGATTCTCAAGAGTGTATCACCTGTGAGCAAAATGAATAGTGGGATATTTTGGGCCATTTTAAATGTGA
AATTTTGCCTCTTTAATGTTAATTCAAACTATATCAATGTTTTCTTGTTCACCTCTAACCCAAGGAAAAAAG
AGAAAACATACTATGCAAAGGAAGTTTAAACTTAAGTTTTCTTAAGGGTCAGCCCAACAATGACTTTCAGTCAA
ATGGATTAAACTGGAAAATGTTTTGTTTCTGTTGTAAACAGATCATCCTAGGCGAAAGTTTTTTTTTGTGTTGTT
GCTTTTAAATTAGTTTATTTCTAAATCTTAGTCTTCCACATTTCTAGAGGCCACCTGACACAAGTCCCTGTATCT
GAAGTCTAGCATCTCAAGGCTGATCTGGAAGTGTGCTAGTATGCTCCCTAGTGGATAACTTAATCTTTTAATACA
GTTCCGTCATTCCCATCTTGTGTTTTCAGAAGAGAAGGTGGCTACAGCCAGGCATAACTTATCCACTGTGTGCATAG
AGGGTCTCTTCACGTTGATGCTTGGCATTCCATCAGCTTTCTCTAAGTCTTGCTCAAGTTCAAGGTTAAATGA
TGTTAGACAACAGGTCCCAGTCAGTCCCCTCTATTTTACCCATTTTGCTCACAAGCCATATTGGCCCGATTAGT
GGTACTGTCTGACTCACGTGTGTGATCCAAATAAAGGTAGCTGCCGGGAATT

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FIGURE 793

CTCTTCTCACATCAGCGGGTCCAGGCCCAACCGACAGACTATGGGGGCTCCTTCACCAGGCGCTGCGTGGAGTGG
CTGCTGGGGCTCTACTTCCTCAGCCACATCCCCATCACCTGTTCATGGACCTGCAGGCGGTCTGCGCGCGAG
CTCTACCCAGTCGAGTTTAGAAACCTGCTGAAGTGGTATGCTAAGGAGTTCAAAGACCCACTGCTACAGGAGCCC
CCAGCCTGGTTTAAAGTCCTTTCTGTTTTGCGAGCTTGTGTTTCAGCTGCCTTTCTTTCCATTGCAACGTATGCC
TTCTCAAAGGAAGCTGCAAGTGGATTGCAACTCCTGCAATCATCTACTCTGTTCACACCATGACAACCTTAATT
CTGATACTCTCCACATTTCTGTTTGAGGATTTCTCCAAAGCCAGTGGTTTCAAGGGACAAAGACCTGAGACTTG
CATGAACGGTTAACCCTTGTGTCTGTCTATGCCCCCTACTTACTCATCCCATTTCATACTTTTAATTTTCATGTTG
CGGAGCCCCCTACTACAAGTATGAAGAGAAAAGAAAAAAATGAAGGAAACAACCACTGGCCCAGGGTAGAGAT
GCCTACAGGGTGGTTGCTTGTGGATACATACAGGAACACTGCTCAGAACCCACGTCTTCAGCAGCATTGAAAC
ACTGGCAGCAATGCACAAGAGCAAGATGGTGTGAGGAACCATGTCAAACCCCTCACCTTCTTCCATTTTTTTTTT
TTTTTGAGACAGTCTCACTCTGTTGCCAGGCTGGAGTAAAGGGCAGTGGCATGATCTCGGCTCACTGCAACCTCC
GCCTCCTGGGCTCAAGCCATCTTCCTTAGCCTCCCAAGTAGCTAGAACTACAGGTGTGTACCAACACGTATGGCT
AATTTGTTTTGTTTTTTTTTGTGTGTGTGGAGACAGGGTTTTGCCATGTTGCCAGGTTGGTCTCGAACGCCTAGG
CTCAAGTGATCTGCCCACCTCAGTCTCCCTAAGTGCTGGGATTACAGACGTGAACCCTGGGGCCAGCCCCAAACC
TTCACCTTCTAAGGGCCTGGGATGAACAGACCGATCGGCTTGAGGGTGGGCAAAGGGGTGTGGGCTAGGTTATA
AGGAAGTGGTACCAAATAACTGTGTTGCCTGAGTTCCACCGCAAGATTACTAAAAGCAGGACCAGACCAGAACT
GCTAAAGAACATGGCCTGTTTGACATGTTTCATGAGTCACCTGACCCACAGCATATATGCTTATGACTAAACCTC
CACTCCTGATTCTCAAGAGTGTATCACCTGTCAGCAAAATGAATAGTGGGATATTTTGGGCCATTTTAAATGTGA
AATTTTGCTCTTTAATGTTAATTCAAACCTATATCAATGTTTTCTTGTTCACCTCTAACCCAAGGAAAAAAG
AGAAAAATACTATGCAAAGGAAGTTTAAACTTAAGTTTTCTTAAGGGTCAGCCCAACAATGACTTTCAGTCAA
ATGGATTAAACTGGAAAAATGTTTTGTTTTCTGTTGTAAACAGATCATCCTAGGCGAAAGTTTTTTTTGTTGTTT
GCTTTTAAATTAGTTTATTTCTAAATCTTAGTCTTCCACATTTCTAGAGGCCACCTGACACAAGTCCCTGTATCT
GAAGTCTAGCATCTCAAGGCTGATCTGGAAGTGTGCTAGTATGCTCCCTAGTGGATAACTTAATCTTTTAATACA
GTTCCGTCAATCCCATCTTGTTCAGAAAGAGAAGGTGGCTACAGCCAGGCATAACTTATCCACTGTGTGCATAG
AGGGTCTCTTCACGTTGATGCTTGGCATTCCATCAGCTTTCTCTAAGTCTTTGCTCAAGTTCAAGGTTAAATGA
TGTTAGACAACAGGTCCAGTCAGTCCCTCTATTTTACCCATTTTGCTCACAAGCCATATTGGCCCGATTAGT
GGTACTGTCTGACTCACGTGTGTGATCCAAATAAAGGTAGCTGCCGGGAATT

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FIGURE 794

LFHQRVQAQPTDYGGSFTRRCVEWLLGLYFLSHIPITLFMDLQAVVPRELYPVEFRNLLKWYAKEFKDPLLQEP
PAWFKSFLFCELVFQLPFFPIATYAFLKGSCKWIRTPAIIYSVHTMTTLILILSTFLFEDEFSKASGFKGQRPETL
HERLTLVSVYAPYLLIPFILLIFMLRSPYYKYEEKRKKK

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FIGURE 795

ATGTGGCTTCATCGAGTATTCCTTTGTGAATTCCTGGATGAAATTTTCAAGGCAAACAGGAAAAGCACTGAAATT
GCTGAATGGTGGCGAACGGAGCCACGAGGGAAGGGAGCGCCGCCGCGCAGCTGCCGGGACACCAGGATACCACGCG
GCCAGCACCGAAACGCTAGGCTCGCGCTCACAACCGCAATCTACACTGAGTAGCCGCGCGCCGAACGGCGTGACT
AAGCCCCGCCCACACGGCGCTCCTGGCGGCCAATGGAAATGGCTTACGAGACGCCCTTCTCCACGCGCTATACTTA
TACGGACCAATGGGTGCGCCCTGTGGGGAGTGCCGCCCCCTGTCCACGAGCCTCCTCTTCTCGCCAGCCAATGGA
AGCGGTCTGCCTAGCCCTCGCGGGGGCAAGGCGGCGACCGAGGCGCGTGGGTCTGGGAAGGCGCGCGGATTTGGC
CTCTTCTCACATCAGCGGTCCAGGCCCAACCGACAGACTATGGGGGCTCCTTCACCAGGCGCTGCGTGGAGTGG
CTGCTGGGCCTCTACTTCCTCAGCCACATCCCCATCACCTGTTCATGGACCTGCAGGCGGTCTGCGCGCGAG
CTCTACCCAGTCGAGTTTAGAAACCTGCTGAAGTGGTATGCTAAGGAGTTCAAAGACCCACTGCTACAGGAGCCC
CCAGCCTGGTTTAAAGTCCTTTCTGTTTTGCGAGCTTGTGTTTCAGCTGCCTTTCTTTCCATTGCAACGTATGCC
TTCTCAAAGGAAGCTGCAAGTGGATTGCAACTCCTGCAATCATCTACTCTGTTTACACCATGACAACCTTAATT
CTGATACTCTCCACATTTCTGTTTGAGGATTTCTCAAAGCCAGTGGTTTCAAGGGACAAAGACCTGAGACTTTG
CATGAACGGTTAACCCTTGTGTCTGTCTATGCCCCCTACTTACTCATCCCATTCATACTTTTAAATTTTCATGTTG
CGGAGCCCCCTACTACAAGTATGAAGAGAAAAGAAAAAAAAAATGAAGGAAACAACCACTGGCCCAGGGTAGAGAT
GCCTACAGGGTGGTTGCTTGTGGATACATACAGGAACACTGCTCAGAACCACCGTCTTCAGCAGCATTTGAAAC
ACTGGCAGCAATGCACAAGAGCAAGATGGTGTGAGGAACCATGTCAAACCCCTACCTTCTTCCATTTTTTTTTTT
TTTTTGAGACAGTCTCACTCTGTTGCCAGGCTGGAGTAAAGGGCAGTGGCATGATCTCGGCTCACTGCAACCTCC
GCCTCCTGGGCTCAAGCCATCTTCCTTAGCCTCCCAAGTAGCTAGAACTACAGGTGTGTACCAACACGTATGGCT
AATTTGTTTTGTTTTTTTTTGTGTGTGTGGAGACAGGGTTTTTGCCATGTTGCCAGGTTGGTCTCGAACGCCTAGG
CTCAAGTGATCTGCCCACCTCAGTCTCCCTAAGTGCTGGGATTACAGACGTGAACCACTGGGCCAGCCCAAACC
TTCACCTTTCTAAGGGCACTGGGATGAACAGACCGATCGGCTTGAGGGTGGGCAAAGGGGTGTGGGCTAGGTTATA
AGGAAGTGGTACCAAATAACTGTGTGCCTGAGTTCCACCGCAAGATTACTAAAAGCAGGACCAGACCAGAACT
GCTAAAGAACATGGCCTGTTTGACATGTTTATGAGTCACCTGACCCACAGCATATATGCTTATGACTAAACCCCTC
CACTCCTGATTCTCAAGAGTGATCACCTGTCAGCAAAATGAATAGTGGGATATTTTGGGCCATTTTAAATGTGA
AATTTTGCCCTCTTTAATGTTAATTCAAACTATATCAATGTTTTCTTGTTCACCTCTAACCCAAGGAAAAAAG
AGAAACATACTATGCAAAGGAAGTTTAACTTAAGTTTTCTTAAAGGGTCAGCCCAACAATGACTTTCAGTCAA
ATGGATTAACTGGAAAATGTTTTGTTTCTGTTGTAAACAGATCATCCTAGGCGAAAGTTTTTTTTGTTTGT
GCTTTTAAATTAGTTTATTTCTAAATCTTAGTCTTCCACATTTCTAGAGGCCACCTGACACAAGTCCCTGTATCT
GAAGTCTAGCATCTCAAGGCTGATCTGGAAGTGTGCTAGTATGCTCCCTAGTGGATAACTTAATCTTTTAAATACA
GTTCCGTCAATCCCATCTTGTTCAGAAAGAGAAGGTGGCTACAGCCAGGCATAACTTATCCACTGTGTGCATAG
AGGGTCTCTTACGTTGATGCTTGGCATTCCATCAGCTTTCTCTAAGTCTTTGCTCAAGTTCAAGGTTAAATGA
TGTTAGACAACAGGTCCCAGTCAGTCCCCTCTATTTTACCCATTTTGCTCACAAGCCATATTGGCCCGATTAGT
GGTACTGTCTGACTCACGTGTGTGATCCAAATAAAGGTAGCTGCCGGAATT

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FIGURE 796

MWLHRVFLCEFLDEIFKANRKSTEIAEWWRTPEPRGKGAPPAAAGTPGYHAASTETLGSRSQPQSTLSSRAPNGVT
KPRPHGAPGGQWKWLTRRLHLALYLYGPMGAPCGECRPLSTSLLFSPANGSGLPSRGGKAATEARGSGKARGFG
LFSHQRVQAQPTDYGGSFTRRCVEWLLGLYFLSHIPITLFDLQAVVPRELYPVEFRNLLKWKYAKEFKDPLLQEP
PAWFKSFLFCELVFQLPFFPIATYAFLKGSCKWIRTPAIIYSVHTMTTLILILSTFLFEDFSKASGFKGQRPETL
HERLTLVSVYAPYLLIPFILLIFMLRSPYYKYEEKRKKK

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FIGURE 797

GGCTTACAGGAGGGCAGCTCTGCAGTTGGGAGGGGCACCGTCCGGAGGAGACCAGGCCTCTACACACCCCCCACT
CTACTTATCATCCCTGCTCACACACCCCTTGTCCTAAGGCTTTATGCATCGGATTTATTTTTCCAAATCAAGAGGAC
AGTGATAGATGCATTTTCCCCAGGCTGTCTCAGAAAGGTCGCTAAATGTATACTGTTGTCAGAATTGCTGAGATC
TCCCCCACTTTTGGTTTTTGCAGCAGTAAAACTCTTTCCACTGTGACTTATTTTCTCTCTCAGGCAGCCAGCC
ACCTGGTCCCTTGTGCTGACTCTAGCACAGTGGCCAGGATCCAATACGAGTCCAGGGGTGACCGCAGGATGGTGG
GGGCAGCGGGCTTCTCCACCTACCCAGCCACCAAGGCCCTGACGCACTGCCTCCTGCACCTTCAGCACATCCCT
GTGCACAGCTGGAAGGGTGCATGGCCCGCTCACCTTTGTTTCAGATGGGTGGAAACGCTGATGATAACGCTCCTC
CCTGCCGTGCCCCTGCCACGGAGCAGGCATTGTGAACTGGCTGGTGTGTTGCAGTCCCACGTGGCATGGCCTCCAG
CCCAACCCACAGTGGAGACTGGAGACAGGGCAATGAGTCTGGTCGGGGGCACGTGGACATGCCCCATAGGGGGCCC
CACCCAGACTTAACAGGCAAGGTCTGGGCATTGCGCGACGCAGGACTCAATGCTAAAGCAAGCCTGCCTGGCTC
TGTGCCAGGGCCCCCTCTTCTGATTTACACATCCCATTTTTACACAGACCCTTCCTTCTTAATAAAGGCTGACAGT
TCTGTTGGCAGCCAAGAACCCACACCATGAAGACAGGGAGTGAGGGGCCTTTGTGCCCAACTCCAGCACAGCTGC
GTTCTGGGGTGTGTGAGAGGCATGTTTCGTGTCTGTGCGTGGTGGTCTCGTGAGACAGTTCCGAGGACGGGGAAA
TTGCAGGGTGGTGGGGCGTGAGGCTTATATGTGGAAGTGTGAGAGTTTCGCCTGCAGACGGATCTGGATATAC
ACTATGTATAATTGTTACGTGTAATTTAAATATATCTGTTTGCCATCGTCATGAGAAGATTATATGTAAGGCTC
TGAAGGGAGAGGGAGATGTACATTCTGCCAGGCTCCTGGGGACCTTATCCGAGTCATGAATTGATGACTGTTGA
TCCAGTGGTGCAAGAAGCTACACTCCATGTGTGTCATCACGCTTATTGACTCCTAATGTATTTTTAAGGCAAAAAATG
TCAGCCGACTCCATCTTCACCCCTCGATTCTCGAGTCCAGCCTTTCTGTGCCAGTGCTTCACTGAGCCACAACG
CTCTCGCCATCGGGACCCGGCTGGGCCTGGAGTCTCGGGGCACAGTTGCCATGGAGCCCTCCTGGGTCATTCTAC
AAATGTGCTGAGTGCCAGCTGAAAACCCACAGGAGATGGAGTACCTTGGCCAAGCTTAAAGAGAAGATTTTCTC
AGGGTATTTATTAGTGTGTCCAGCAGGGTCAGGAAGCAGGATGGAAAGATGCATTCAGACTGTTAATTTATTAAC
AAGGCAAATGATTTTGTGTTTCTTGATGACAGACTATTAAGTTGGGACTTATTTTCCATTTGAGAAGTTATAA
TATATATTTAAGATGATAAGTTTCCTGCTTAAGTTGTGCCTTTCAGCTTCAATGAGTTTAAGGAGCACTAAGGGT
AATGATACCAATGAGGGTGGTTTATTATCAAACCTGAATAGCTGTGGTTTCTCCAGTAAATATTTTCTTCTACT
GAACATGGAGCCATTATTAAGAGTTGTGTGTTTTTATTATGTACATTTGTATATTTTTTGTCTTGTGTTGATGTT
CTATTTTCTAATAGTTTTCTTTTAGTTTTCTTAAAGTTGTGATACTAGATTTAGATTCTGATGCTAACTGCAAAAT
CAGGTTGGTCTCTGCTGGGTCTCTCCTGCTTTTATTTTACTTTAAGGACAAGTGTAGTTGTCGTCCACCACCTTT
CAAAAAATGTGAAACTGCCCTGCCCTCCCCTTTTGTCTGACAACACTGTGTACATTGACCACCTTCTACCATACTT
TATGTTGTAAATCAAACCTTTTTGTGGTACATTATCTCATGCTTCTGCAAATTCGAATAAATCTATGGCTTCC
AAAAAAAAAAAAAAAA

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FIGURE 798

MKLMTVDPVVQEATLHVSSRL

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FIGURE 799

CGGTCACCACAGAGGCAAGACAAGGGTCCATATCGCGGCATCCGGCTCCCGCCCGTCTTCAGGAGAGAAAGAAAA
AATAAAATATACCTTGGGGAAGTTGTACCTGCCAGAATTAGTAAGAGCTTCTTTAAGAAGACATTTGTCAAACCTC
AACAAATTGAAGGTTAACACCTTAAGAGTTGTAGTTACTGACCAGAAATATGGACAGACTTCTTAGACTTGGAGG
AGGTATGCCTGGACTGGGCCAGGGGCCACCTACAGATGCTCCTGCAGTGGACACAGCAGAACAAGTCTATATCTC
TTCCCTGGCACTGTTAAAAATGTTAAAACATGGCCGTGCTGGAGTTCCAATGGAAGTTATGGGTTTGATGCTTGG
AGAATTTGTTGATGATTATACCGTCAGAGTGATTGATGTGTTTGCTATGCCACAGTCAGGAACAGGTGTCAGTGT
GGAGGCAGTTGATCCAGTGTTCCAAGCTAAAATGTTGGATATGTTGAAGCAGACAGGAAGGCCGGAGATGGTTGT
TGGTTGGTATCACAGTCACCCTGGCTTTGGTTGTTGGCTTTCTGGTGTTGGATATCAACACTCAGCAGAGCTTTGA
AGCCTTGTCGGAGAGAGCTGTGGCAGTGGTTGTGGATCCCATTCAGAGTGTTAAAAGGAAAGGTTGTTATTGATGC
CTTCAGATTGATCAATGCTAATATGATGGTCTTAGGACATGAACCAAGACAAACAACCTCGAATCTGGGTCACCT
AAACAAGCCATCTATCCAGGCATTAATTCATGGACTAAACAGACATTATTACTCCATTACTATTAACATATCGGAA
AAATGAACTGGAACAGAAGATGTTGCTAAATTTGCATAAGAAGAGTTGGATGGAAGGTTTGACACTTCAGGACTA
CAGTGAACATTGTAAACACAATGAATCAGTGGTAAAAGAGATGTTGGAATTAGCCAAGAATTACAATAAGGCTGT
AGAAGAAGAAGATAAGATGACACCTGAACAGCTGGCAATAAAGAATGTTGGCAAGCAGGACCCCAAACGTCATTT
GGAGGAACATGTGGATGTACTTATGACCTCAAATATTGTCCAGTGTTTAGCAGCTATGTTGGATACTGTCGTATT
TAAATAA

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FIGURE 800

MDRLLRLGGGMPGLGQGPPTDAPAVDTAEQVYISSLALLKMLKHGRAGVPMEVMGLMLGEFVDDYTVRVIDVFAM
PQSGTGVSVEAVDPVFQAKMLDMLKQTGRPEMVVGWYHSHPGFGCWLSGVDINTQQSFEALSERAVAVVVDPIQS
VKGKVVIDAFRLINANMMVLGHEPRQTTSNLGHLNKPSIQALIHGLNRHYYSITINYRKNELEQKMLLNHLKKSW
MEGLTLQDYSEHCKHNESVVKEMLELAKNYNKAVEEEDKMTPEQLAIKNVGKQDPKRHLEEHVDVLMTSNIVQCL
AAMLDTVVF

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FIGURE 801A

GGGGACATTTTGGATTAAACCTTATGTAGGTTGCCAGCTAATGAATTGTAATTGATTTCAATCTTAGCTGATAAAT
CTAATTGGTAATTTATAGAACAAATATTTGATAAGCTCCTATTAATTGTCACCCACCAAGCGGACAGCTAACAT
GAATTGCACTTCACTGCAGCTTTAGAGATCGGTTTAGGCTGAGACATTGCGCCTGCCTTAGGTTGCTGACTTCTT
TATTTTCAGAGCTCTGGAGACACCTAGTTTGAAAAATGTTATTCTGTTTTTTTTGTGAGAACTTAGTAAACAAGAAA
ATACTCTTGAGTGAAATGCAATGTATTTCTTTTGTAAATCAGTGCATTGAAAATTCAAGCCAGCATATTCCTAGT
AGATGGAAGCAAAATTAAGTTGTCTTTGTAGAAAATGAAGAGCCTTCTTCCAGCAAAAATCCCTGCTGTATGCA
ATAGCCCTGATTAAACCTCTCCCTTCTGCATGTTTCCCATATTACAGACTTGAGACTGTCCTCATTCCCATATGT
AATAGACATCCAAAGAATTTCAATTGCTTTGTTGAACTTTTACTAATGATCTTGTTTTTATTTTCTCTCTTGT
TTGGTTTTTACCATTGATATTGTATTTAGAAGGTTTCAGGTGGGTGAAACCTCCTATTCCATGCGTAAGGTGCC
TCGCTGAAGGGAGCTCGAGGCCTGGATCTAGGGCAGACACACAACCTCCTCCTCCTTCCAGCAAGGAACGCAC
CGAAAAGTCACATGATGAGAAATATGGTAACGGGTTTGTAACTGCCACAGCAAAACAATTTGCCTCCATGCCTGA
ATCTTCTGTCTTGTGGCTTCAGAAACAGCTTAAATAATTTTATTTACAAGCAAGTTATGTAAGAGAATGTTTTA
TACTATAGCCACAATTCTGTCAAAGATAAGTAAAGTTAATTGATATTAAAAATTATTAGAGATAATTTACTTAG
TAAAAGCTTCTAACTCTTCTTGTTGTTCATTTTTTCTCTTTTCTTCTTGTGTTGGATTGCAGCATTCTGCTC
TTCTGATGATGCGCTGTGACCCTGCAGTAGCGCAAAGGCTGCGCAGCGTTAATGCGCATTGCGTGCGAATGAACC
CCTGTGAACGGTTGACTAGATGAGTAATCTGATTGACTGGCTCCCTCAGTCCTATTCTGTAGCCTTTTTGGATAA
AATTGGGTTTTAACATACCTCGAGTCCAATAATCTCATTAAACAAATATTCTCCATGGGCCTGTCTAGTAGATT
AATGGATCTGGTTGGCCGTTTGTCTGCGTCTAGGGGTGTTCTATGTAGCGCAGCAGTTCCGAGCGATTGCGCAGTG
CGATGCTGTTAGGTTGCGCAAGCGATGTTTGCCTCGCATTACAGGGACCTCAACCTAGGTGCAATCCTGTCTATG
TGAGGTTTCAGCTTCAGTCCTCCTTGGGAGACGGGGCATTGTGAGAATGTAACCTAAAGCCTGGCTTTATGATAT
CCTACTTGGCAGAAAGACATTTTTCTCCTCAGTAGCATAGTTTTGATGTTAGTGAGGAACATTGTTGAAGAGCAG
CATTTCCCAAAATGTGTTTCATAGTATTCTAATAAAATGCCCAATGAAAGAAGAGTTCCATGGTCAACTAAGTTC
AGGGAACCTGTACACTATTAAAGGCTTAGGGAAGTCCAGTAAAGAAACCTATTTTCCGAATTTATTTGATCAT
GAACTCCTTTTTTTTTCAGCCATACCTCTTAACACCTCATAGAACACACTTCCGGAACAGTGGGGGTAGGAAAAC
TCGGCCTCAAGTTGCGCCCTCTAGGTAGCACTTGAAAACATGACAAGGGCCCGTAGTTGTTTGGATAAGAGAACT
CCAGCATAGAGCCTTATAGCAACTGACTTCCCAGTTAAGTCCCAGTGTAAGGGTTGGTCTTTGGTTGGCAGAACT
GAACATGGTGGTTTGCACCTTGGGTTCTGGTGGCGCAGGCGCAGGAGCAGCCAGCTGTGGCAGCGCATTAGTTTTG
GCGCAAGCGAGCCTATGCTGCAGGGTCACTTTTGGCTGGTCAGAGAAGGAATAATGATATCACCTTCTTCCCCC
CTCCCCCAATCTTTTTTTTTTCCCTTTACAAATTTTCCCTTTCCCTTTACCTCCTTTCCCTCCCATCTTCTTT
CATTAAACCTCCTAAGGCATGTTATTTGAAAGCAATTGAGACGCAACCGAACTTTGCAGTAGCTTGGAGTAATC
TTGGCTGTGTTTTCAATGCACAAGGGGAAATTTGGCTTGCAATTCATCACTTTGAAAAGGCTGTCACCCCTTGACC
CAAATTTCTGGATGCTTATATCAATTTAGGAAATGTCTTGAAAGAGGCACGCATTTTGCAGAGCTGTGGCAG
CTTATCTTCGTGCCCTAAGTTTGAGTCCAAATCACGCAGTGGTGCACGGCAACCTGGCTTGTGTATACTATGAGC
AAGGCCTGATAGATCTGGCAATAGACACCTACAGGCGGGCTATCGAACTACAACCACATTTCCCTGATGCTTACT
GCAACCTAGCCAATGCTCTCAAAGAGAAGGGCAGTGTGCTGAAGCAGAAGATTGTTATAATACAGCTCTCCGTC
TGTGTCCCACCCATGCAGACTCTCTGAATAACCTAGCCAATATCAAACGAGAACAGGGAAACATTGAAGAGGCAG
TTCGCTTGTATCGTAAAGCATTAGAAGTCTTCCCAGAGTTTGTCTGCTGCCCATCAAATTTAGCAAGTGTACTGC
AGCAGCAGGGAAAACTGCAGGAAGCTCTGATGCATTATAAGGAGGCTATTGCAATCAGTCTACCTTTGCTGATG
CCTACTCTAATATGGGAAACACTCTAAAGGAGATGCAGGATGTTTACGGGAGCCTTGCAGTGTTATACGCGTGCCA
TCCAAATTAATCCTGCATTTGCAGATGCACATAGCAATCTGGCTTCCATTATAAGGATTACAGGGAATATTCCAG
AAGCCATAGCTTCTTACCGCACGGCTCTGAACTTAAGCCTGATTTTCTGATGCTTATTGTAACCTGGCTCATT
GCCTGCAGATTGTCTGTGATTGGACAGACTATGATGAGCGAATGAAGAAGTTGGTCAGTATTGTGGCTGACCAGT
TAGAGAAGAATAGGTTGCCTTCTGTGCATCCTCATCATAGTATGCTATATCCTCTTTCTCATGGCTTCAGGAAGG
CTATTGCTGAGAGGCACGGCAACCTGTGCTTAGATAAGATTAATGTTCTTATAAACCACCATATGAACATCCAA
AAGACTTGAAGCTCAGTGATGGTGGCTGCGTGTAGGATATGTGAGTTCCGACTTTGGGAATCATCTACTTCTC
ACCTTATGCAGTCTATTCCAGGCATGCACAATCCTGATAAATTTGAGGTGTTCTGTTATGCCCTGAGCCAGACG
ATGGCACAACTTCCGAGTGAAGGTGATGGCAGAAGCCAATCATTTCATTGATCTTCTCAGATTCCATGCAATG
GAAAAGCAGCTGATCGCATCCATCAGGATGGAATTCATATCCTTGTAATATGAATGGCTATACTAAGGGCGCTC

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FIGURE 801B

GAAATGAGCTTTTTGCTCTCAGGCCAGCTCCTATTTCAGGCAATGTGGCTGGGATACCCTGGGACGAGTGGTGCGC
TTTTTCATGGATTATATTATCACTGATCAGGAACTTCGCCAGCTGAAGTTGCTGAGCAGTATTCCGAGAAATTGG
CTTATATGCCCCACACTTTTTTTTATTGGTGATCATGCTAATATGTTCCCTCACCTGAAGAAAAAAGCAGTCATCG
ATTTTAAGTCCAATGGGCACATTTATGACAATCGGATAGTTCTGAATGGCATCGACCTCAAAGCATTCTTGATA
GTCTACCAGATGTGAAAATTGTCAAGATGAAGTGTCTGATGGAGGAGACAATGCAGATAGCAGTAACACAGCTC
TTAATATGCCTGTTATTCTATGAATACTATTGCAGAAGCAGTTATTGAAATGATTAACCGAGGACAGATTCAAA
TAACAATTAATGGATTGAGTATTAGCAATGGACTGGCAACTACTCAGATCAACAATAAGGCTGCAACTGGAGAGG
AGGTTCCCGTACCATTATTGTAACACCCGTTCTCAGTACGGGTTACCAGAAGATGCCATCGTATACTGTAAC
TTAATCAGTTGTATAAAATTGACCCTTCTACTTTGCAGATGTGGGCAAACATTCTGAAGCGTGTTCCTCAATAGTG
TACTCTGGCTGTTGCGTTTTCCAGCAGTAGGAGAACCTAATATTCAACAGTATGCACAAAACATGGGCCTGCCCC
AGAACCGTATCATTTTTTTCACCTGTTGCTCCTAAAGAGGAACACGTCAGGAGAGGCCAGCTGGCTGATGTCTGCT
TGGACACTCCACTCTGTAATGGGCACACCACAGGGATGGATGTCTCTGGGCAGGGACCCCCATGGTGACTATGC
CAGGAGAGACTCTTGCTTCTCGAGTTGCAGCATCCAGCTCACTTGCTTAGGTTGTCTTGAGCTTATTGCTAAAA
ACAGACAAGAATATGAAGACATAGCTGTGAAGCTGGGAACTGATCTAGAATACCTGAAGAAAGTTTCGTGGCAAAG
TCTGGAAGCAAAGAATATCTAGCCCTCTGTTCAACACCAAAACAATACACAATGGAAGTGAAGCGGCTCTATCTAC
AGATGTGGGAGCATTATGCAGCTGGCAACAAACCTGACCACATGATTAAGCCTGTTGAAGTCACTGAGTCAGCAT
AAATAAAGACTGCACAGGAGAATTACCCCTAAAAAAGGGCGGCCGAGGGAAGTGAATAACATA
CTTCTTACTTGTCTGTACAGTACCTTGTTGCAGATGGGTGATATATAATGGTAATAGAATAGCACAGCCAGACTT
GCTTCCTGCATGGTAGGGAGAGACACAAAAGATGGGAACTGCTTTTCCACAAGGAATCTCCGTAGAATTTTGCG
GCGACCAGATGGTGCATAGGTCTGGAAGGTCTGATCTCCCTTGGTCTTCCATGGGATGGTTAGTGTGGAGGGGAG
ATATAGATTGTCCGGCCGCTTTGTGATTCCATGGATTGATTGAGTCTTCTGGATTTTTTTTTCTTTATATTTTGG
GTACTGGAGCTTTTAAAAATGTTTGGTTTTCAGGTATTTTTATTTCATGTGAAGTGTATATGATTCTCTTGAGATAA
GGTTTTAAGCTAAAATGTTACTCCCTGTTTTAGTTTTCTGAACTCTGACAGATTGACAGGGACTTTGCTGGTGTAG
TCTTTTTATAGGTTTTATAAACCCTTGAGCCTATATCAGTCGTTTTAGTGTCTGACCTAATATTTGGAGCTATC
AGTGCTTTGTTGATTTAGATGATGACTCAAGATTTTTTCTGGTCCATTTCCTTTTCTTCCCTGACCCC
CATACCCCTACCCCTTAAAATTCTCCTGTAACCACTAACAATAAAGCCTGATTCAAACATCCTAGGGTGTT
TTAAACACACCATCTGGTGCCAAATGAAGATTTTTAGGAGTGATTACTAATTATCAAGGGCACAGTTGTGGTACT
GTCATTGATAATAATATAGTTTTTTTTTTTTCTAAAAAAGGGCGGCCGAGGGAAGTGAATAACATA
AATAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 802

MLQGHFWLVREGIMISPSSPPPPNLEFFFLQIFFFPFTSFPSHLLSLTPPKACYLKAIETQPNFAVAWSNLGCVF
NAQGEIWLAIHHFEKAVTLDPNFLDAYINLGNVLKEARIFDRAVAAYLRALSLSPNHAVVHGNNLACVYYEQGLID
LAIDTYRRAIELQPHFPDAYCNLANALKEKGSVAEAEDCYNTALRLCPTHADSLNNLANIKREQGNIEEAVRLYR
KALEVFPEFAAAHSNLSVLLQQGKLQEALMHYKEAIRISPTFADAYSNMGNLTKEMQDVQALQCYTRAIQINP
AFADAHSNLSIHKDSGNIPEAIASYRTALKLKPDPDAYCNLAHCLQIVCDWTDYDERMKKLVSIIVADQLEKNR
LPSVHPHSMYLYPLSHGFRKAIAERHGNLCCLKINVLHKPPYEHKDLKLSDGRLRVGYVSSDFGNHPTSHLMQS
IPGMHNPDKFEVFCYALSPDDGTNFRVKVMAEANHFIIDLSQIPCNGKAADRIHQDGIHILVNMNGYTKGARNEF
ALRPAPIQAMWLGYPGTSGALFMDYIITDQETSPAEEVQYSEKLAYMPHTFFIGDHANMFPHLKKKAVIDFKSN
GHIYDNRIVLNGIDLKAFDLSLDPVKIVKMKCPDGGDNADSSNTALNMPVIPMNTIAEAVIEMINRGQIQITING
FSISNGLATTQINNKAATGEEVPTIIVTTRSQYGLPEDAIVYCENFNQLYKIDPSTLQMWANILKRVNSVLWLL
RFPVAGEPNIQQYAQNMGLPQNRIIFSPVAPKEEHVRRGQLADVCLDTPLCNGHTTGMDVLWAGTPMVTMPGETL
ASRVAASQLTCLGCELELIAKNRQEYEDIAVKLGTDLEYLKKVRGKVWKQRISPLFNTKQYTMELERLYLQWEH
YAAGNKPDMIKPVEVTESA

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FIGURE 803

GGAGGAGGAAGCAAGCGAGGGGGCTGGTTCCCTGAGCTTCGCAATTCCTGTGTGCGCTTCTGGGCTCCCAGCCTGC
CGGGTCGCATGATCCCTCCGGCCGGAGCTGGTTTTTTTGCCAGCCACCGCGAGGCCGGCTGAGTTACCGGCATCC
CCGCAGCCACCTCCTCTCCCGACCTGTGATACAAAAGATCTTCCGGGGGCTGCACCTGCCTGCCTTTGCCTAAGG
CGGATTGAATCTCTTTCTCTCCCTTCAGAATCTTATCTTGGCTTTGGATCTTAGAAGAGAATCACTAACCAGAG
ACGAGACTCAGTGAGTGAGCAGGTGTTTTGGACAATGGACTGGTTGAGCCCATCCCTATTATAAAAAATGTCTCAG
AGCAACCGGGAGCTGGTGGTTGACTTTCTCTCCTACAAGCTTTCCCAGAAAGGATACAGCTGGAGTCAGTTTAGT
GATGTGAAGAGAACAGGACTGAGGCCCCAGAAGGGACTGAATCGGAGATGGAGACCCCCAGTGCCATCAATGGC
AACCCTCCTGGCACCTGGCAGACAGCCCCGCGGTGAATGGAGCCACTGGCCACAGCAGCAGTTTGGATGCCCGG
GAGGTGATCCCCATGGCAGCAGTAAAGCAAGCGCTGAGGGAGGCAGGCACGAGTTTGAAGTGCAGTACCGGCGG
GCATTGAGTGACCTGACATCCAGCTCCACATCACCCAGGGACAGCATATCAGAGCTTTGAACAGGTAGTGAAT
GAATCTTCCGGGATGGGGTAAACTGGGGTGCATTGTGGCCTTTTTCTCCTTCGGCGGGGCACTGTGCGTGGA
AGCGTAGACAAGGAGATGCAGGTATTGGTGAGTCGGATCGCAGCTTGGATGGCCACTTACCTGAATGACCACCTA
GAGCCTTGGATCCAGGAGAACGGCGGCTGGGATACTTTTGTGGAATCTATGGGAACAATGCAGCAGCCGAGAGC
CGAAAGGGCCAGGAACGCTTCAACCGCTGGTTTCTGACGGGCATGACTGTGGCCGGCGTGTTCTGCTGGGCTCA
CTCTTCAGTCGGAAATGACACAGACTGACCATCCACTCTACCTCCACCCCCCTTCTCTGCTCCACCACATCCT
CCGTCCAGCCGCCATTGCCACCAGGAGAACCACTACATGCAGCCCATGCCACCTGCCCATCACAGGGTTGGGCC
CAGATCTGGTCCCTTGCAGCTAGTTTTCTAGAATTTATCACACTTCTGTGAGACCCCCACACCTCAGTTCCCTTG
GCCTCAGAATTCACAAAATTTCCACAAAATCTGTCCAAAGGAGGCTGGCAGGTATGGAAGGGTTTGTGGCTGGGG
GCAGGAGGGCCCTACCTGATTGGTGCAACCCCTTACCCCTTAGCCTCCCTGAAAATGTTTTCTGCCAGGGAGCTT
GAAAGTTTTTCAGAACCTCTTCCCCAGAAAGGAGACTAGATTGCCTTTGTTTTGATGTTTGTGGCCTCAGAATTGA
TCATTTTCCCCCACTCTCCCCACACTAACCTGGGTTCCCTTCCATCCCTACCCCTAAGAGCCATTTAG
GGGCCACTTTTGACTAGGGATTACAGGCTGCTTGGGATAAAGATGCAAGGACCAGGACTCCCTCCTCACCTCTGGA
CTGGCTAGAGTCCTCACTCCAGTCCAAATGTCTCCAGAAGCCTCTGGCTAGAGGCCAGCCCCACCCAGGAGGG
AGGGGGCTATAGCTACAGGAAGCACCCCATGCCAAAGCTAGGGTGGCCCTTGCAAGTTCAGCACCACCCTAGTCCC
TTCCCTCCCTGGCTCCCATGACCATACTGAGGGACCAACTGGGCCCAAGACAGATGCCCCAGAGCTGTTTATGG
CCTCAGCTGCCTCACTTCTTACAAGAGCAGCCTGTGGCATCTTTGCCTTGGGCTGCTCCTCATGGTGGGTTTACAGG
GGACTCAGCCCTGAGGTGAAAGGGAGCTATCAGGAACAGCTATGGGAGCCCCAGGGTCTTCCCTACCTCAGGCAG
GAAGGGCAGGAAGGAGAGCCTGCTGCATGGGGTGGGGTAGGGCTGACTAGAAGGGCCAGTCTGCTGGCCAGGC
AGATCTGTGCCCCATGCCTGTCCAGCCTGGGCAGCCAGGCTGCCAAGGCCAGAGTGGCCTGGCCAGGAGCTCTTC
AGGCCTCCCTCTCTCTTCTGCTCCACCCTTGGCCTGTCTCATCCCCAGGGGTCCCAGCCACCCGGGCTCTCTGC
TGTACATATTTGAGACTAGTTTTTATTCCTTGTGAAGATGATATACTATTTTTGTTAAGCGTGTCTGTATTTATG
TGTGAGGAGCTGCTGGCTTGCAGTGCGCGTGCACGTGGAGAGCTGGTGCCCGGAGATTGGACGGCCCTGATGCTCC
CTCCCTGCCCCTGGTCCAGGGAAGCTGGCCGAGGGTCTGGCTCCTGAGGGGCATCTGCCCTCCCCAACCCCC
ACCCACACTTGTTCAGCTCTTTGAAATAGTCTGTGTGAAGGTGAAAGTGCAGTTTCAATAAACTGTGTTTA
CTCAGTGAAAAAAAAAAAAAAAAAAAA

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FIGURE 804

MSQSNRELVVDFLSYKLSQKGYSWSQFSDVEENRTEAPEGTESEMETPSAINGNPSWHLADSPAVNGATGHSSSL
DAREVIPMAAVKQALREAGDEFELRYRRAFSDLTSQLHITPGTAYQSFEQVVNELFRDGVNWGRIVAFFSFGGAL
CVESVDKEMQVLVSRIAAMATYLNHLEPWIQENGWDTFVELYGNNAAESRKGQERFNRWFLTGMTVAGVVL
LGSLSRK

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FIGURE 805

GGCACGAGGCGTCCCGGCGCCACTCGGCCCAGGGCAGGGACCCCGCCACGGCCGGGACCGCCCGGCCCGGCCCA
GCCCCGCGCTCTCCGCGCCGCCCCGCGCTCCGCACCGCGCCCTCTCCGCGTCCCCGCCC GCGCGGCCGACCGGG
CAGCCAGAAAAATCATTTTTCTTCTCTGGGAAGGTGAACATTTGTAGCATTGATTTCCCGGATCTGGTAAC**ATGG**
CAAAAGATGCCGGTCTAATTGAAGCCAACGGAGAACTCAAGGTCTTCATAGACCAGAACCTTAGTCCC GGGAAG
GCGTGGTGTCCTCTCGTGGCCGTTACCCCTCCACCGTCAACCCGCTCGGGAAGCAGCTCTTGCCAAAAACCTTTG
GACAGTCCAATGTCAACATTGCCAGCAAGTGGTAATTGGTACGCCTCAGAGACCGGCAGCGTCAAACACCCCTGG
TGGTAGGAAGCCACACACCCCCAGCACTCACTTTGCCTCTCAGAACCAGCCTTCCGACTCCTCACCTTGGTCTG
CCGGGAAGCGCAACAGGAAAGGAGAGAAGAATGGCAAGGGCCTACGGCATTCTCCATGAAGGTCTGCGAGAAGG
TGCAGAGGAAAGGGACCACTTCTTACAACGAAGTGGCAGACGAGCTGGTTGCGGAGTTCAGTGCTGCCGACAACC
ACATCTTACCAAACGAGTCAGCTTATGACCAGAAAAACATAAGACGGCGCGTCTACGATGCCTTAAACGTGCTAA
TGGCCATGAACATCATCTCCAAGGAGAAGAAGGAGATCAAGTGGATTGGTCTGCCACCAACTCGGCTCAGGAAT
GTCAGAACTTAGAGGTGGAAGACAGAGGAGACTTGAAAGAATAAAACAGAAACAGTCTCAACTTCAAGAACTTA
TTCTACAGCAAATTGCCTTCAAGAACCTGGTGCAGAGAAACCGGCATGCGGAGCAGCAGGCCAGCCGGCCACCGC
CACCCAACCTCAGTCATCCACCTGCCCTTCATCATCGTCAACACCAGCAAGAAGACGGTCATCGACTGCAGCATCT
CCAATGACAAATTTGAGTATCTGTTTAATTTTGACAACACATTTGAAATCCACGATGACATAGAAGTGCTGAAGC
GGATGGGCATGGCTTGCGGGCTGGAGTCGGGGAGCTGCTCTGCCGAAGACCTTAAATGGCCAGAAGTCTGGTCC
CCAAGGCTCTGGAGCCATACGTGACAGAAATGGCTCAGGGAACGTGTTGGAGGCGTGTTTCATCACGACGGCAGGTT
CCACGTCTAACGGCACAAGGTTCTCTGCCAGTGACCTGACCAACGGTGCAGATGGGATGCTGGCCACAAGCTCCA
ATGGGTCTCAGTACAGCGGCTCCAGGTGGAGACTCCGGTGTCTACGTGCGGGAGGACGACGAGGAGGACGATG
ACTTCAACGAGAATGACGAGGACGACT**TGAC**GTCTCTCCCACTTCAGATTCCGGCTTCAGGAAAACGTTTAGCGAAA
AGAAACTTTTTTTTTTAATGTGGGTTTTCTGTTTCCTTTTGGCCTACTCCCAAGAAGATATTGGTAAGCTATTGAA
TTAGATATGCACCTCTGATAAGCAAGGATTGTTTCCCGTAGGATTAGGACGTGCTGTGGATGTGTGTTTTGATA
CCAGTGTGCTGATGCAGAGCGTTTATTTAGTTGTTAGGATTTTGTGTTTTTCATTTGCTATTTTTCTTTAAGTGCA
GAGTTCATTTTTGCCCCTGAAAAGTTTTTGCTGAGTTTGCTGAAGAAATTGTATTTCAACCACATCCATGAAAAAT
AAAACACCTCCTGTTGTGGATGGTGAGCCCTGATGCCGCTTATTTGCCGTGAGTTTGGACGGCACCCCTGCTGG
CGGATAGCAAGACTCTGTGGAGTTTGTTCAGTGGTACGGTGTCCAAGCAAACAGCAGAATGCAACTTTCTAAACA
GCCCCAAGCAAACAGCAGAATTCAACTTTTTTAAACAATAAACACCATCAACCTTATTGACTTTATTGTCCCTTAA
ATTATATTGACTGTTGTGATTCCATCAAGTTTGACACTCTTTCTCTCCCTGTTTTGCAGCAACAAATTGCGAA
GTGCTTTTGTGTTGTTTGTTCGTTTGGTTAAAGCTTATTGCCATGCTGGTGC GGCTATGGAGACTGTCTGGAAG
GCTTGGAATGGTTTATTGCTTATGGTAAAATTTGCCTGATTTCTTACAGGCAGCGTTTGGAAACCTTTTATTATA
TAGTTGTTTACATACTTATAAGTCTATCATTTAAAGACATGTACTGAAACAAATGTATTTGTTTCATAAGCATCT
TCCTGTAATCTATTATAAAATTGAAATTAAATATAGAGAATGTTTAAACAAAAAAAAAAAAAAAAAAAAA

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FIGURE 806

MAKDAGLIEANGELKVFIDQNLSPGKGVVSLVAVHPSTVNPLGKQLLPKTFGQSNVNIAQQVVIGTPQRPAASNT
LVVGSPTHPTSTHFASQNQPSDSSPWSAGKRRNRKGEKNGKGLRHF SMKVCEKVQRKGTTSYNEVADELVAEFSAAD
NHILPNESAYDQKNIRRRVYDALNVLMAMNII SKEKKEIKWIGLPTNSAQECQNLEVERQRRLERIKQKQSQLQE
LILQQIAFKNLVQRNRHAEQQASRPPPPNSVIHLFFIIVNTSKKTVIDCSISNDKFEYLFNFDNTFEIHDDIEVL
KRMGMACGLESGSCSAEDLKMARSLVPKALEPYVTEMAQGTVGGVFITTAGSTSNGTRFSASDLTNGADGMLATS
SNGSQYSGSRVETPVSYVGEDDEEDDDFNENDEDD

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FIGURE 807

ACTTATACATCTGTAAAGGTGGTTTCAGGGACCTTTCTGAACTTAGCCCGTATCTCACTGGTGATCCCACTTCTG
GGTATTTGCAAATCACTTTATTAGGTTTTTAAAAGTATTGTTGCAGGCATGCGAAGGGGCCGATATACTTTTGCC
ATGTCCAGAGTGTATTTCAGGTCTTGTAATGATCATATGGGTGTAATATTGAGTAACAGGCCAAATGTGGGCAGAAA
ATATCAAATGTGGTTTTTCAGCTAAGAAGTCTGGTTGCTCTTAATTTTCAGTTACTCTCCATTGCATAGAATAAAG
CCCCGAAGAAACGAAGAATAAGATCATGGGGAAACTTGGCTTCCATGTTAAACCGTGTAATACCAGGTGTTAGAA
TAGTAGTAAAGGACTTGTTTTCTTTCACATCTATATACACTCAAAGACCTCATCGATCTTGGAAAAACATTGTTT
CGAAGACAATGTGTATGACTGATTGGTTATATGAAGAAATTATTTCTAGGATTTCTTGTAATTCTGTGATAAA
CAGTAATACAACTGGAATTTTTACAGGTCACCTATAGTAGAGGTTTTAGTTTGATTTTGCCTTGCCTGTCATGC
TCTCTCGCCTTATAATTCTTTGTGGTGTAATTAACAAACGAACACTNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNTGCAAACACATTTTAATTGACAACACTAGGGCTGTTGTACAAAATAGTAATGATAGCCATGGAAG
TTTTACCTTATTCTGTGAGAAAGTGTCTTAACTTATTAAGTGTCTAACTAAGGTTTAGTGCTTTTTTAAAGGA
AAGTTGTCCCAGGATTCATCCTAAAGAAAGCAAAAGTTAATTCACTGATCCACCAATGGAATTAGATGGGTAGA
GTTGGGTTCTTGAGTTTTACCACCACCTTAGTTCCCACTGAATTTTGTAACCTCCTGTGTTTGCATCCTCTGTTCC
TATTCTGCCCTTGCTCTGTGTCATCTCAGTCATTTGACTTAGAAAGTGCCCTTCAAAGGACCCTGTTCACTGCT
GCACTTTTCAATGAATTAATAATTTATTTCTGTTCTAGTGGGAATGTGTCCTTTGTTTTAGTTTACAAGTAGTAAT
TTTGACAAGATGCTTTCTTCTGATGCAGTTTGTTTTAATCACTCACCTAGTACTAGAAATGGCTTTCTAGTCAGA
TCCTATAGTCTCTACCTGTATAGCTCTTACATACA

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FIGURE 808

MLSSDAVCFNHSPSTRNGFLVRSYSLYLYSSY

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FIGURE 809A

CCGTCCCGGGGCGGACGGGCGGGCGGGAGGATCGAGCTGAACTCCCTGCTGATCCTGCTGGAGGCGGCCGAGT
ACCTGGAGCGCAGGGATCGAGAGGCCGAGCACGGCTACGCCTCGGTGCTGCCCTTCGACGGCGACTTCGCCAGGG
AGAAAACAAAGGCGGGCCGGCTGGTGCACAAGGCCCCGAACAACAGGTCTTCACACAACGAGCTAGAAAAGCACA
GACGAGCCAAACTCAGGCTGTACCTTGAGCAGCTCAAGCAACTGGTGCCCCCTGGGCCCCGACAGCACCCGCCACA
CCACGCTGAGCCTCCTGAAGCGGGCCAAGGTGCACATCAAGAACTGGAGGAGCAGGACCGCCGGGCACTGAGCA
TCAAGGAGCAGCTGCAGCAGGAGCATCGTTTCTGAAGCGGCGCCTGGAGCAGCTGTGGTGCAGAGCGTGGAGC
GCGTGCGCACAGATAGCACGGGCTCTGCTGTCTCCACGGACGACTCAGAGCAAGAAGTGGACATAGAGGGCATGG
AGTTTGGCCCTGGTGAGCTGGACAGTGTGGCAGCAGCAGTGACGCGGACGACCACTACAGCCTGCAGAGTGGCA
CCGGCGGCGACAGTGGCTTCGGGCCCCACTGCCGGCGGCTGGGCGGCCCGCCCTCTCGTAGGCCCGTGCCCTCT
GCTCCTTGGCCTGCCTGCCCGCCAGCCACGCGTGTACGCCCTCCAGTTCTCCTTCAGTTGACGCCAGCCTCTCCA
CAGGCCCCACTGCTGTGCCATTCTGGAAGCTCCAGCTGCTGCTGGGCTGCCTGGCACTGCCCGCTTGCCGGTCAGG
GCCTGCCGAGCTGCCTGCCCTTCCAGCTGGGCAGAGTCCCCTGCAAGGAGGCAGGGCCCAGCTTCCACATCCGG
AGCCCTGGTCAGCATAGCCGCCACGGTCTGTTCTCAGATTCCTAATCATTCCAGAAGTATTAAACGTCATTGCT
GCAAACCTCGGCAGGTGCCGTGTGAGGGGCTTAATGACCACCACAGGGAGCTCAGACCCCAACCCTGGATCCAG
GAGAAAAGGAGTGGACCGAGGAAGGAAGGAAGGCAAGGCTGTCTGTCCATCCGTCCGTCTGTCCACCTACCTGTCA
GTCCACATAGGCTCCTGGCGTGGACAAGGGGCTGTGAAGGGCGGGAACGGGTGAGCACCTGGGGCAGGTGGGT
GGTTAAGGTCCTTCCCACTTCGAGGTGTGACAACCTAGGGCTGGGCTCTCGGGGCCAGGCAGGCCAGCCCAGCC
CACGCCGAGCTGGGCAGCGTCTGCTCTGGTAGGACTGTCAGACGCACACGCGCACGCACCTAGACACACCCACTC
ATGTACATGCTCACACATGCAGACACACCTGGGCGTCCCGAGGTACATGTTCTGGGGATGATGGCCTTCAGGGG
TCATCTGGCAAACAGCCCCTGGGCTGTGCCTGGATCCCCCTCTAGCTCCTGCTCACCCACGCCACCCAGTAGTC
CTGCCTGTCTGCACAGGAGAGGGGCTTCTCTTCTGGCTGGGGCTGGGGTGAACCTGGAGGCTGGTTAAGTTGCAG
CCGCTGGGTCTCTGGGGGCTTACTCATCTCCCTTTTTTAAACAAAAAGCAAAAAAGTAAAATGCTGCACTGCCCA
GCAGCCCGGTTAGGGCTCCTGGAGCCACCTTAGGAAAGGGCTTCTCATGAGCTCTGCTGCGGCAGCTTCAGCTGG
CAGAGAGGCTTTCCAGAAAAAAGGCTTCTCATGAGCTCTGCTGCGGCAGCTTCAGCTGG
CGTCCGTGTGTGCCGCTCTGTTTCTGTACAGATTTTTGTATTCTATTTTCTAGCTGTTGTTGCGTCCCTGT
TTGTGAGGGGTGGGAGCCACCCAGCGTCTCAGGGACCTGTCCCTCCGTACGTCGTCAAAGTGTGCCCTTGTGTC
TTGTGTCAGGCCCTTGCCCTTCCCACAGCATGTCCCTCGTGGCTCAGGGTGCCCCAGGCCTGCCAGCTAGTGCT
GTCCCTCCATCTCCTGTGGGCAGCCCCTCCCGGCAGCCAGGGCTTCTGGAGGCGATGCAGCCAGGCCCCCTGTGG
GTGGCAGGAGGGGCTGTGACCTGGTCCCCAGTGTGCCCCCTCCCCAGTGGCTGGCAGGGGCTGCTTGCTCACTA
GAGAGATGGATTCTCACCTGTACCTGACTCGAGCCCCCTGCTTCTGGCCTAGGCGAGGGTTCCAGGTTTCAGA
CACTGGCAGCCAATGAAGACTGTGCTCGCTGGGTGGTGCAGGCCTGGCACCAGGAGGCTTGCACCCGCCTTCTCT
TCCTGACGTCTCTGTCTTGGGGCTGGCCCATAGCAGTGCCTGCCGTGCCCTCTGGTACATCTGTAGCCAATTCC
CATATCATGGGGAAATTCTGTGTCTATTTTTCAGTCTGACGCATAGACGCCCCAGGATGGGGGGCCCACTGTGGCG
GAAGGGGGTCCCTGGAACAACCTCTGGCACAGAACCTGCCCTGCAGGCTGTAGGGGGCATGGTGCCTGGAGCTGA
GGGGCATCCGAACGCGTTGCGGGTGGTTGTGAGGAGGCTGTCTGCATCTCCTTCCGGCCCCACTGGGGTCCAGG
GGTGCCAGAAAGGAGCTTCCCTGCCTGCCTGAGTCTGTCCCCCAGGCTTCATTTCAAACACCGTGGCACCTC
CGAGCAAGGCGGGCCGTGTGTAAAGCTTGCTTCCCCAGCCAGCACTGCAGGGCCCTGAGGTGGTGTGTCCTGT
CCCTCAATTCTTGAAGCACCAGCTCCCTGCCCCACCTCCAGTGCCTGAGGCAGCTAGGGGCTTCTGCTCTCATC
TCTGACCAGCAGAATCCACCCGGTGACAGTGGTGGCCCCCTCAGCCACCTCCCGGCAGCTCAGCCTGTGGCTC
TTGAGGCCGTGGTTCCCACGTGGACTGGGAGGCAGTCTCAGCCACCCGGGGTGTGTTTCACTGCCCCCTCCCTGC
CATCAGCAGGTGGGTGAGGGGTGCCCCACTGGGTGGGGGCGCGTCTAGGAGTCAACCATGCTCCAACCTCCCA
CTGCTCCCTGTCAGGGGGCCAGGCTGCCATCACTGGAGGCTGCAGGGACCAAGAGGCCATCACCGTGTCTATAGA
GAGCAGACAGAAGCAGAACAGAGCCCGGGCTCCTGAGCCTCTGCGTGTGCCCTCCAGCCACACCAGTGCTCT
CGGCCACTGAGCACCCAGACTCAGGCTTGGGTTCACAGCCTTATTGGAAGGCAGCTCCCGCATACCAGGATAAC
CCCCGAAACCACATAGCAGACCCCCGCCATCCTCGCAGAGTGGGAGAGGCTGCAGCAAGGCTTTGCCTCTGCAG
ACCCCATCTTAGTGGCACGGTGTGGGCTGTGTCCCGGGTGGTGGAAACCTGTACCGGTCTGTGGCCCTAGG
GTCCCTGCTCTGTCTGCCCGGGCCGTGTGTCCGCTGGGTGAGGCAGGCTCCCCGTGCCCTGCCTCCCTCTGT
CAGGGAACCTGGGACCCCCCTCCCCACTGCCTGCACAGAGGACCTGACCCTCGGCCAGCAGGGTGGCCCCAGGTC

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FIGURE 809B

CATGTTGGGCACTAGGGCAGGTTCCGTGCCAGAGTCGGGGGCCACACGAGGGCCTGGTGCCGGTGAGGGGGGCGT
GCGCTAGAGGGGGAAGGGCCCCGGCCACCTGTCCACCGTGTGGGCCGTGCTGTGTCCTTATGTCATTGTAAT
ATAAATACAGATTTTTATATCTC

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FIGURE 810

MELNSLLILLEAAEYLERRDREAHEGYASVLPFDGDFAREKTKAAGLVRKAPNNRSSHNELEKHRRAKLRRLYLEQ
LKQLVPLGPDSTRHTTLLSLLKRAKVHIKKLEEQDRRALSIKEQLQQEHRFLKRRLEQLSVQSVERVVRTDSTGSAV
STDDSEQEVDIEGMEFGPGELDSVGSSSDADDHYSLSQSGTGGDSGFGPHCRRLGRPALS

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FIGURE 811

CGCGGGCGGGAGGATGGAGCTGAACTCCCTGCTGATCCTGCTGGAGGCGGCCGAGTACCTGGAGCGCAGGGATCG
AGAGGCCGAGCACGGCTACGCCTCGGTGCTGCCCTTCGACGGCGACTTCGCCAGGGAGAAAACAAAGGCGGCCGG
CCTGGTGCGCAAGGCCCCGAACAACAGGTCTTCACACAACGAGCTAGAAAAGCACAGACGAGCCAAACTCAGGCT
GTACCTTGAGCAGCTCAAGCAACTGGTGCCCTGGGCCCCGACAGCACCCGCCACACCACGCTGAGCCTCCTGAA
GCGGGCCAAGGTGCACATCAAGAAACTGGAGGAGCAGGACCGCCGGGCACTGAGCATCAAGGAGCAGCTGCAGCA
GGAGCATCGTTTCCTGAAGCGGCGCCTGGAGCAGCTGTCGGTGCAGAGCGTGGAGCGCGTGCGCACAGATAGCAC
GGGCTCTGCTGTCTCCACGGACGACTCAGAGCAAGAAGTGGACATAGAGGGCATGGAGTTTGGCCCTGGTGAGCT
GGACAGTGTTGGCAGCAGCAGTGACGCGGACGACCACTACAGCCTGCAGAGTGGCACCGGCGGCGACAGTGGCTT
CGGGCCCCACTGCCGGCGGCTGGGCCGCCCCGCCCTCTCGTAGGCCCCGTGCCCTCTGCTCCTTGGCCTGCCTGCC
CGCCAGCCACGCGTGTGAGCCCTCAGTTCTCCTTCAGTTGACGCCAGCCTCTCCACAGGCCCACTGCTGTGCCA
TTCTGGAAGCTCCAGCTGCTGCTGGGCTGCCTGGCACTGCCCGCTTGCCGGTCAGGGCCTGCCGAGCTGCCTGCC
CCTTCCAGCTGGGCAGAGTCCCCTGCAAGGAGGCAGGGCCCAGCTTCCACATCC

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FIGURE 812

MELNSLLILLEAAEYLERRDREAEGYASVLPFDGDFAREKTKAAGLVRKAPNNRSSHNELEKHRRAKLRLYLEQ
LKQLVPLGPDSTRHTTSLKRAKVHIKKLEEQDRRALSIKEQLQQEHRFLKRRLEQLSVQSVERVRTDSTGSAV
STDDSEQEVDIEGMEFGPGELDSVGSSDADDHYSLSGTGGDSGFGPHCRRRLGRPALS

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FIGURE 813A

GTTGGAGCGGCGCTGCTCGGCCGCGGACACACGAGGGACGCGCCCCGAGGAGCTGCAGGTGGCAGCCCAGGCGGTC
CGAACCCGTCGGCCGGCCGAGCCTGGAGTATTGCCTAAGTGTAATCTTGAACATGGGCGGTGCTGTGAGTGCTGG
TGAAGACAATGAAGAGCTGATAGATAATTTGAAAGAAGCACAGTATATCCGGACTGAGCTGGTAGAGCAGGCTTT
CAGAGCTATCGATCGTGACAGACTATTATCTTGAAGAATTTAAAGAAAATGCTTATAAAGACTTGGCATGGAAGCA
TGGAAACATTACCTCTCAGCCCCGTGCATCTACTCGGAGGTGATGGAAGCCCTAGATCTGCAGCCTGGACTCTC
GTTTCTGAACCTGGGCAGTGGCACTGGGTATCTCAGCTCCATGGTGGGCCTCATTCTAGGTCCTTTTGGTGTGAA
CCATGGGGTGGAACTTCACTCAGATGTGATAGAGTATGCAAAGCAGAACTGGACTTCTTCATCAGAACAAGTGA
TAGTTTTGACAAGTTTGACTTCTGTGAACCTTCTTTTGTACTGGGAATTGCCTGGAGATTTCTCCGGATTGTTT
TCAGTATGATCGTGTATACTGTGGGGCTGGCGTGCAGAAAGAGCATGAAGAGTACATGAAGAATCTTCTCAAAGT
GGGAGGGATCCTTGTCTATGCCACTGGAAGAGAAGTTGACTAAGATAACACGCACAGGTCCTTCAGCTTGGGAAAC
CAAAAAGATTCTTGCTGTTTCTTTTGTCTCTGTATCCAGCCCTGCCATTCAGAGTCAGGAAAATCAAGACTTGT
CCAGTTACCACCAGTGGCAGTTTCGCAGCCTCCAGGACTTGGCTCGCATCGCCATCCGGGGCACCATTAAAAAGAT
TATTCATCAGGAACTGTGAGCAAAAACGGAACCGACTAAAGAACACCCCCAGGTTTAAACGAAGGAGAGTTTCG
CCGCCGTGCAATGGAAACGATTGTCTTTTTTGGACAAAGAAGTCTTTGCCAGTCGGATTTCCAACCCCTCAGATGA
CAACAGCTGTGAAGACTTGGAAAGAGGAACGGAGGGAAGAAGAAGAGAAGACCCCGCCGGAACAAAGCCAGACCC
CCAGTGAACTTCCTACGCCAGAAGGTCTGAGCCTCCCTCTGCCAGATCCCCTGAAATACTACTTGCTTTATTA
CAGAGAAAAATAAGTCTCTCTGTTTGAAGGGGGAAATAGGAAGAGCAGATTGCTGAGTGTGAAGTTCGTGCTGCC
TGTGTGCTGTTGAAGGGTCACCTGGAGGCAGACGTTGTGGGGAAAGGGAAGTGTGGGCTCATCCACACCATGGTT
TTCTTCTAGTTTCTGATTGACCTCTAAAATTTCTATTTCAGTTGTATGATTGTTTACATAGTTCCACAAGACCTTC
ATTGCATAGAAGATTGTTTTCCCAAAGTGGAGAGAATCTTCATAGAGAAAAAGAGAAGGCTGTTTCTTTTTTCGGC
TCTGACGAAACACTGAAGTCTGCGTAAGAGAGACTGTTTGATGACCGTCCCTCATGCAACATGCACGGTACTCAC
TAAAAATGAAAACACTGAAGTGGAACTAACCTGTGTTGCTTATAAAGTGTGAAAGCACAAGCTTATAAATGTATAA
AATCTTTTCTGGGTGTGACGCACCTGCGTCCAAGTTTGAATTTTATGATATGTACCACTTAATTACTGGCACTG
AGTATCACTGAATTTCTTAGTTTTCTAGTGGGGAACATTATTGAGAAGCCCTCCCTTATTTTAAGTAAGTTGAT
TAAATCTTATGTGAGTTGCCAGTTGTAATTTTTCAAAGGAAAAATTTGATGGGGTGGAGGAATGAATTGCCAGA
TAATCTTTCTGGAATTCCGAGAGAATTCCAAAGAGGGTTTTTTTTTTTTTTTTTAGGACATCTTTTGATACCT
TTAAAGAACCCTGTCAAGTAATCCTTAAAAAATATCTTGGAAAAGGAAACAGATTTTTCTGTGTGTAAGC
AATAAGTGAAGTTACATTTGCCCTAACCTAGGGATGATTCTTTACCCAGTTTTAAAGCCCATCATGGTATTCTA
AGGTGTTGACACCCCTCCATCCTCAGAGCAGGTCGAAAATATTAAATAGACTGGGGACTCTATGATGGGCAGCCTG
TGCTTTTGACTTCAGTTTGCTATTTTTCTGTGATCACATTAGTACTGATTCATAGATTCTATCTTTTATAATTC
TGGAGAAAAAGATTTGTTAGTTTTGTAATTTTTTGTAAAGACCAAATGTATGTATTTTAGTAGCTCCATTGCATG
AGAAGAGTGTAACTCACACTGACTTGTGATATCAGCCTTCTCTGGGCCTTGTGTGTGGAGAGCTTCTATCTTAC
CAAGTGGTAGGGCTAAAAGAACAACAGCCTTTTTGGTAGTCACATAGCAGAATGATCAGAGTTACATTGCTTATT
CCAAAACATTGGTTCTTTTTTAAACATTTTTTTTTTACCCAAAGAAAAAGAAATAATAGAAATTACTAACAATAAATA
TAAATTCAGAGTGTGATATAGGATTACAGTATCCAGAGTTTATTTTTAATCTTAATCCTCAGCTTCTTGGGAGTT
GCTGGGCTTCAGTGTCTCTGTGGTTTTACCAGCTTAGCTTGAGCTCTGGTTATTTTGGATCTTTTCTGCTTTTTT
TAAGTAACTGAGTCATTTTTTACCACACAGTCCAGTTTGCATGTATAGCTAGGAAACATGTATTGCTCTAGATTGG
GCAGTTTAAAGTCATTTTTAAAGAAAGTTAGTTTCATAGTTGTTGCCTTTTTAACTCATAGTCAAGCTTCAGTCTTTCA
AAGAGAAAATGTGTGATTTTCAATTTACTTGCTGATATTTTGTAGTTTGGAGATCCTTGTGGGCATTATTCTAACTG
ATACGTAGACACTTACTTGGAAATTTTTGGACATTATATTAAATGAGTGCTATCTGTGAAATTGGTTATATTAGG
TGGCTTGACTAAATGTTTTTCTATAATTGTATATGGACTGCATTTTTTAAAAAACCGCATTGCTTTTATGCTAG
ATTGTAAAAAATTATATTAGAATGCATAAGACATGTTTTTCTTCATATGCTAGACTTTTCTAGCATTTCGTAT
TTCTGTGTTGTCAGTGTGTGATTTTTTAAACCGGAATTTGGTTTAAAAAAAATCTGGTGGTAATATATGTGAGAAA
TACTTTGGTGTTTACCTTATGAAATAAAGGATTGTAAGTAAAGTTTCTGCGCACCTTATACCAGAATTCAGTA
TAATACACTACTTTCTGTTTTTCAAACAGATAAATCATAATATAGTCTGTATTATCTGTAAGATCTGTCTTGTA
CCACATTCTTGACAACATTTTGTCTTTTGAAGTAGTTTGTATTTTAAATATGTGACTTTTGTCTTGAAAAGTAGTAA
GCCATAGACTTGTGCAAAACAAGTTTCAAGTTTATAGATATTAAGTTTGTAAATGTGAGCATCAAATGTGTATGTA
AAAAACTTTTTTACCAGTCTGGAACCTGGGAAAATCCAGGGAATTTGAAACATAGATTTTAAATGAGCTGGTAAAC

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FIGURE 813B

ACAAATCATGTCAATAAAGGTAGTCAGGATATTTTATCCTTAGCATTGCTTCTGC

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FIGURE 814

MGGAVSAGEDNEELIDNLKEAQYIRTELVEQAFRAIDRADYYLEEFKENAYKDLAWKHGNIHLSAPCIYSEVMEA
LDLQPGLSFLNLGSGTGYLSSMVGLILGPPGVNHGVELHSDVIEYAKQKLDOFFIRTSDSFDFCEPSFVTGNC
LEISPDSCSQYDRVYCGAGVQKEHEEYMKNLLKVGILVMPLEEKLTKITRTGPSAWETKKILAVSFAPLIQPCHS
ESGKSRLVQLPPVAVRSLQDLARIAIRGTIKKIIHQETVSKNGNGLKNTPRFKRRRVRRRRMETIVFLDKEVFAS
RISNPSSDDNSCEDLEEERREEEEKTPPETKPDPPVNFRLRQVLSLPLPDPLKYLLLYREK

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FIGURE 815

CGAGGGCAGCGCCGGTCGGGAGCGCAGCGCGGCAGCTCGGCGCGCACGGCGGGAGCGGCGCGAGTGGTCGG
GCCTGGCGGGCTGGACGGGCGCCCCCTCGCTGCCCCGCGCGCTCCCCGCCGCCCCCATGAGCGCAGCCCCGCGCGG
CCCGGGTCCGTAGGCGGGCGGGGCGCCCCCATGCTGCTGCAGCCCGCGCCGTGCGCCCCGAGCGCGGGCTTCCCC
CGGCCCCCTGGCCGCCCCCGGCGCC**ATG**CACGGCTCGCAGAAGGACACCACGTTACCAAGATCTTCGTGGGCGGC
CTGCCGTACCACACTACCGACGCCTCGCTCAGGAAGTACTTCGAGGGCTTCGGCGACATCGAGGAGGCCGTGGTC
ATCACCGACCGCCAGACGGGCAAGTCCCGCGGCTACGGCTTCGTGACCATGGCCGACCGGGCGGCAGCTGAGAGG
GCTTGCAAAGACCCGAACCCCATCATCGACGGCCGCAAGGCCAACGTGAACCTGGCATATCTGGGCGCCAAGCCG
CGGAGCCTCCAGACGGGCTTTGCCATTGGGGTGAGCAGCTGCACCCACCTTGATCCAGCGGACTTACGGGCTG
ACCCCGCACTACATCTACCCACCAGCCATCGTGAGCCAGCGTGGTGATCCCAGCCGCCCTGTCCCGTCGCTG
TCCTCGCCCTACATTGAGTACAGCCGGCCAGCCCGGCTACGCCCAGTACCCACCGGCCACCTATGACCAGTAC
CCATACGCCGCTCGCTGCCAGGCTGCCAGCTTCGTGGGCTACAGCTACCTTGCCGCCGTGCCCCAGGCCCTC
TCAGCCGCAGCACCCGCGGGCACCACTTTTCGTGCAGTACCAGGCGCCGCAGCTGCAGCCTGACAGGATGCAG**TGA**

GGGGCGTTCTGCCCGAGGACTGTGGCATTGTACCTTCACAGCAGACAGAGCTGCCAGGCCATGATGGGCTGG
CGACAGCCCCGGCTGAGCTTTAGTGAGGTGCCACCAGCACCCGTGCCTCCGAAGACCGCTCGGGCATTTCGCCTGC
GCCCTGGGACAGCGGAGAGATGGCTTCTCTTTAATCTAGGTCCCATTTGTGTCTTGAGGGAGGACTTTAAGAATGA
CTGAGAATAATTTAAAGACGCAATCCAGGTTCTTGCACACCATGGCAGCCTCTTCTTGACCTTCTCTGCCT
CTCCACACTCCAGGTTCCCTCAGGCTTGTGTCCCCACTGCTGCATCGTGCGGGGTGTCACAGACCCTCTGCAGC
CCCTGGCTGCCCTGGACTGTGCAGAGATGCCTGACTCCAGGGAAACCTGAAAGCAAGAAGTTAATGGACTGTTTA
TTGTAACCTGATCCTCCCGAGCTGTGAGCGCAGTCTGAGGTGTGAGGACACGGCCTCCTGTTGGAGTCCCATTTT
CTCCATCAGGGCACGTGGGCGGCTTCTCAAGCCCGGAGGAGCTCCCAGGCGCACAGGGGCCGCCGTTAACAGGG
GCCGCCGGCCAAAGGCCCTTTCCAGTCATAGCACTGAAGTTGCAACTTTTTTCTTGTAAATTGTTTTGCTACTAA
GATAATTTTCAAAGTTCAGTCTATTTTTTTCAGCGGATACTGCCGCCACCAAGAATCCAAAACCTATTTTTGACTT
GGAGAGACTTGCTTTTGTGTTGGTTCCGCCCGTGGAGACGACGACAGTGTTCGTGATAATAAAGTGTCTGCCGGCT
CGCGGGCCAGGATCCTCTCGGTGGGATGGGCACCACAGACAGGAGGCCCTCAGGCCCGTGCGGGCCACTGTCTG
CTGCCGCTGCCGGGTGGCAGAGTGAGTTGTCTCAGGACCCCGTCACTGCGACGTTGACACTCTCTCCTTCCTT
CCTTCCCCAACTCCCCAAACACTGTGGAAGGGAAGAAGGAAGTGATCCACAGCATTACAGGCCACTTGGGGTCTAG
ACCATGGTGGTGCCAGCCTGGGGGGGGCAGTGGCCCTCAGCTCTGCCCGCTGGAGCGGTTGAGTGCAGAAGGGTG
CGCCTCTTCCCTCTACCCCCGCACCACCTGCTGTGTGCCAGCCTGAGACGGTTCCCTGCCGTGTCTTGGGGGTTGGT
GGAGGGTGGAGGCAGTTCTGCCAGCCGTGGCAGGGCTGCTATGGGGCATCCAGGGCTGTGGGGGTCTGGAGGAGG
GGACATGAGGTGAGAGGTATCCTGGCCGAGGGCGGGGGGCGAGCGGGGGGTCTCCCTCCGGACCTACCTCAGGGAG
CTGAGCGTGACGGCGCTCCAGGGCAGGCCTGGGACAGAGTCAAGGCTCAGAGAATAAAGGTAGCTAATCTCATCA
TAATATTTTTATTAGAATGTTCTGATGATAAAAATAAAACTTGTTTTCTTT

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FIGURE 816

MHGSQKDTTFTKIFVGGLPYHTTDASLRKYFEGFGDIEEAVVITDRQTGKSRGYGFVTMADRAAAERACKDPNPI
IDGRKANVNLAYLGAKPRSLQTGFAIGVQQLHPTLIQRTYGLTPHYIYPPAIVQPSVVIPAAPVPSLSSPYIEYT
PASPAYAQYPPATYDQYPYAASPATAASFVGYSYPAAVPQALSAAAPAGTTFVQYQAPQLQPD RMQ

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FIGURE 817

GAGCCCAGCCGAGCGTCCGCCGCTGCCCGTGCGCTCCGCGCCATGGCCGGCCTCAACTCCCTGGAGG
CGGTGAAACGCAAGATCCAGGCCCTGCAGCAGCAGGCGGACGAGGCGGAAGACCGCGCGCAGGGCCTGCAGCGGG
AGCTGGACGGCGAGCGCGAGCGGGCGGAGAAAGCTGAAGGTGATGTGGCCGCCCTCAACCGACGCATCCAGCTCG
TTGAGGAGGAGTTGGACAGGGCTCAGGAACGACTGGCCACGGCCCTGCAGAAGCTGGAGGAGGCAGAAAAAGCTG
CAGATGAGAGTGAGAGAGGAATGAAGGTGATAGAAAACCGGGCCATGAAGGATGAGGAGAAGATGGAGATTCAGG
AGATGCAGCTCAAAGAGGCCAAGCACATTGCGGAAGAGGCTGACCGCAAATACGAGGAGGTAGCTCGTAAGCTGG
TCATCCTGGAGGGTGAGCTGGAGAGGGCAGAGGAGCGTGCGGAGGTGTCTGAACTAAAATGTGGTGACCTGGAAG
AAGAACTCAAGAATGTTACTAACAATCTGAAATCTCTGGAGGCTGCATCTGAAAAGTATTCTGAAAAGGAGGACA
AATATGAAGAAGAAATTAACTTCTGTCTGACAAACTGAAAGAGGCTGAGACCCGTGCTGAATTTGCAGAGAGAA
CGGTTGCAAACTGGAAAAGACAATTGATGACCTGGAAGAGAACTTGCCAGGCCAAAGAAGAGAACGTGGGCT
TACATCAGACACTGGATCAGACACTAAACGAACCTTAAGTATATTAAGCAAAACAGAAGAGTCTTGTTCCAACAG
AAACTCTGGAGCTCCGTGGGTCTTTCTCTTCTTGTGAAGAAGTTCCTTTTGTATTGCCATCTTCGCTTTGCTG
GAAATGTCAAGCAAAATTATGAATACATGACCAAATATTTTGTATCGGAGAAGCTTTGAGCACCAGTTAAATCTCA
TTCCTTCCCTTTTTTTTTTCAAATGGCACCAGCTTTTTTCAGCTCTCTTATTTTTTCCTTAAGTAGCATTTATTCCT
AAGGTAGGCAGGGTATTTCCCTAGTAAGCATACTTTCTTAAGACGGAGGCCATTGGTTCCCTGGGAGAATAGGCAG
CCCCACACTTTGAAGAATACAGACCCAGTATCTAGTCGTGGATATAATTAACCGCTGAAGACCATAACCTTTT
GGGTCAACTGTTGGTCAAACCTATAGGAGAGACCAGGGACCATCACATGGGTAGGGATTTCCATCCAGAGCCAAT
AAAAGGACTGGTGGGGGCCGGGGGTGGCTATTGTGGGAAGTCATAACCCACAGATAGATCAACCTAAGAATCCTG
GCCCTTCTCCACTCTCCACCATGCAGGACAAACATCTTCTCAAGCAGTCAACGTAGAATGCTTGGGAAATAGTCA
TAATTACCCACATATAGTAATTAATAGATGGTAATTAATTGATCCTTGATGTGATGTTCTTTTGCATATTTTCCTT
CATTCTAAAGTTGTTCCCTGGCCGGGAGCGTTTGCTTTTCGCTGTAAATCCCAACACTTTGGGAGGGCCAGGACAGA
TCACTTGAGGTGAGGAGTTCGAGACCAGCCCAGCCAACATGGCGAAACCATGTCTCTACTAAAAATACAAAAATT
ATGGTGACGCCTGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAGGAGGATCGCTTGAACCCAGGAAGTGGAG
ACTGCAGTGAGCCGATATCGCACACAGCGCTCCAGCCTGGTCGACAGAGTGAGACTCCATCTCAAGAAAAAATA
AAAAATAAGTTGTTCTCTGAAGAGCAAATGTCTCATTCCAGTAATGACCCACTCAGCAGGAATATGGTGGAGTTC
AGTCCAATTCAGGTGAGCCATATCCAAAAGACCACAAGTCATTACTAAGTTGAGCAAAAGAGTTTTTATCTATTA
GCAGAAAGGGCCTCTCTGGCAGCAGAGATTAAAACTGGCCCACTTCATTTCCATACTTCAGGGAACAGCAAAT
TGAGGATTTACTTATCTAGGACTT

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FIGURE 818

MAGLNSLEAVKRKIQALQQQADEAEDRAQGLQRELDGERERREKAEGDVAALNRRIQLVEEELDRAQERLATALQ
KLEEAEKAADESERGMKVIENTRAMKDEEKMEIQEMQLKEAKHIAEEADRKYEEVARKLVILEGELERAEEERA EVS
ELKCGDLEEELKNVTNNLKSLEAASEKYSEKEDKYEEEIKLLSDKLKEAETRAEFAERTVAKLEKTIDDLEEKLA
QAKEENVGLHQTL DQTLNELNCI

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FIGURE 819A

CGGCACCGTCGTAGGTGCGGGCCGCATGAATGGAGCGCCGGGCGTAAGGCAAAGCCTGGCACCGTCTGCGCGGGC
GCTATCTGCTCCCGGAGCGTGAGTGCGGGGTGTGGGGCGTGCGCGTGCAGAGGGGGCTCAAGGCGAGCG
CGCCGGGCGAGTTGCGGGCGGTGGCTGCTGAGGTTGGCGGCGGTGCCGCGCGCCGACGGGCCGGTGGTTGCGGG
GCCTCCCGCCTCGACCCGGGCTGGGGGCGAGCCGTGGCGGGCGCCGGGACCGCAAGGGGCGGAGGAAAAGGAGGGG
GCCGGTCCCGGCACGCAGAGGAGCAGCCGACCATGCCCCGAGACAACATGGCCTCCTTGATCCAACGGATCGCCC
GCCAGGCTTGCTTACCTTCCGGGGCAGCGGGGGCGGCCGCGCGCTTCCGATCGCGACGCGGCTTCTGGCGCGG
AGGCGCCGATGCAGCCGGGCTTCCCGAGAACCTGAGCAAGCTGAAGAGCCTCCTGACCCAGCTCCGCGCCGAGG
ACTTGAACATCGCCCCGCGCAAGGCCACACTGCAGCCGTGCCGCCAACCTGCCGCCAGTCACCTACATGCACA
TCTACGAGACGGACGGCTTCAGCCTGGGCGTGTCTGCTCAAGAGCGGCACGTCCATCCCGCTGCACGACCACC
CGGGCATGCACGGCATGCTCAAGGTGCTGTACGGCACCGTGCGCATCAGCTGCATGGACAAGCTAGACGCGGGCG
GCGGGCAACGGCCGCGGGCCTTGCCGCCGAGCAGCAGTTCGAGCCGCCGCTGCAGCCCCGGGAGCGAGAAGCCG
TGCGGCGGGCGTGTGCGTTGCGGGGCCGAGTACACCGAGGCCAGCGGCCCTGCATCCTCACACCGCACCGGG
ACAACCTGCACCAGATCGACGCCGTGGAAGGGCCTGCCGCCTTCCCTGGACATCCTGGCCCCGCCCTACGACCCGG
ACGATGGCCGGGACTGCCACTATTACCGGGTGTGGAGCCGGTCAAGGCCAAGGAGGCCTCCAGCTCGGCCTGTG
ACCTGCCTCGAGAGGTGTGGCTCCTGGAGACCCACAGGCCGATGACTTCTGGTGCAGGGGAGAACCTATCCAG
GTCCCAAGGTCTTCCCTTGAAGCCACTGGCGCCAGGAGCGGTGGGCCGAAGACGTGCCCTACCCTACCACAAGG
GCTGTGTCTTACCCCTAGCCTGGGCGTTGGATCTACTGGAATGAGCAGCAGCCGCTTCCCTCGGCAGCCTTGGG
AAGCACGGGCGACTGGACAGCAGCCGCCGGGCACGGTTATGGGGCGGGGTGGGCGGGGAGGCTAGATTGTTTCC
TGGTACTGTCACTGCCACTGGGGCTTTGATTTGGAGGAATGGGGCAGGGGACTATCTGAAGCGCTTCCATCCTAA
AGCCATAATGAAAATATCTTCTCTCTTCCCCATTCTATACAAATACTAAGTGGTTTTCTTGCTCCCACTCCCT
ACCCCTTAGTTAAATAGGGTTTATTTTCCACTCATGCCCTTATGCCTTTTTTTCTTATAGTTTTTTAACTTATTG
ACTGTGCATGACCCAGTGGTTTGAATTGTTTTTAGTTCAAGTCATTGGTAAAACTAGGTTTAAAGGAGATGAGCT
ACTGTTTTAAAGTGAGCTGGCCTGCCTAATTAATTCCTGTGAAAATAAATGATTTTTTTCAGTTTGGGGATCATT
CTCACAACTAATATGATGTAGAGGACAAGATTTATTTTCTTTCTCCCTTGCCAGTAGCCACATCTGGTT
TACTCAGGCAGCATCTACTAAGAAATTCAGCACCTGCATATCTCTGTGACATGGTCACTTAGAGCTTATCTTCCC
TATGAATCTCCAGATCTGTGAGTCGAGCAGATTTTATGTTGAGATTACCTTTAATGCAAAGACTGTATTATCC
TCACATGACTTTTTTCTTGTCTTACTGTACCTTAAAAGGTGATAGAGTAATCTGTATTTTTCTAACGGGAAGAT
TCAAAGGAGCTGAATGTGTTATGCTTCCAAACAACCTGAATGTAAAACACTCCTAGCCAGTTGTTGCATTCCCTAT
ATTTATTTACTTCCAATATTTTACTGTAAAAGTAGGGAGAAAATATTATGTTGATAGTTGTTTCATATTCTCTCAG
GAACTTTAATGTTCCCGACTCGGGTGATTCCAGCTGTGTTGCTGGCAGTGTGCTCAACCCTCTCCCTAAAATG
ACTGAGCCCTGGGTTCACTAATGTGGTTTTCTTAGGAAGAGATAGAAGGCACAGAAGATCACAGCTAGAGAAT
TGAGAATTAATACTACTACTAGCCATTTTAGGGCACAAAACCTTGGGATTAAACACTTCCCTACTTCCCACTCCCA
ACTCCTGAAATGAAGTCTTGCTATCTGTGACTAGTTTTATTTTTGTGCTTTTAATAGTCCGAGCAGTCTTACCTT
GTTTACACATGTATTGACACCATTGCTTCAGGCCATGGAGCACTGTTTCTCCCTTTTTACTATTTATAGGATTC
CGTTTTTTCACAAGACTTTTAATAAAAAGAAATTGTAGAAATAAACACATTAAAATTTGCCAGCTGTCGTCTAA
GCCCTCTTGATTGACTTGCCCAAGTGGCAATAGAGTTCTAATATCTATAATAAAGGGAGATTGCTATTATTAGT
GGAATGTTGACCCCGTATGTAGAGAAACAGTACGTGCCCTTGCCTCTTATGCACACAGAGACCCAGGGTGAGGG
AGTATTTGTTCCCGATTTTTAAGATAGTATAAAAAAGCAAATACTTGGTGAGTGATTAAAAATAAAACCAAAC
AAAAACAAAAAGATATTCCACAGGACATGCCACTTTATTATAAACCTGACACAGGCATAGTACCAAGTATTTT
CTGCATTGTTGCTAAAAATGTTTTATTGTAGCTCCACATTCTGGTGTAGTTTAAATGCCTTTGGGGGCGAGTTTG
AAGCAGTTCTTCATGCCACTTAGTTTGAATAAATAATCTAGATATGCAAATGATTTTCTTAGAAAACCTTCACAA
AATAAAAGATCTTGTTTTTTTTTCCATAGCACAGTAATGAATGTGGTTATCAATCACATACTTTTTTGGATTATA
TTGTAGCAAAAAGTTGATTAGCTTACCAAGATTATTAATAGCAATGTATGTGTTATAATACAACCTTAGTACATTA
AAGCTACGAAAACCTCATCCTGGCTGTAGGATAGTAATAAAGGAAGAATTATGACTTCATTATGAAAAAAGAAGT
TTTAAAGTTTTCAATTACGAGCAATTTGGAAGAAAAACCTAAGGTGCTTTTCAAAAAGAGTAACCTGAAATTGTTG
CAGGCCAAAACAGCAATATGATATCTCAGATTTAGTTCAATAAGAACAGTGAAACTTTTGGTTCACTAATAAATT
CTGAGTAAATTAGTGGTGAAGACAAAATATAACTTGTTTTAGTGAGCCACTGAGGAAAGAATATGCTTATTACAA
AGACAAAATGTGGTGCAGAACTATCTTGCACCTGTGTGCATAAACTGTTAGTCGTGACTGACTTGGTGTGTTGC

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FIGURE 819B

TATTGTGTTTCTATATACTCCGTCCAATATAGATAATGTTTAAATAACAACGTGTTGGGATAAAAGTTATCTTCCCC
TTGGAAAGACTAATGAGCACAAATGATATTAATCACTTTTATGGTGAATAATAAATGCAATAATTGCCTCATGGGT
GAGAAATTGTCTGTCC

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FIGURE 820

MPRDNMASLIQRIARQACLTFRGSGGGRGASDRDAASGAEAPMQPGFPENLSKLKSLLTQLRAEDLNIAPRKATL
QPLPPNLPPVTYMHYETDGFSLGVFLLKSGTISIPLDHHPGMHGMLKVLYGTVRISCMDKLDAGGGQRPRALPPE
QQFEPPLQPREREAVRPGVLRRAEYTEASGPCILTPHRDNLHQIDAVEGPAAFLDILAPPYDPDDGRDCHYYRV
LEPVRPKEASSACDLPREVWLLETQADDFWCEGEPYPGPKVFP

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FIGURE 821

GGGGGAGAGGGGGCTCAAGGCGAGCGCGCCGGGCGAGTTGCGGGCGCGTGGCTGCTGAGGTTGGCGGGCGGTGCCGC
GCGCCCGACGGGCCGGTGGTTGCGGGGCTCCCGCCTCGACCCGGGCTGGGGGCAGCCGTGGCGGCCGCCGGGGA
CCGCAAGGGGCGGAGGAAAGGAGGGGGCCGGTCCCGGCACGCAGAGGAGCAGCCGACCATGCCCGAGACAACAT
GGCCTCCTTGATCCAACGGATCGCCGCCAGGCTTGCTCACCTTCCGGGGCAGCTGGGGCGGCCGCCGCGCTTC
CGATCGCGACGCGGCTTCTGGCGCGGAGGCGCCGATCAGCCGGGCTTCCCCGAGAACCTGAGCAAGCTGAAGAG
CCTCCTGACCCAGCTCCGCGCCGAGGACTTGAACATCGCCCCGCGCAAGGCCACACTGCAGCCGCTGCCGCCAA
CCTGCCGCCAGTCACCTACATGCACATCTACGAGACGGACGGCTTCAGCCTGGGCGTGTTCTGCTCAAGAGCGG
CACGTCCATCCCGCTGCACGACCACCGGGCATGCACGGCATGCTCAAGGTGCTGTACGGCACCGTGCGCATCAG
CTGCATGGACAAGCTAGACGCGGGCGGGGCAACGGCCGCGGGCCTTGCCGCCCGAGCAGCAGTTCGAGCCGCC
GCTGCAGCCCCGGGAGCGAGAAGCCGTGCGGCCGGGCGTGCTGCGTTCGCGGGCCGAGTACACCGAGGCCAGCGG
CCCCTGCATCCTCACACCGCACCGGGACAACCTGCACCAGATCGACGCCGTGGAAGGGCCTGCCGCCTTCCTGGA
CATCCTGGCCCCGCCCTACGACCCGGACGATGGCCGGGACTGCCACTATTACCGGGTGCTGGAGCCGGTCAGGCC
CAAGGAGGCCCTCCAGCTCGGCCTGTGACCTGCCTCGAGAGGTGTGGCTCCTGGAGACCCACAGGCCGATGACTT
CTGGTGCGAGGGAGAACCCTATCCAGGTCCCAAGGTCTTCCCTTGAAGCCACTGGCGCCAGGAGCGGTGGGCCG
AAGACGTGCCCTACCCTACCACAAGGGCTGTGTCTCTACCCCTAGCCTGGGCGTTGGATCTACTGGAATGAGCA
GCAGCCGCTTCCTCGGCAGCCTTGGAAGCACGGGCGACTGGACAGCAGCCGCCGGGCACGGTTATGGGGCGGG
GTGGGCGGGGAGGCTAGATTGTTTCTGGTACTGTCACTGCCACTGGGGCTTGTATTGGAGGAATGGGGCAGGG
GACTATCTGAAGCGCTTCCATCCTAAAGCCATAATGAAAATATCTTCTCTCTCCCATCTATACAAAATACT
AAGTGGTTTTCTTGCTCCCACTCCCTACCCCTTAGTTAAATAGGGTTTATTTTCCACTCATGCCCTTATGCCTTT
TTTTCTTATAGTTTTTTAACTTATTGACTGTGCATGACCCAGTGGTTTGAATTGTTTTTAGTTCAAGTCATTGGT
AAAACTAGGTTTAAGGAGATGAGCTACTGTTTAAAGTGAGCTGGCCTGCCTAATTAATTCCTTGTGAAAATAA
ATGATTTTTTCAGTTTGGGGATCATTCTCACAACATAACTATGCATGTAGAGGACAAGATTTATTTTCTTTCTC
CCTTTGCCCAGTAGCCACATCTGGTTTACTCAGGCAGCATCTACTAAGAAATTCAGCACCTGCATATCTCTGTGA
CATGGTCACTTAGAGCTTATCTTCCCTATGAATCTCCAGATCTGTGAGTCGAGCAGATTCATGTTGCAGATTCA
CCTTTAATGCAAAGACTGTATTATCCTCACATGACTTTTTTTCTTGTCTTACTGTACCTTAAAGGTGATAGAGT
AATTCTGTATTTTCTAACGGGAAGATTCAAAGGAGCTGAATGTGTTATGCTTCCAAACAACCTGAATGTAAACAC
TCCTAGCCAGTTGTTGCATTCCCTATATTTATTTACTTCCAATATTTTACTGTAAAAGTAGGGAGAAATATTATG
TTGATAGTTGTTTCATATTCTCTCAGGAACTTTAAATGTTCCCGACTCGGGTGATTCCAGCTGTGTTGCTGGCAGT
GTTGTCTCAACCTCTCCCTAAAATGACTGAGCCCTGGGTTCATCTAATGTGGTTTTCTTAGGAAGAGATAGAA
GGCACAGAAGATCACAGCTAGAGAATTGAGAATTAATACTACTAGCCATTTTAGGGCACAAAACCTTGGGAT
TAAACACTTCCCTACTTCCCACTCCCACTCCTGAAATGAAGTCTTGCTATCTGTGACTAGTTTTATTTTTGTGCT
TTTAATAGTCCGAGCAGTCTTACCTTGTTTACACATGTATTGACACCATTTGCTTCAGGCCATGGAGCACTGTTT
CTCCCTTTTTTACTATTTATAGGATTCCGTTTTTTTCAAGACTTTTTAATAAAAAGAAATTGTAGAAATAAACAC
ATTAATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 822

MQPGFPENLSKLKSLTQLRAEDLNIAPRKATLQPLPPNLPPVTYMHYETDGFSLGVFLLKSGTSIPLHDHFGM
HGMLKVLYGTVRISCMDKLDAGGGQRPRALPPEQQFEFPLQPREEREAVRPGVLRRAEYTEASGPCILTPHRDNL
HQIDAVEGPAAFLDILAPPYDPDDGRDCHYYRVLEPVVRPKEASSSACDLPREVWLLETPQADDFWCEGEPYPGPK
VFP

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FIGURE 823

ATCCCCCTAGGTCTCCTGTGGCTGGGCCTAGCCCTGTTGGGGGCTCTGCATGCCCAGGCCCCAGGACTCCACCTCA
GACCTGATCCCAGCCCCACCTCTGAGCAAGGTCCCTCTGCAGCAGAACTTCCAGGACAACCAATTCCAGGGGAAG
TGGTATGTGGTAGGCCTGGCAGGGGAATGCAATTCTCAGAGAAGACAAAGACCCGCAAAAAGATGTATGCCACCATC
TATGAGCTGAAAGAAGACAAGAGCTACAATGTCACCTCCGTCCTGTTTAGGAAAAAGAAGTGTGACTACTGGATC
AGGACTTTTGTTCAGGTTGCCAGCCCGGCGAGTTCACGCTGGGCAACATTAAGAGTTACCTTGGATTAACGAGT
TACCTCGTCCGAGTGGTGAGCACCAACTACAACCAGCATGCTATGGTGTTCCTTCAAGAAAGTTTCTCAAAACAGG
GAGTACTTCAAGATCACCTCTACGGGAGAACCAAGGAGCTGACTTCGGAATAAAGGAGAACTTCATCCGCTTC
TCCAATATCTGGGCCTCCCTGAAAACCACATCGTCTTCCCTGTCCCAATCGACCAGTGTATCGACGGCTTGA

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FIGURE 824

MPLGLLWLGLALLGALHAQAQDSTSDLIPAPPLSKVPLQQNFQDNQFQGWYVVGLAGNAILREDKDPQKMYATI
YELKEDKSYNVTSVLFRKKKCDYWIRTFVPGCQPGFTLGNIKSYPLTSYLVRVVSTNYNQHAMVFFKKVSQNR
EYFKITLYGRKELTSELKENFIRFSKYLGLPENHIVFPVPIDQCIDG

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FIGURE 825

CACCGTCCGCAGCCCGAGCGCCCCGGAGCCGCAGGCGCCGCCGCGCAGAGACGCCGCGGCTGCGACTAGGCGCGC
CCAGCCGCACGTGGCGGACCCGCCCCAGGCCCCGAGTGTCTGGACCCCGCAGGCCTCCGCTCTCCTGTCTCG
GCCCCGTCCCAGGGCCGCGATGAGCTTCTTGAGCCGACAGCAGCCGCCGCCACCCCGCCGCGCCGGGGCGGCCCT
GCACCTTGCGGCAGAAGCTGATCTTCTCGCCCTGCAGCGACTGTGAGGAGGAGGAAGAAGAGGAGGAGGAGGAGG
GCAGCGGCCACAGCACCGGGGAGGACTCGGCCTTTCAAGAGCCCGACTCGCCGCTGCCGCCGAGCGGAGCCCCA
CGGAGCCCGGGCCCGAGCGCCGCCGCTCGCCCGGGCCGGCCCCCGGCAGCCCCGGCGAGCTGGAGGAGGACCTGT
TGCTGCCCGGCGCCTGCCCGGGCGCGGACGAGGCGGGCGGTGGGGCGGAGGGCGACTCGTGGGAGGAGGAGGGCT
TCGGCTCCTCGTCGCCGGTCAAGTCGCCGGCGGGCCCCCTACTTCTGGGTAGCTCTTTCTCGCCGGTGCCTGCG
GCGGCCAGGAGATGCGTCGCCGCGGGGTTGCGGGGCGCGCCGGGCGGGCGAAGGCCGCCGCTCGCCGCGGGCCG
ACCACCCGGGCACCCCGCCACACAAGACCTTCCGCAAGCTGCGACTCTTCGACACCCCGCACACGCCCAAGAGTT
TGCTCTCCAAAGCTCGGGGAATTGATTCCAGCTCTGTTAAACTCCGGGGTAGTTCTCTCTTCATGGATACAGAAA
AATCAGGAAAAAGGAATTTGATGTGCGACAGACTCCTCAAGTGAATATTAATCCTTTTACTCCGATTCTTTGT
TGCTTCATTCTCAGGACAGTGTCTGTCGTAGAAAGAGAACGTATTGGAATGATTCTGTGGTGAAGACATGGAAG
CCAGTGATTATGAGCTTGAAGATGAAACAAGACCTGCTAAGAGAATTACAATTACTGAAAGCAATATGAAGTCCC
GGTATACAACAGAATTTTCATGAGCTAGAGAAAATCGGCTCTGGAGAATTTGGTTCTGTATTTAAGTGTGTGAAGA
GGCTGGATGGATGCATTTATGCCATTAAGCGATCAAAAAGCCATTGGCGGGCTCTGTTGATGAGCAGAACGCTT
TGAGAGAAGTATATGCTCATGCGAGTGTGGACAGCATTCTCATGTAGTTCGATATTTCTCTGCGTGGGCGAGAAG
ATGATCATATGCTTATACAGAATGAATATTGTAATGGTGGAAAGTTTAGCTGATGCTATAAGTGAAAACATACAGAA
TCATGAGTTACTTTAAAGAAGCAGAGTTGAAGGATCTCCTTTTGCAAGTTGGCCGAGGCTTGAGGTATATTCATT
CAATGTCTTTGGTTCACATGGATATAAAACCTAGTAATATTTTCATATCTCGAACCTCAATCCCAAATGCTGCCT
CTGAAGAAGGAGACGAAGATGATTGGGCATCCAACAAAGTTATGTTTAAATAGGTGATCTTGGGCATGTAACAA
GGATCTCCAGTCCACAAGTTGAGGAGGGCGATAGTCGTTTTCTTGCAATGAAGTTTTACAGGAGAATTATACCC
ATCTACCAAAAGCAGATATTTTTGCGCTTGCCCTCACAGTGGTATGTGCTGCTGGTGTGAACCTCTTCCGAGAA
ATGGAGATCAATGGCATGAAATCAGACAGGGTAGATTACCTCGGATACCACAAGTGCTTTCCCAAGAATTTACAG
AGTTGCTAAAAGTTATGATTCATCCAGATCCAGAGAGAAGACCTTCAGCAATGGCACTGGTAAAGCATTACAGTAT
TGCTGTCCGCTTCTAGAAAGAGTGCAGAACAATTACGAATAGAATTGAATGCCGAAAAGTTCAAAAATTCATTT
TACAAAAGAACTCAAGAAAGCACAGATGGCAAAAGCTGCAGCTGAGGAAAAGACACTCTTCACTGACCGGATGG
CCACTAGGTCCACCACCCAGAGTAATAGAACATCTCGACTTATTGGAAAAGAAATGAACCGCTCTGTGAGCCTTA
CTATATACTGAGCTACTCCTTTCCACCTCCCCCTGAACACTGTGACAAGAGGAAGCTAGGTTGAAATCACTGAT
AGAATCCAGTTTGCAATTACTTTCTCGATTGGTGTGAGTAGTTTTACTGATTAGGACTTTTATTGTGAATTACAG
TTGAAAGCTGTATTTTGATGATTGCTATGTGAGGCTTTTCATCTAATCTTACCAGTCTGTCTTCTGTAGGATGTGT
CACTGTTGGATGTTACACCAGCCTTTCCAGGGTTAACCAGTGTGGTGGTGTGCTGCTTATAGTTTGTGTTGCAT
TGTAATAAAAGGTGTCTTTCCCTGTAGTGACCTGTAAAAGTACTCAAGGGCTTTATTACAGACATACCCTCCCT
TTGAAAAGGGACATGCTAAAAGACTCATTACTACTCAGCCTTCAATGTACCTGTGTGTCCATCTTATATTTCTTT
TTTTTTTTAATTGTGAATTAGACTTGTATATCCCACTGGGAGCACTTTGTAGGCATTGCATGAACCATGGGATGAT
GATTCTGTGGAGGATTGCTTGTGAATTTGCTGCTATTTTAGTTTTGCTTTTGTGTAAGCTTGTAGCATTAAA
CAATCATTTGTTGTTAATAGGTCTTCTTTTTGAAACAATTATGTGAATGTATAGCTGCTTTTGATGGAAAGCAGC
TATTTGCTTTTTTTTTTTTTCTTTGAACTTTGAAGCTAGTGCATTGGAAAAATGCACCCCTTTCCCTCCTTTGGAA
TGCTGTATTAATGTAGTATAATAATTACTGGTTTTGTAACCTGTTCTGGTAATGTCCTTCCCGGACTCTTTTTAA
ATGTCTCCCCCTAAGTTTTTATACTTGATTGTATTATTAGTCTGTTTTTAAATGTTTTGCCCCGTTTTTCTCTTCA
ATATTTGTGTATATAAACCGATCTTCGTGATACTGTACATAGCTGTTTGAAATGCCAGAATGACTTCTGACATTC
CAAGTTTTTACAAAATATATTTTATCTGTGATTAGCCATTTGACTAATAATACTGGCTAACAGATGTTGAAAAA
AATTGTCTGTTTTCTCATTAATTTTGGTCTAAAACATGTTTGCACCTGTCTTTGACTTGTGTTTTATTAAACATTG
ATTGGCATATTAAAAGTCACTCTGAGCTT

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FIGURE 826

MSFLSRQQPPPPRRAGAACTLRQKLIFSPCSDCEEEEEEEEEEGSGHSTGEDSAFQEPDSPLPPERSPTTEPGPER
RRSPGPAPGSPGELEEDLLLPACPGADEAGGGAEGDSWEEEGFGSSSPVKSPAAPYFLGSSFSVVRGCGPGDAS
PRGCGARRAGEGRRSPRPDHPGTPPHKTFRKLRLFDTPHTPKSLLSKARGIDSSSVKLRGSSLFMDTEKSGKREF
DVRQTPQVNINPFTPD SLLHSSGQCRRRKRKYWNDS CGEDMEASDYELEDETRPAKRITITESNMKSRYTTEFH
ELEKIGSGEFGSVFKCVKRLDGCYAIKRSKKPLAGSVDEQNALREVIYAHAVLGQHSVVRYSAWAEDDHMLIQ
NEYCNGGSLADAI SENYRIMSYFKEAELKDLLLQVGRGLRYIHSMSLVHMDIKPSNIFISRTSIPNAASEEGDED
DWASNKVMFKIGDLGHVTRISSPQVEEGDSRFLANEVLQENYTHLPKADIFALALT VVCAAGAEPLPRNGDQWHE
IRQGRLPRIPQVLSQEFTELLKVMIHDPFERRPSAMALVKHSVLLSASRKS AEQLRIELNAEKFKNSLLQKELKK
AQMAKAAAEERALFTDRMATRSTTQSNRTSRLIGKKMNRSVSLTIY

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FIGURE 827A

TTGCTGCGTCAACTGTGTTCCCTTTGGCCTGGCTGAGTTTGATACTGTGGGGATTAGTTTAGGCGCTGGCCCCGA
GGATATCCCAGCGGTGGTACTTCGGAGACACCTGTCTGCATCTGACTGAGCCGGCTCTCCTGGCCTCGCGCTGCA
CATTCTCTCCTGGCGGCGGCCACCTGCAGTAGCGTTTCGCCCCGAACATGGCGACACGGAGCAGCAGGAGGGAGT
CGCGACTCCCGTTCTATTACCCCTGGTCGCACTGCTGCCGCCCGGAGCTCTCTGCGAAGTCTGGACGCAGAGGC
TGCACGGCGGCAGCGCGCCCTTGCCCCAGGACCGGGGCTTCCTCGTGGTGCAGGGCGACCCGCGCGAGCTGCCGC
TGTGGGCGCGCGGGGATGCCAGGGGGGCGAGCCGCGCGGACGAGAAGCCGCTCCGGAGGAAACGGAGCGCTGCC
TGCAGCCCCGAGCCCATCAAGGTGTACGGACAGGTTAGTCTGAATGATTCCACAATCAGATGGTGGTGCCTGGG
CTGGAGAGAAAAGCAACGTGATCGTGGCCTTGCCCCGAGATAGCCTGGCATTGGCGAGGCCCAAGAGCAGTGATG
TGTACGTGTCTTACGACTATGGAATAATTCAAGAAAATTTAGACAAGTTAAACTTTGGCTTTGGGAAATAGGA
GTGAAGCTGTTATCGCCAGTTCTACCACAGCCCTGCGGACAACAAGCGGTACATCTTTGCAGACGCTTATGCCC
AGTACCTCTGGATCACGTTTGACTTCTGCAACACTCTTCAAGGCTTTTCCATCCCATTTGGGCAGCTGATCTCC
TCTACACAGTAAGGCCTCCAACCTTCTCTTGGGCTTTGACAGGTCCACCCCAACAAGCAGCTGTGGAAGTCAG
ATGACTTTGGCCAGACCTGGATCATGATTGAGGAACATGTCAAGTCCCTTTCTTGGGGAATTGATCCCTATGACA
AACCAAATACCATCTACATTGAACGACACGAACCTCTGGCTACTCCACTGTCTTCCGAAGTACAGATTTCTTCC
AGTCCCGGGAAAACAGGAAGTGATCCTTGAGGAAGTGAGAGATTTTCAGCTTCGGGACAAGTACATGTTTGCTA
CAAAGGTGGTGCATCTCTTGGGCAGTGAACAGCAGTCTTCTGTCCAGCTCTGGGTCTCCTTTGGCCGGAAGCCCCA
TGAGAGCAGCCAGTTTGTCAAGACATCCTATTAATGAATATTACATCGCAGATGCCTCCGAGGACCAGGTGT
TTGTGTGTGTGACCCACAGTAACAACCGCACCAATTTATACATCTCAGAGGCAGAGGGGCTGAAGTTCTCCCTGT
CCTTGGAGAACGTGCTCTATTACAGCCAGGAGGGGCCGCGCAGTGACACCTTGGTGAGGTATTTTGCAAATGAAC
CATTTGCTGACTTCCACCGAGTGGAAGGATTGCAAGGAGTCTACATTGCTACTCTGATTAATGGTTCTATGAATG
AGGAGAACATGAGATCGGTCATCACCTTTGACAAAGGGGGGAACCTGGGAGTTTCTTCAGGCTCCAGCCTTCACGG
GATATGGAGAGAAAATCAATTGTGAGCTTTCCAGGGCTGTTCCTTTCATCTGGCTCAGCGCCTCAGTCAGCTCC
TCAACCTCCAGCTCCGGAGAATGCCCATCCTGTCCAAGGAGTCGGCTCCAGGCCTCATCATCGCCACTGGCTCAG
TGGGAAAGAACTTGGCTAGCAAGACAAACGTGTACATCTCTAGCAGTGCTGGAGCCAGGTGGCGAGAGGCACCTC
CTGGACCTCACTACTACACATGGGGAGACCACGGCGGAATCATCACGGCCATTGCCAGGGCATGGAACCAACG
AGCTAAAATACAGTACCAATGAAGGGGAGACCTGGAAAACATTCTCTCTGAGAAGCCAGTGTTTGTGTATG
GCCTCCTCACAGAACCTGGGGAGAAGAGCACTGTCTTACCATCTTTGGCTCGAACAAGAGAATGTCCACAGCT
GGCTGATCCTCCAGGTCAATGCCACGGATGCCTTGGGAGTTCCCTGCACAGAGAATGACTACAAGCTGTGGTCAC
CATCTGATGAGCGGGGGAATGAGTGTTTGTGCTGGGACACAAGACTGTTTTCAAACGGCGGACCCCCCATGCCAT
GCTTCAATGGAGAGGACTTTGACAGGCCGGTGGTTCGTGTCCAAGTCTCCTGCACCCGGGAGGACTATGAGTGTG
ACTTCGGTTTCAAGATGAGTGAAGATTTGTGATTAGAGGTTTGTGTTCCAGATCCGGAATTTTCTGGAAAGTCAT
ACTCCCCCTCCTGTGCCTTGCCCTGTGGGTTCTACTTACAGGAGAACGAGAGGCTACCGGAAGATTTCTGGGGACA
CTTGTAGCGGAGGAGATGTTGAAGCGCGACTGGAAGGAGAGCTGGTCCCCTGTCCCCTGGCAGAAGAGAACGAGT
TCATTCTGTATGCTGTGAGGAAATCCATCTACCGCTATGACCTGGCCTCGGGAGCCACCGAGCAGTTGCCTCTCA
CCGGGCTACGGGCAGCAGTGGCCCTGGACTTTGACTATGAGCACAAGTGTGTTGATTGGTCCGACCTGGCCTTGG
ACGTCATCCAGCGCCTCTGTTTGAATGGAAGCACAGGGCAAGAGGTGATCATCAATTCTGGCCTGGAGACAGTAG
AAGCTTTGGCTTTTGAACCCCTCAGCCAGCTGCTTTACTGGGTAGATGCAGGCTTCAAAAAGATTGAGGTAGCTA
ATCCAGATGGCGACTTCCGACTCACAATCGTCAATTCTCTGTGCTTGATCGTCCCAGGGCTCTGGTCTCTGTGC
CCCAAGAGGGGGTGATGTTCTGGACAGACTGGGGAGACCTGAAGCCTGGGATTTATCGGAGCAATATGGATGGTT
CTGCTGCCTATCACCTGGTGTCTGAGGATGTGAAGTGGCCCAATGGCATCTCTGTGGACGACCAGTGGATTTACT
GGACGGATGCCTACCTGGAGTGCATAGAGCGGATCACGTTTCACTGGCCAGCAGCGCTCTGTCTATTCTGGACAACC
TCCCGCACCCCTATGCCATTGCTGTCTTTAAGAATGAAATCTACTGGGATGACTGGTTCACAGCTCAGCATATTCC
GAGCTTCCAAATACAGTGGGTCCAGATGGAGATTCTGGCAAACAGCTCACGGGGCTCATGGACATGAAGATTT
TCTACAAGGGGAAGAACTGGAAGCAATGCCTGTGTGCCAGGCCATGCAGCCTGCTGTGCCTGCCCAAGGCCA
ACAACAGTAGAAGCTGCAGGTGTCCAGAGGATGTGTCCAGCAGTGTGCTTCCATCAGGGGACCTGATGTGTGACT
GCCCTCAGGGCTATCAGCTCAAGAACAATACCTGTGTCAAAGAAGAGAACACCTGTCTTCGCAACCAGTATCGCT
GCAGCAACGGGAACTGTATCAACAGCATTTGGTGGTGTGACTTTGACAACGACTGTGGAGACATGAGCGATGAGA
GAAACTGCCCTACCACCATCTGTGACCTGGACACCCAGTTTCGTTGCCAGGAGTCTGGGACTTGTATCCCACTGT

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FIGURE 827B

CCTATAAATGTGACCTTGAGGATGACTGTGGAGACAACAGTGATGAAAGTCATTGTGAAATGCACCAGTGCCGGA
GTGACGAGTACAACCTGCAGTTCCGGCATGTGCATCCGCTCCTCCTGGGTATGTGACGGGGACAACGACTGCAGGG
ACTGGTCTGATGAAGCCAACCTGTACCGCCATCTATCACACCTGTGAGGCCTCCAACCTCCAGTGCCGAAACGGGC
ACTGCATCCCCAGCGGTGGGCGTGTGACGGGGATACGGACTGCCAGGATGGTTCCGATGAGGATCCAGTCAACT
GTGAGAAGAAGTGCAATGGATTCCGCTGCCCCAACGGCACTTGCATCCCATCCAGCAAACATTGTGATGGTCTGC
GTGATTGCTCTGATGGCTCCGATGAACAGCACTGCGAGCCCTCTGTACGCACTTCATGGACTTTGTGTGTAAGA
ACCGCCAGCAGTGCTTCCACTCCATGGTCTGTGACGGAATCATCCAGTGCCGCGACGGGTCCGATGAGGATG
CGGCGTTTGCAGGATGCTCCCAAGATCCTGAGTTCACAAAGGTATGTGATGAGTTCGGTTTCCAGTGTGAGAATG
GAGTGTGCATCAGTTTGATTGGAAGTGCGACGGGATGGATGATTGCGGCGATTATTCTGATGAAGCCAACCTGCG
AAAACCCACAGAAGCCCCAACTGCTCCCGCTACTTCCAGTTTTCGGTGTGAGAATGGCCACTGCATCCCCAACAA
GATGGAATGTGACAGGGAGAACGACTGTGGGGACTGGTCTGATGAGAAGGATTGTGGAGATTCACATATTCTTC
CCTTCTCGACTCCTGGGCCCTCCACGTGTCTGCCAATTACTACCGCTGCAGCAGTGGGACCTGCGTGATGGACA
CCTGGGTGTGCGACGGGTACCGAGATTGTGCAGATGGCTCTGACGAGGAAGCCTGCCCCCTTGCTTGCAAACGTCA
CTGCTGCCTCCACTCCCACCAACTTGGGCGATGTGACCGATTGAGTTTGAATGCCACCAACCGAAGACGTGTA
TTCCCAACTGGAAGCGCTGTGACGGCCACCAAGATTGCCAGGATGGCCGGGACGAGGCCAATTGCCCCACACACA
GCACCTTGACTTGATGAGCAGGGAGTTCCAGTGCGAGGACGGGGAGGCCTGCATTGTGCTCTCGGAGCGCTGCG
ACGGCTTCTGACTGCTCGGACGAGAGCGATGAAAAGGCCTGCAGTGATGAGTTGACTGTGTACAAAGTACAGA
ATCTTCAGTGACAGCTGACTTCTCTGGGGATGTGACTTTGACCTGGATGAGGCCCAAAAAAATGCCCTCTGCAT
CTTGTGTATATAATGTCTACTACAGGGTGGTTGGAGAGAGCATATGGAAGACTCTGGAGACCCACAGCAATAAGA
CAAACACTGTATTAAGTCTTGAAACCAGATACCACGTATCAGGTTAAAGTACAGGTTTCAAGTGTCTCAGCAAGG
CACACAACACCAATGACTTTGTGACCCTGAGGACCCAGAGGGATTGCCAGATGCCCCTCGAAATCTCCAGCTGT
CACTCCCCAGGGAAGCAGAAGGTGTGATTGTAGGCCACTGGGCTCCTCCCATCCACACCCATGGCCCTCATCCGTG
AGTACATTGTAGAATACAGCAGGAGTGGTTCCAAGATGTGGGCCTCCAGAGGGCTGCTAGTAACCTTTACAGAAA
TCAAGAACTTATTGGTCAACACTCTATACACCGTCAGAGTGGCTGCGGTGACTAGTCGTGGAATAGGAACTGGA
GCGATTCTAAATCCATTACCACCATAAAAAGGAAAAGTGATCCACCACCAGATATCCACATTGACAGCTATGGTG
AAAATTATCTAAGCTTCACCTGACCATGGAGAGTGATATCAAGGTGAATGGCTATGTGGTGAACCTTTTCTGGG
CATTGACACCCACAAGCAAGAGAGGAGAACCTTTGAACCTCCGAGGAAGCATATTGTACACAAAGTTGGCAATC
TGACAGCTCATACTCTATGAGATTTCTGCCTGGGCCAAGACTGACTTGGGGGATAGCCCTCTGGCATTTGAGC
ATGTTATGACCAGAGGGGTTGCGCCACCTGCACCTAGCCTCAAGGCCAAGCCATCAACCAGACTGCAGTGGAAAT
GTACCTGGACCGGCCCCCGGAATGTGGTTTATGGTATTTTCTATGCCACGTCCTTTCTTGACCTCTATCGCAACC
CGAAGAGCTTGACTACTTCACTCCACAACAAGACGGTCATTGTGAGTAAAGGATGAGCAGTATTTGTTTCTGGTCC
GTGTAGTGGTACCCTACCAGGGGCCATCCTCTGACTACGTTGTAGTGAAGATGATCCCGGACAGCAGGCTTCCAC
CCCGTCACTGCATGTGGTTCATACGGGCAAAACCTCCGTGGTCAATCAAGTGGGAATCACCGTATGACTCTCCTG
ACCAGGACTTGTGTATGCAATTGCAGTCAAAGATCTCATAAGAAAGACTGACAGGAGCTACAAAGTAAAAATCCC
GTAACAGCACTGTGGAATACACCCTTAACAAGTTGGAGCCTGGCGGGAAATACCACATCATTGTCCAACCTGGGGG
ACATGAGCAAAGATTCCAGCATAAAAATTACCACAGTTTCATTATCAGCACCTGATGCCTTAAAAATCATAACAG
AAAATGATCATGTTCTTCTGTTTTGGAAAAGCCTGGCTTTAAAGGAAAAGCATTTTAAATGAAAGCAGGGGGCTATG
AGATACACATGTTTGATAGTGCCATGAATATCACAGCTTACCTTGGGAATACTACTGACAATTTCTTTAAATTT
CCAACCTGAAGATGGGTGATAATTACACGTTTACCGTCCAAGCAAGATGCCTTTTTTGGCAACCAGATCTGTGGG
AGCCTGCCATCCTGCTGTACGATGAGCTGGGGTCTGGTGCAGATGCATCTGCAACGCAGGCTGCCAGATCTACGG
ATGTTGCTGCTGTGGTGGTGGCCATCTTATTCTGATACTGCTGAGCCTGGGGGTGGGGTTTGCCATCCTGTACA
CGAAGCACCGGAGGCTGCAGAGCAGCTTACCGCCTTCGCCAACAGCCACTACAGCTCCAGGCTGGGGTCCGCAA
TCTTCTCCTCTGGGGATGACCTGGGGGAAGATGATGAAGATGCCCTATGATAACTGGATTTTTCAGATGACGTCC
CCATGGTGATAGCCTGAAAGAGCTTTTCTCACTAGAAACCAAATGGTGTAAATATTTTATTTGATAAAGATAGTT
GATGGTTTATTTTAAAGATGCACCTTTGAGTTGCAATATGTTATTTTATATGGGCCAAAAACNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNGGAATGAATAAACTTTGTAGTAATCAACTGTGAACCTCAAACCAGGTTGATTTTA
GTAACCAATTGCTTTGATTTGACATTAATGTAGTCTTACAGGCTGTGCTTGTGCTGGGCATGCTTTTACGTCTGT
GAGATAATTTCCGGTTCAGTAAATTGGCCAATCTTTTATTTTCTAAGACACAGAAATGTATTTAATAAAACCT

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FIGURE 827C

CGAGAGAGTGATGGGTGGAACCCCTTCTCCTTGAAAGTGTGTACAGATATTCCATTTTGTGGATATAGTTTAT
AGGAAAGTGTGTGGATGTATTATGGCGGAAGGTTTCTTTATGTTATTTTGTAAATTTATTGGGACTCTGTGTAAG
GCCAGGCTTTAGTGGTCATTAGACACCACATGTGTTATGAGCCCCCTTACCCATAGGGTTGGGGGTGGGAAGAGAA
GCATATTTTTTTGCCATTCCGGAAGCAATCCATTTTATTCACTTGTGTGTCATGTAATGGTCTTTGGCAGGAGA
GAGCACTGAGTCATTGCTGGAGTTCAGTTCAACAGAGCTGCAGCTTGGGAAGCCCTGTAAGCCCACAGCTTCCTC
TCTTATATTAATTGATGGAATTTTACTGTATGTGCCTCTGTACAAGATGTAGCTTTGAGAGCTACAAAATGATAA
CACTGCTTTATTACACACTGGTTTCATTGTCAATTGCAAAAACCTTACCCTGGTTGTGGGGGAGAGTTCTAGATCTG
TGCCATGATCCATACACTGGCTAATAGAGTACATAATTTTCCATTTTCCATTTTGTGTTTTACTTACTACTGA
AGGATCTCAGATGTAAAATTATGTATTTGGTTTGAGATGGCCACTTATTGTCCTTAAAAATCCATACTGATATAT
GCAGTCATTTTGAATTGGACAGTGCCTTCTCTTTTTTTTTCTCCTCTTCTTCCATCTCCCTCACCCATGCCCCA
CCCAATCTAAAGAGACAGTGTGTACATTCTCATAGAGATAGAGAAGATCTAAAAAGTTGAGACTACTCAATCCA
GTTAACACAGCAGGAGCACTAGAGTTTGTTCATTTATTCTCTCTGTAAAACAAGCTGTGCTTTTTTCTTCTGC
CTTTAAAAATGCCACCCGTGTATTCAAACCATGGCCACTTGATACTTATGTAGAATCCATCGTGGGCTGATGCAAG
CCCTTTATTTAGGCTTAGTGTTGTGGGCACCAATGTGCGAGCATCGTTGTGACTTGTGCTGTATGATTCTCACTGA
AGAATTTCCCTTTCAGCCAAGAAGCAGTGAGGTCTGGGAATATTCCAAAGTCATGTCTCTGAATATGTGTCCTTGA
CGTGCAAGCTTTGTAAAACCCCATCCCCGCTTAGGTGCGAGGCATCACCTTCTCACAAGTGTTTAGTTTCTTTTA
ACCACAAGTATCATTCTTGGGTGATAATATAGTTTCATTCTACTTAGGGATTGTTTAGAAAACAAAGAAAGAGCC
AATTAAATTTTTTAGTTTTTGAATTTTTATTTATATGTATACTTAGATGAGTATTTTAAAGCTGTGACCTTTAG
TTTGCCATACGGGTAGGACTGTATTTTCATGTTAACAACCTGGTGGTAATGATAAGCCTTCTTCTAGCGTATTTTCT
CTTCTTTCCTGTCACTTTCCTAAGTTTTTTTTTTTAAAGACTGGAATTTTTTTTGGCTTTATCTTGTCTTACCGT
AGAGATTTGTTCAAACTCTAAGCCCTACCACCTCCCCTTTAATAAGCTCTTTAAATAGTTGAATCATTAAACAAC
CTGGTGGGAGGCAAGTCATTTAATTGAACCACTAGGAAGTGATTTTTCTTTTCTTTTCTGCCAACTTTTTTGGTG
GCATTTGTAAAAGCTGATATAAAAGGCTCTGAGATGTTATTTTCAGTTATTCCATAGGCAAGCCTTTTTACAGAG
CATATGTCTCCAGTTGGCAGCTTGAGATATTTCCGAGCATCCGGTTCCTAGCTACCAGTGCCTCCCAATGCTTAGT
GCACAGTACTGTAGACTGGCCATCACCCCTCTCCTTGGAAAAATGCCACTGTGCTGTTTGAAAAAAGCAGCCTTT
TAGGGCTAGAGTATTTTATATAAACAGAAGAGCTAAGTTCTCTGAAGACTAAGCTAGATAGCTGCAGCTATATGTA
AATTGTATATTTTTATGAACTTTTGAAGCACACACTCCTGTTTCCCTCTGTGTAGCTTTGTGGGGATTTTCATGTA
TATATGCTGTCTGAAAGAATCCAGAGGTTGGAGTGCCAATAGAAAAATGAAAACAAATGCCTTGTACTACAGGCAG
CCTCTGAAGGTGACCACATAACTGTCTTCACTGTGACCAATCGGAGTCCCTGCTTGCTTGTGAAGAAGGGGCTTT
TGTAACCTTGTGGAGATGCCACCTCAGAAGTTCACACTGTGCAGGAAAAAGGTTTTATTCTCTCCTGGCATACAT
TAGAATGTCAGATGCCTGCATCCATGTGGACCACGATGGGCCCTCTAAAAATTGGTGGGCAGGGGGTTTGCTTATG
AGTTTTCTCTGGAAACCGATTTTACTCCTGGATGTATTGAATGCCCTTGAGCTTTATGAGATACGAGTCCACAT
GGATAAAATGTTAGAGAGTGGAGTTCTACAGAGGATTCCAGGAAGAGGCCATGTCTGTGCAGTCCCTAGTTCCAGA
CAGGTGAGAAGCTCCAGGAACCTACTGGCTACCTTGACAAGCTGGGTAAATAGTTATCATTCTGGGTAACCTGGTTG
AAACTCTGACTTTTTGGACAAGTAATTCCTGGGGTTCTGTCTTTGGTAGCATCACCAGGGATATTTGGGTGGGACA
GACAGAAGACACACAGCTGCCTGTTCTCTCCTGCCCATCATGTTTGGCCCACTAGATGAAGCTGTACTCAGCAAT
TTAGGGAATGTAACCTTCTCAGAAGTGGCCATTTTCAGGGGAAGCTTGGGAGAGCAATAGTATGGTGAGCCCT
TAGAGATGAGCGCCTACTCCTTCTTGGCGAATGCTGCCTTCAGATGCTTACCAAGTGGTCACTGCATCTAGTAAG
ATTATATTTCCAGTACACTTCCTTAGGGCAGAAACACCATCCTATCAGGTTTGGTCACTCCCTTCTTCATGAAGG
GAGTCATGGGGAATTCCTGAAAATTTTCTTCTTCTGCAGACAGTTGGATGAGTCCCTTAGAGAAGGCATCCAGA
GACATAACTAACTGAATATCATCCCATATTGATTTTAGGAATTGACTCTAAACTCTGTGCAGAATCTTGTGTT
GGGATTGTATCTTGACATTCCTGTTGTGTTATTTTTCTTAACTGGAGTGTGTGCTGCCTTTAGGTACAATTTTT
GTGTAATAAAAGCCAGTGCATTAAGTTTATATAGACTACTTTCTATGCAAGACTGAGATATGGAATAGATAGGAA
GAGATATGTAAGTGTGGGTACATGGACAGTAAGTGTGTTTTAGATGGAGTACCAGCACCGAAAATGGGTTGAGG
GAGGATGGGTTGTATGTATGTTTCTGCCCACTAATTTTGGAGCAGCCATATTATGAATTAATCGTCACAGCCAAG
TAATAACCCAAGAATGGTATGAGTTTCATGTGTAATAGCTCAAATGGAATAAGCATGAATGCTGGAGTGGACCAT
TATCCTCAAATATTCTATGTCACTTCTCATTTAAAGACTCTTGTATGAATATTAGAACTTTAGGCAAAATCA
AAAGTATTTGCGGCAAAATAAAGGCCTATTCTACTCTTATTTAAAGTGAAACACTGTATACTTGTCTCTCCAA

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FIGURE 827D

AGCGAAATTAAGTATTTATAATTTCAATTGCCTCGATAAGTTTCCAAGTCACTGAAATCTGCTGAAGGTTTTACT
GTATTGTTGCACAACTTTAAGATAATTTTGTCTCAATGTCAACTTTTTTCACTGAATAAAAATTTAACTGGGTC
AAGAAAACACCTCTTTGAAATCCACTGTCTCTGTGTGTCTCGAGCTGTTCTTTAGAGCGCAATAAAGATGGCTG
ACGCAGTCTCCAAACCCC

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FIGURE 828

AASVTFPLAWLSLILWGFSLGAGPRISQRWYFGDTCLHLTEPALLASRCTFSPGGGATCSSVRPNMATRSSRRES
RLPFLFTLVALLPPGALCEVWTQRLHGGSAFLPQDRGFLVVQGDPRELRLWARGDARGASRADEKPLRRKRSAAAL
QPEPIKVYGVSLNDSHNQMVVHWAGEKSNVIVALARDSLALARPKSSDVVYSYDYGKSFKKISDKLNFGNGNRS
EAVIAQFYHSPADNKRYIFADAYAQYLWITFDFCNTLQGF SIPFRAADLLLHASKASNLLLGFD RSHPNKQLWKSD
DFGQTWIMI QEHVKSF SWGIDPYDKPNTIYIERHEPSGYSTVFRSTDFQ SRENQEVILEEVRDFQLRDKYMFAT
KVVHLLGSEQQSSVQLWVSFGRKPMRAAQFVTRHPINEYYIADASEDQVFVCVSHSNNRNTNLYISEAEG LKFSLS
LENVLYYSPGGAGSDTLVRYFANEPFADFHRVEGLQGVYIATLINGSMNEENMRSVITFDKGGTW EFLQAPFTG
YGEKINCELSQGCSLHLAQRLSOLLNLQLRRMPILSKESAPGLI IATGSVGKNLASKTNVYISSAGARWREALP
GPHYTWGDHGGIITAI AQGMETNELKYSTNEGETWKTFIFSEKPVFVYGLLTEPGEKSTVFTIFGSKNENVHSW
LILQVNATDALGVPCTENDYKLWSPSDERGNECLLGHKTVFKRRTPHATCFNGEDFDRPVVVSNC SCTR EDECD
FGFKMSEDL SLEVCVPDPEFSGKSYSPVPCPVGSTYRRTRGRYRKISGDTCSGGDVEARLEGE LVPCLAEENE F
ILYAVRKSIYRYDLASGATEQLPLTGLRAAVALDFDYEHNC LYWSD LALDVIQRLCLNGSTGQEV I INSGLETVE
ALAFEPLSQLLYWVDAGFKKIEVANPDGDFRLTIVNSSVLD RPRALVLPQEGVMFWTDWGD LKPGIYRSNMDGS
AAYHLVSEDVKWPNGISVDDQWIYWTDAYLECIERITFSGQQRSVILDNLPHYAI AVFKNEIYWD DWSQLSIFR
ASKYSGSQMEILANQLTGLMDMKIFYKGKNTGSNACVPRPCSL LCLPKANSRSCRCPEDVSSSVLP SGDLMCDC
PQGYQLKNNTCVKEENTCLRNQYRCSNGNCINSIWWCDFDND CGDMSDERNCPTTICDLDTQFR CQESGTCIPLS
YKCDLEDDCGDNSDESHCEMHQCRSDEYNCS SGM CIRSSWVCDGDNDCRDWSDEANCTAIYHTCEASN FQCRNGH
CIPQRWACDGD TDCQDGSDEDPVNCEKKCN GFRCPNGTCIPSSKHCDGLRDCSDGSDEQHCEPLCTHFMDFVCKN
RQQCLFHS MVCDGIIQCRDGSDEDAAFAGCSQDPEFHKV CDEFGFQCQNGVCISLIWKCDGMDDCGDYSDEANCE
NPTEAPNCSRYFQFRCENGHCIPNRWKCDREND CGDWSDEKDCGDSHILPFSTPGPSTCLPNYYRCSSGTCVMDT
WVCDGYRDCADGSDEEACPLLANVTAASTPTQLGRCDRFEFECHQPKTCIPNWKRCDGHQDCQDGRDEANCP THS
TLTCMSREFQCEDEGEACIVLSERCDFLDCSDESDEKACSD ELTVYKVQNLQWTADFSGDVTLTWMRPKKMP SAS
CVYNVYYRVVGESIWKTLETHSNKTNTVLKVLKPD TTYQVKVQVQCLSKAHNTNDFVTLRTPEGLPDAPRNLQLS
LPREAEGVIVGHWAPP IHTHGLIREYIVEYSRSGSKM WASQRAASNFT EIKNLLVNTLYTVRVA AVTSRGIGNWS
DSKSITTIGKVIPPPDIHIDSYGENYLSF TLTMESDIKVNGYV VNLFWAFDTHKQERRTLNFRGSILSHKVGNL
TAHTSYEISAWAKTDLGDSPLAFEHVMTRGVRPPAPSLKAKA INQTAVECTWTGPRNVVYGIFYATSFLDLYRNP
KSLTTS LHNKTVIVSKDEQYLFLVRVVVPYQGPSSDYVVVKMIPDSRLPPRHLHVHTGKTSVVIKWESPYDSPD
QDLLYAI AVKDLIRKTDRSYKVKSRNSTVEYTLNKLEPGGKYHIIVQLGNMSKDSSIKITTVSLSAPDALKIITE
NDHVLLFWKSLALKEKHFNESRGYEIHMFD SAMNITAYLGNTTDNFFKISNLKMGHNYTFTVQARCLFGNQICGE
PAILLYDELGSGADASATQAARSTDVA AVVVPILFLILLSLGVGFAILYTKHRR LQSSFTAFANSHYSSRLGSAI
FSSGDDLGEDDEDAPMITGFSDDVPMVIA

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FIGURE 829

AGGCGCTGCGGAGACGCGTAGAGGAGCGCGCCCCCGGCCGMTGCCGMCCCTGGCCCCGTGCCGTACCCCCGCTTC
TCCGCGCCTCGGGCGGTACCCAGCCAGTCCCCAGCGCCGCGCTACCGCGCTGACCGGCCCTCCAGACGCCTCCCG
GTACCCGGGACCCCCAGCCCCGGCCGCTCGCCCCGAGCCCCGCCGGCCGCACACGTCCCCGGAGCCGGGCCTAGGGCG
GGCGGCAGGGCGGCTCGGGCGCAGTCAGGCTGGGCTCTGTAGCGTCCCCATGGCCGCGGCCGGCTGGCGGGACGGC
TCCGGCCAGGAGAAGTACCGGCTCGTGGTGGTCGGCGGGGGCGGCGTGGGCAAGTCGGCGCTCACCATCCAGTTC
ATCCAGTCCTATTTTGTAACGGATTATGATCCAACCATTGAAGATTCTTACACAAAGCAGTGTGTGATAGATGAC
AGAGCAGCCCCGGCTAGATATTTTGGATACAGCAGGACAAGAAGAGTTTGGAGCCATGAGAGAACAGTATATGAGG
ACTGGCGAAGGCTTCCTGTTGGTCTTTTCAGTCACAGATAGAGGCAGTTTGAAGAAATCTATAAGTTTCAAAGA
CAGATTCTCAGAGTAAAGGATCGTGATGAGTTCCCAATGATTTTAATTGGTAATAAAGCAGATCTGGATCATCAA
AGACAGGTAACACAGGAAGAAGGACAACAGTTAGCACGGCAGCTTAAGGTAACATACATGGAGGCATCAGCAAAG
ATTAGGATGAATGTAGATCAAGCTTTCATGAACCTTGTCGGGTTATCAGGAAATTTCAAGAGCAGGAATGTCTCT
CCTTCACCAGAACCAACACGGGAAAGAAAAGACAAGAAAGGCTGCCATTGTGTCATTTTCTAGAATCCCTTCAGT
TTTAGCTACCAACGGCCAGGAAAGCCCTCATCTTCTCTTCTCTCTCAGTTTACATCTTGTGGTACCTTTCT
AGCCTTAGACAAATGATCACCATGTTAGCCTTAGACGAAGAAGCTGGCTAGTCCTTCTGTGAAGCTAATAACAAT
GGTCATTTCCAGACAAATTTAAAGGAAACACTAAGGCTGCTTCAAAGATTATCTGATTCCTTTAAAATATATGTC
TATATACACAGACATGCTCTTTTTTTAAGTGCTTACATTTTAATAGAGATGAATCAGTTTTGGAATCTAAGCTGT
TTGCCAAGCTGAAGCTACAGGTTGTGAAATAATTTTAACTTTTGAATCATACTGCCTACTGTTACTCTAAATA
GAAATATAGGGTTTTTTTTAATGTGAATTTTGCCTATCTTTAAACATTTCAATGTCAGCCTTTGTTAACCTTAA
ATACACTGAATTGAATCTACAAAAGTGAACCATCTCAGACCTTTACTGATACTACAACCTTTTGTCTTCTGATGGC
CAAAATACCAAATGCCTGTTGTATTTATGGATTAAAACTGCTTATAAAAACCTGTGTTACTACTCCTACTCTTG
GAGATGATAATATTTCTATGTGGTCAAATATTTGGACTCATTTAGGACTTAGATATTTCAGTGTACTTGATTTTTT
AATTTAACTCTTTTTACAGCCACGCTAAGGGTAAAAAGGAATAATTTCTTCTGTCTTCTTTTCAAGTATTTT
TGGGTAAGGGATTCAAAAACTAAAAGTGTGTTTGTGTAATATAAAATATGGAATTGATCTTTCCAGGGTCAG
AGATGATTAATGTTTTTGTATATATACTTTTATACATTATTTTCTTATCAAAGTATTTTATATG
TTTGTAAGCAGATATGCTTTCATAGCATACCTTGTGTATATGTAAAGATAAGTATTTAATTCTCACTGTTCACTT
TTAACTGACAAAGAAAAACAAGTGGAACTACAGAACTGTGGTAGAACTTTTACTTGCTGGTCTGGTCTTGGTT
GTACCCATCTTTGGCCAGTCACATACTACTCAAGAAACCTTCCCAATAGAGTACAACAGGATGAGACTCTGAAA
TCACTTTCAGTATTCCTGCTAGATATTGATTGTTATTTCAAGTATTAAGTGTAAAGCTTTTAATGGATAAATTAGT
ATAACTGTGGATGGCATCTGATTTTGTGTTTAAATCTGTGGATTGTGTTAAGCAATTCAATAGTATGTTCTCTGA
TTTTGAGATGCTAAGTGGTATTGCACAGTTGTCACCTTATCAAGTGTGTACAACAGTCCCATGAAGTTTATAGAG
CATACCTTGTATAGCTTCAGGTGCTAGAATTAAATTTGATCTGTTATCACAAAAAAAAAAAAAAAAAAAAAGG
CTCTTTAATTAGGCG

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FIGURE 830

CGCGCCTCGGGCGGTACCCAGCCAGTCCCCAGCGCCGCGCTACCGCGCTGACCGGCCCTCCAGACGCCTCCCGGT
ACCCGGGACCCCCAGCCCGGCCGCTCGCCCGCAGCCCGCGGCCGCACACGTCCCCGGAGCCGGGCTAGGGCGGG
CGGCAGCGGCGGCTCGGCGCAGTCAGGCTGGGCTCTGTAGCGTCCCCATGCGCCGCGGCCGCTGGCGGGACGGCT
CCGGCCAGGAGAAGTACCGGCTCGTGGTGGTCCGGCGGGGGCGGCGTGGGCAAGTCGGCGCTCACCATCCAGTTCA
TCCAGTCCTATTTTGTACGGATTATGATCCAACCATTGAAGATTCTTACACAAAGCAGTGTGTGATAGATGACA
GAGCAGCCCGGCTAGATATTTTGGATACAGCAGGACAAGAAGAGTTTGGAGCCATGAGAGAACAGTATATGAGGA
CTGGCGAAGGCTTCCTGTTGGTCTTTTCAGTCACAGATAGAGGCAGTTTGAAGAAATCTATAAGTTTCAAAGAC
AGATTCTCAGAGTAAAGGATCGTGATGAGTTCCCAATGATTTTAATTGGTAATAAAGCAGATCTGGATCATCAA
GACAGGTAACACAGGAAGAAGGACAACAGTTAGCACGGCAGCTTAAGGTAACATACATGGAGGCATCAGCAAAGA
TTAGGATGAATGTAGATCAAGCTTTCCATGAAC TTGTCCGGGTTATCAGGAAAATTTCAAGAGCAGGAATGTCCTC
CTTCACCAGAACCAACACGGAAAGAAAAAGACAAGAAAGGCTGCCATTGTGTCATTTTCTAGAATCCCTTCAGTT
TTAGCTACCAACGGCCAGGAAAAGCCCTCATCTTCTCTTTCTCTCCTCAGTTTACATCTTGTGGTACCTTTCTA
GCCTTAGACAAATGATCACCATGTTAGCCTTAGACCAAGAAGCTGGCTAGTCCTTTCTGTGAAGCTAATACAATG
GTCATTTCCAGACAAAATTTAAAGGAAACACTAAGGCTGCTTCAAAGATTATCTGATTCCTTTAAATATATGTCT
ATATACACAGACATGCTCTTTTTTTAAAGTGCTTACATTTTAATAGAGATGAATCAGTTTGGAAATCTAAGCTGTT
TGCCAAGCTGAAGCTACAGGTTGTGAAATAATTTTTAACTTTTGGAAATCATACTGCCTACTGTTACTCTAAATAG
AAATATAGGGTTTTTTTTTAATGTGAATTTTTGCCTATCTTTAAACATTTCAATGTCAGCCTTTGTTAACCTTAAA
TACACTGAATTGAATCTACAAAAGTGAACCATCTCAGACCTTTACTGATACTACAACTTTTGTCTTCTGATGGCC
AAAATACCAAATGCCTGTTGTATTTATGGATTAAAAACTGCTTATAAAAAAAAAAAAAA

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FIGURE 831

MAAAGWRDGSQEKYRLVVGGGGVGKSALTIQFIQSYFVTDYDPTIEDSYTKQCVIDDRAARLDILD
TAGQEEF
GAMREQYMRTGEGFLLVFSVTDGRGSFEEIYKFQRQILRVKDRDEFPMILIGNKADLDHQRQVTQ
EEGQQLARQLK
VTYPEASAKIRMNVDQAFHELVRVIRKFQEQECPPSPEPTRKEKDKKGCHCVIF

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FIGURE 832

TTAAGCACTTGTTTTGGGTACAAGGCATTTCTGACATTTTATAAACCTACATTTAAGGGGAATTTTTAAAGGAAA
TGTTTTTCTTTTTTTTTTTTGTTCGAGGGGGCAAGGAGGGACAGAAAAGTAACCTCTTCTTAAGTGGAATATT
CTAATAAGCTACCTTTTGTAAGTGCCATGTTTATTATCTAATCATTCCAAGTTTTGCATTGATGTCTGACTGCCA
CTCCTTCTTCAAGGACAGTGTTTTTTGTAGTAAAATCACTGGTTTATACAAAGCTTTATTTAGGGGGTAAAGT
TAAGCTGCTAAAACCCCATGTTGGCTGCTGCTGTTGAGATACTGTGCTTTGGGAGTAAAAAAGAAAGTTATTTT
TTTGTCTTAAAGAATTTTTAAAAAATTAGTCATGAGACTTATTCATCTTTCCAGGGAACATACTGATTGGTCTTA
AAAGACTAGACAGTTAAGTAAAAGGTGGCTGGAACATCTATTTTCTACAAAACCTGGAAAAATGAACCTGGTTCT
AGAAGAATGTACACCAAATAAAAACATGTGAAGCAGTATTGATTCTTT

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FIGURE 833

LSTCFGYKAFLTFYKPTFKGNF

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FIGURE 834

GCACGAGCATAGACTTTTAAACTGGTACGGTTCTTAGAGATGTCCTTGGCCTTCTGTTGTTGTTGTKGTTTTTT
TCTTTTCTTCTTCTCCTTCTCCTTCTTCTTCTTCTCCTTCTTCTTCTTTTTTTTTTTCAGAGTCTTGCTCTG
TCACCAAGACTGGAGTGAAGTGATGTGATCTCGGCTTACTGCAACCTGGGAGGCAGAGGTTGCAGTGAGTCGAGA
TGGTGCCATTGCTCTCGTTTGGGCAACAAGAGTGAACTCTTGTCTCAAAAAAAAAAAAAAAAAATGAGGTTTAAAG
CAGTTTGTCACTTACTGGTGGGATCTGGTCACACAAGATAGCATTAAACGTGACATGGCACATAAAATTGGTTAA
AAAATTTGTTTTTTTAATTACGTAATGTAAAAGCCCAACAAACACTTTATGCAAGATTGGAATGTATCTTCAAAT
TCAGATTTAATAAACATGTAAAGATCCTCTGTATATAAAAGTTGTATTTAATCCCTTGTGCCCAAGAATGCTAT
AAAAGATCCCAAGAATGTTATCTATGAAAAGATAGCAATAGGGAATGGTGAACAAATAATTTAATTTGCCAATTC
TAAAAAACATGGACTTAAACCCCATGAAAACCTGGTTCCATAGTTTTAACTGTTTTATGGTTCCAATACAAAACC
AGAGTGGTTTACATTCCACAATXACCAAATTTGCATCCAATXTTGGGGTAATTTTXGGTATTTGCCATGGGATAC
TATTCATTTTT

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FIGURE 835

MVLGLLLLLXFFSFSSSPSPSSSLLLLSSFFFQSLALSPRLE

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FIGURE 836

TGTCGGGGACGGTAACCGGGACCCGTGCTCTGCTCCTGTCGCCTTCGCCTCCTGAATCCCTAGCCATATGCGTGA
GTGCATCTCCATCCACGTTGGCCAGGCTGGTGTCCAGATTGGCAATGCCTGCTGGGAGCTCTACTGCCTGGAACA
CGGCATCCAGCCCGATGGCCAGATGCCAAGTGACAAGACCATTGGGGGAGGAGATGACTCCTTCAACACCTTCTT
CAGTGAGACGGGCGCTGGCAAGCACGTGCCCCGGGCTGTGTTTGTAGACTTGGAACCCACAGTCATTGATGAAGT
TCGCACTGGCACCTACCGCCAGCTCTTCCACCCTGAGCAGCTCATCACAGGCAAGGAAGATGCTGCCAATAACTA
TGCCCGAGGGCACTACACCATTGGCAAGGAGATCATTGACCTTGTGTTGGACCGAATTGCAAGCTGGCTGACCA
GTGCACCCGCTCTTACAGGGCTTCTTGGTTTTCCACAGCTTTGGTGGGGGAAGTGGTTCTGGGTTACCTCCCTGCT
CATGGAACGCCTGTGAGTTGATTATGGCAAGAAATCCAAGCTGGAGTTCTCCATTTACCCGGCACCCAGGTTTC
CACAGCTGTAGTTGAGCCCTACAACCTCCATCCTCACCACCCACACCACCCTGGAGCACTCTGATTGTGCCTTCAT
GGTAGACAATGAGGCCATCTATGACATCTGTGCTAGAAACCTCGATATCGAGCGCCCAACCTACACTAACCTTAA
CCGCCTTATTAGCCAGATTGTGTCTTCCATCACTGCTTCCCTGAGATTTGATGGAGCCCTGAATGTTGACCTGAC
AGAATTCCAGACCAACCTGGTCCCCCTACCCCGCATCCACTTCCCTCTGGCCACATATGCCCTGTGCTCTCTGC
TGAGAAAGCCTACCATGAACAGCTTTCTGTAGCAGACATCACCAATGCTTGCTTTGAGCCAGCCAACCAGATGGT
GAAATGTGACCCTGGCCATGGTAAATACATGGCTTGCTGCCTGTTGTACCGTGGTGACGTGGTTCCCAAAGATGT
CAATGCTGCCATTGCCACCATCAAAACCAAGCGCACGATCCAGTTTGTGGATTGGTGCCCCACTGGCTTCAAGGT
TGGCATCAACTACCAGCCTCCCACTGTGGTGCCTGGTGGAGACCTGGCCAAGGTACAGAGAGCTGTGTGCAIGCT
GAGCAACACCACAGCCATTGCTGAGGCCTGGGCTCGCCTGGACCACAAGTTTGACCTGATGTATGCCAAGCGTGC
CTTTGTTCACTGGTACGTGGGTGAGGGGATGGAGGAAGGCGAGTTTTTCAGAGGCCCGTGAAGATATGGCTGCCCT
TGAGAAGGATTATGAGGAGGTTGGTGTGGATTCTGTTGAAGGAGAGGGTGAGGAAGAAGGAGAGGAATACTAATT
ATCCATTCTTTTGGCCCTGCAGCATGTCATGCTCCAGAATTTACGCTTACGCTTAAGTACAGATGTTAAAGC
TTTCTGGTTAGATTGTTTTCACTTGGTGATCATGTCTTTTCCATGTGTACCTGTAATATTTTCCATCATATCTC
AAAGTAAAGTCATTAACATCA

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FIGURE 837

MRECISIHVGQAGVQIGNACWELYCLEHGIQPDGQMP SDKTIGGGDDSFNTFFSETGAGKHVPRAVFVDLEPTVI
DEVRTGTYRQLFHPEQLITGKEDAANNYARGHYTIGKEIIDLVLDRIKRLADQCTRLOGFLVFHSFGGGTGSGET
SLLMERLSVDYGKKSKLEFSIYPAPQVSTAVVEPYNSILTHTTLEHSDCAFMVDNEAIYDICRRNLDIERPTYT
NLNRLISQIVSSITASLRFDGALNVDLTEFQTNLVPYPRIHFPLATYAPVISAEKAYHEQLSVADITNACFEPAN
QMVKCDPGHGKYMCCLLYRGDVVPKDVNAAIATIKTKRTIQFVDWCPTGFKVGINYQPPTVVPGGDLAKVQRAV
CMLSNTTAIAEAWARLDHKFDLMYAKRAVHWYVGEGMEEGEFSEAREDMAALEKDYEYVGVD SVEGE GEEEGEE
Y

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FIGURE 838

GGGCTTCCTGGGGAGGGTGTGGCAGGGTGGTGGGCATCCCCCTCCCTCACCAAAGCATGGGCTCTTTGTTTCCTCT
TTGCCAGGCCTGGGTCTTCCAGTGACCCCTCAGCCTTCACTTCCTCCTCACTCCCGGGGAGCTGTGACAGGTG
TTTGGGGAGGGGAGGGGGGTATGATAAGCTGGGACAGCTGCACCCACCGGTGCTCTGGTGAGATGGGGGGCCCCG
GATGTTGGGGAGACACATCTGCTGGGTTCACAGCCCAAGGTCCCCAACCCTGGCTGTCTGGCCTTGTCTGTCACC
CCCCGTGCCCCTGGCAGGGACAGGAAGCTCCCCCCCCACCCCGCTTGGGCAGTTTGCCTTGGCACGGGCCTGA
TCTGTTTTCTCCCCAGAGCAGCTGCTGTTCTGTCTGCTGGGCAGAGGGCTGGGTTCCTCCGAGGTAGGCAGGGG
CCTCAACCCAGAGCCCCCTCTCACACCCTCTTTCAACTCAGGCTTATGTCTCTCCCTCCTCCCCACCCCCACCCC
AGGAAGAGGAGATCCCAGAACTGGAGATTGACTGGATGAGCTCCTGGACATGGAGAGTGACGATGCCCGGGCTG
CCAGGGTCAAGGAGCTGCTGGTTGACTGTTACAAACCCACAGAGGCCTTCATTTCTGGCCTGCTGGACAAGATCC
GGGGCATGCAGAAGCTGAGCACACCCAGAAAGTGAAGGTCCCCGACCCAGGAGAACGGTGGCTCCACAGGA
CAATCGCTGCCCCCAACCTCGTAGCAACAGCAATACCGGGGGACCCTGCGGCCAGGCCTGGTGCCATGAGCAGG
GCTCCTCGTGCCCCCTGGCCCAGGGGTCTCTTCCCCTGCCCCCTCAGTTTCCACTTTTGGGGTTTTTTATTGTTA
TTAAACTGATGGGACTTTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 839

MLGRHICWVPSPRSPTLAVWPCLSPPVPTGRDRKLPPHPALGSLPWHGPDFSSPEQLLFCLLGRGLGSSEVGRG
LNPEPLSHPLSTQAYVSPSSPTPTPGRGDPRTGD

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FIGURE 840A

AAGTCAGCGCTGGAGTCGGCTAGGCGGCTGGAAACGGCGGCTGCCGCCGGTGACTCAGGGAGGCGGGAGGCGGGG
GAGGAGCTCTTCCTGCAGGCGTGAAACCATGCTGCTCACGCTCGGAGAAAGTTGGCCGGTATTGGTGGGAGGA
GGTTTCTCAGTCTGTCCGCAGCCGACGGCAGCGATGGCAGCCACGACAGCTGGGACGTGGAGCGCGTCGCCGAGT
GGCCCTGGCTCTCCGGGACCATTTCGAGCTGTTTCCACACCGACGTTACCAAGAAGGATCTGAAGGTGTGTGTGG
AATTTGATGGGAATCTTGGAGGAAAAGAAGATGGATAGAAGTCTACAGCCTTCTAAGGAGAGCATTTTTAGTAG
AACATAATTTGGTTTTAGCTGAACGAAAGTCACCTGAAATTTCTGAACGAATTGTACAGTGGCCTGCAATAACGT
ACAAACCTCTGTTGGACAAAGCTGGTTTGGGATCCATAACTTCTGTTTCGCTTTCTGGGAGATCAACAAAGAGTAT
TTCTTTCTAAAGACCTTTTGAAGCCTATACAGGATGTAAACAGTCTTCGACTTTCTCTTACGGATAATCAGATTG
TCAGTAAAGAATTTCAAGCTTTGATTGTGAAGCATTAGATGAAAGCCATCTTTTAAAGGTGACAAAACTTAG
TTGGTTTCAAGAAGTAAAAATTTATAGCTTGGACCCATCTACTCAGTGGTTTTTCAGCAACCGTTTATAATGGAAACC
CAGCATCAAAAACCTCTCAAGTCAACTGTGAGGAGATTCCAGCACTGAAAATTGTTGATCCGTCAGTATTGATG
TTGAAGTTGTACACGATAACCTTGTGACATGTGGTAATTCTGCAAGAATTGGAGCTGTAAAACGCAAGTCTTCTG
AGAATAATGGAACCTGGTTTCCAAACAAGCAAAATCTTGCTCTGAGGCCTCTCCAGTATGTGTCTGTGCAGT
CTGTACCTACAACAGTTTTTAAAGGAGATACTGCTTGGCTGTACTGCGGCAACTCCACCTAGTAAGGACCCAAGAC
AGCAAAGTACTCCCCAGGCTGCCAACTCTCCACCTAACCTTGGAGCAAAAATTCTCAAGGATGTCTATAAACAAA
GTTTACCAGAGGAAATTTCTTCCTGTCTAAATACAAAGTCTGAAGCTCTGAGAACAAAACCAGATGTCTGCAAG
CAGGGTTGCTCTCAAAGTCTCTCAGATTGGAACCTGGAGACTTGAAAATTCTGACTGAGCCAAAAGGCAGCTGTA
CTCAGCCTAAGACAAAACACTGATCAGGAAAACAGATTGGAGTCTGTTCCACAAGCATTGACTGGCCTTCCTAAGG
AGTGCTTACCTACAAAGGCTTCTTCTAAGGCAGAATTGGAAATTGCCAATCCTCCTGAACTGCAGAAGCACCTAG
AACATGCACCTTCCCCATCGGATGTTTCAAATGCACCAGAAGTGAAAGCAGGTGTCAATAGTGATAGCCCTAATA
ACTGTTTCAGGAAAAAAGGTAGAACCCTTCAGCTTTAGCTTGGCGATCACAGAATTTAAAGGAATCTTCAGTAAAG
TAGATAATGAAAGCTGTGTTCAAGAAGCAACAATAAAATCCAGAATGCCCCATCCAGGAAGTCGGTTTTGACAG
ACCCAGCTAAACTCAAAAAGCTGCAACAGAGTGGCGAGGCCTTCGTACAGGATGATTCTTGTGTGAACATCGTGG
CACAGTTGCCTAAATGCCGAGAGTGTGCTTGGACAGTCTCCGCAAGGATAAGGAGCAACAGAAGGACTCACCTG
TGTTTTGCCGCTTCTTCACTTCAGGAGGTTACAATTCAACAAACATGGTGTGTTGCCGGTAGAAGGCTTCTTAA
CACCAACAAGTATGACAATGAAGCAATTGGCTTGTGGTTACCTTTAAACCAAAAACGTTGTGGGGATTGATTG
ACACAGCAAAGTACATCTTGGCCAACATTGGAGACCACTTCTGTCAAATGGTGATTTCTGAAAAGGAAGCTATGT
CAACTATTGAGCCACACAGACAGGTTGCTTGGAAAGCGAGCTGTCAAAGGTGTTGAGAAATGTGTGATGTGTGCG
ACACCACCATCTTCAACCTGCACTGGGTGTGTCTCGGTGTGGGTTTGGAGTATGTGTGGACTGCTACCGGATGA
AGAGAAAGAATTGCCAACAGGGTGCTGCTTACAAGACTTTCTCTTGGCTAAAATGTGTGAAGAGTCAGATACATG
AACCAGAGAACTTAATGCCCACACAGATCATTCTTGGAAAAGCACTCTATGATGTTGGAGACATTGTTTCATTCTG
TAAGAGCGAAATGGGGAATAAAGGCAAACTGCCCTTGTTCAAACAGGCAATTCAAACCTTTTCAAAGCCAGCCT
CAAAGGAAGACCTAAAACAGACTTCTTTAGCTGGAGAAAAACCGACTCTTGGTGCAGTGCTCCAGCAGAATCCCT
CAGTGTGGAGCCAGCAGCTGTGGGTGGGGAAGCAGCCTCCAAGCCAGCCGGCAGCATGAAGCCTGCCTGTCCAG
CCAGCACATCTCCTCTAAACTGGCTGGCCGACCTAACCCAGCGGGAATGTCAACAAGGAAAACAAGGAAAAACAAC
CAACAATGCCAATTTTAAAGAATGAAATCAAATGCCTTCCACCCCTCCACCTTTAAGCAAATCCAGCACAGTCC
TCCATACGTTTAAACAGCACAAATTTTACACCCGTAAGCAACAACAATTTCTGGTTTCTCCGGAATCTCTTGAATT
CTTCTACAGGAAAGACAGAAAATGGACTCAAGAATACACCAAAAATCCTTGATGACATCTTTGCCTCTTTGGTGC
AAAATAAGACGACTTCTGATTTATCTAAGAGGCCTCAAGGACTAACCATCAAGCCCAGCATTCTGGGCTTTGACA
CTCCTCACTATTGGCTTTGTGATAATCGCTTGCTGTGCTTGCAAGACCCCAACAATAAGAGCAACTGGAATGTGT
TTAGGGAGTGCTGGAAACAAGGGCAGCCAGTGATGGTGTCTGGAGTGATCATAAATTGAACTCTGAACCTTTGGA
AACCTGAATCCTTCAGGAAAGAGTTTGGTGAGCAGGAAGTAGACCTAGTTAATTGTAGGACCAATGAAATCATCA
CAGGAGCCACAGTAGGAGACTTCTGGGATGGATTGAAAGATGTTCCAAATCGTTTGAAAATGAAAAAGAACCA
TGGTGTGAAACTTAAGGACTGGCCACCAGGAGAAGATTTTAGAGATATGATGCCTTCCAGGTTTGATGATCTGA
TGGCCAACATTCCACTGCCCCAGTACACAAGGCGAGATGGCAAACCTGAATTTGGCCTCTAGGCTGCCAACTACT
TTGTTCCGCCAGATCTGGGCCCCAAGATGTATAATGCTTATGGATTAATCACTCCTGAAGATCGGAAATATGGAA
CAACAAATCTTCACTTAGATGTATCTGATGCAGCTAATGTATGGTCTATGTGGGAATTCCCAAAGGACAGTGTG
AGCAAGAAGAAGAAGTCCTTAAGACCATCCAAGATGGAGATTCTGACGAACTACAATAAAGCGATTTATTGAAG

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FIGURE 840B

GAAAAGAGAAGCCAGGAGCACTGTGGCACATATATGCTGCAAAGGACACGGAGAAGATAAGGGAATTTCTTAAAA
AGGTATCAGAAGAGCAAGGTCAAGAAAACCCAGCAGACCACGATCCTATTCATGATCAAAGCTGGTATTTAGACC
GATCATTAAAGAAAACGTCTTCATCAAGAGTATGGAGTTCAAGGCTGGGCTATTGTACAGTTTCTTGGGGATGTGG
TGTTTATCCCGGCAGGAGCTCCACATCAGGTTTATACTTATATAGCTGCATCAAAGTGGCTGAAGATTTTGT
CTCCAGAGCATGTTAAACACTGCTTCTGGCTTACTCAGGAATFCCGATATCTGTCACAGACTCATACCAATCAG
AAGATAAATTACAGGTGAAGAATGTTATCTACCATGCAGTGAAAGATGCAGTTGCTATGCTGAAAGCCAGTGAAT
CCAGTTTTGGCAAACCTTAACTCTCCCTGCACATTGGAAATGAATTACAGGCAGCTGTTCAAACCTCTTCAGGCAGG
ATTCCTGTGGACTTTGAGATTCAIGTTACCTCATCTTCTTTTTTAAACTGTACCCAACCTTGTGAGGGTACTCTGT
CTAATGTATATTTCTAGTGTGTTACAGACAGTAAATGTGTATATGTAGTAACCTATTTACAGAACATGCATCCTTAA
ACTGTGACTTCTCACCTAGTGCAGAACTTTTACCAGGCTGTAAAAGCAAACCTCGTATCAGCTCTGGAACAATA
CCTGCAGTTATTCTTCAGCTGTTTGGACAACCTTAGATTGGGTTTATAACTATTAGGAATCACTGCACAGTTTATT
TGGGTTGTGTTTTGTGTCTGAGTCCCCTCCCTCATCCCTTAGGGTCCAGAAGAGCAATGGAGGAAGTGACAGCTA
ATGTTGCAGTTCTTATTGTATGGCATAGGACTGGCATTATATAGCAGAAATCAACTACTGTACAATTTCTTGGGG
TTAACCATCTTTAGTTAAATGGAATTTTAATTTAAATGACGCTTTGCTAATTTAAGTGTTAAGCATTTTGCATT
AAAAATATTCATATAAT

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FIGURE 841

MVLTILGESWPVLVGRRFLSLSAADGSDGSHDSWDVERVAEWPWLSGTIRAVSHTDVTKKDLKVCVEFDGESWRKR
RWIEVYSLRRRAFLVEHNLVLAERKSPEISERIVQWPAITYKPLLDKAGLGSITSVRFLGDQQRVFLSKDLLKPI
QDVNSLRSLTDNQIVSKEFQALIVKHLDESHLLKGDKNLVGSEVKIYSLDPSTQWFSATVINGNPNASKTLQVNC
EEIPALKIVDP SLIHVEVVHDNLVTCGNSARIGAVKRKSENNGTLVSKQAKSCSEASPSMCPVQSVPTTVFKEI
LLGCTAATPPSKDPRQOSTPQAANSPPNLGAKIPQGCHKQSLPEEISSCLNTKSEALRTKPDVCKAGLLSKSSQI
GTGDLKILTEPKGSC TQPKTNTDQENRLESVPQALTGLPKECLPTKASSKAELEIANPPELQKHLEHAPSPSDVS
NAPEVKAGVNSDSPNNCSGKKVEPSALACRSQNLKESSVKVDNESCCSRSNKIQNAPSRKSVLTDPAKLKKLQQ
SGEAFVQDDSCVNIVAQLPKCRECRDLSLRKDKEQQKDSPVFCRFFHFRRLQFNKHGVL RVEGF LTPNKYDNEAI
GLWLPLTKNVVGIDLD TAKYILANIGDHFCQM VISEKEAMSTIEPHRQVAWKRAVKGVREMC DVCDTTIFNLHWV
CPRCGFVCVDCYMRKRNCCQGAAYKTF SWLKC VKSQIHEPENLMPTQIIPGKALYDVGDIVH SVRAKWGIKAN
CPCSNRQFKLFSKPASKEDLKQTS LAGEKPTLGAVLQQNPSVLEPAAVGGEAASKPAGSMKPAC PASTSPLNWLA
DLTSGNVNKENKEKQPTMPILKNEIKCLPPLPLSKSSTVLHTFNSTILTPVSNNNSGFLRNLLNSSTGKTENGL
KNTPKILDDIFASLVQNKTTS DLSKRPQGLTIKPSILGFDTPHYWLC DNRLCLQDPNNKSNWNVFRECWKQGQP
VMVSGVHHKLNSELWKPE SFRKEFGQEVDLVNCR TNEIITGATVGDFWDGFEDVPNRLKNEKEPMVLKLDWPP
GEDFRDMMPSRFDDL MANIPLPEYTRRDGKLN LASRLPNYFVRPDLGPKMYNAYGLITPEDRKYGTTLHLDVDSD
AANVMVYVGIPKGQCEQEEVLKTIQDGDSELTIKRFIEGKEKPGALWHIYAAKDTEKIREFLKKVSEEQGOEN
PADHDPIHDQSWYLD RSLRKRLHQEYGVQGWAI VQFLGDVVFIPAGAPHQVHNLYSCI KVAEDFVSPEHVKHCFW
LTQEFRYLSQTHTNHEDKLQVKNVIYHAVKDAVAMLKASESSFGKP

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FIGURE 842

CTAACCCAGTATGTTCTTCTTTTTTATGTAAGGNACAGCTTTCTCCACAGAGTCCTTTCTGCTGGTGAGGACAGC
ATTTCTGAGCAGGGCTTTGTTCTCTATGTGCATTAGGACTTTTATCATGCCCTTGTTCTGTGTGTAGTTACTTGA
CAGCATCAAATGCCGCCTCTTCCTAATGTCCTTCAAGTTTTTCATGAAGTAGCAACCCACCTTCCACCATGGTTC
TGGGCGCCTGATTTTGCTGTGACTC

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FIGURE 843

GAAGGGGGCTGGGCCGGAGCCCCCAGGCTCAGAGGAGGAGGAGGAGGAGCAGGAGGAGAGCCTGGCGGTGGCGGA
GCAGGGAAAAGGGGCGCAGGGAGTCTGAAAGCTCCAGGAGCAGCAGAAGGCCAGTGGCCGGTCTCCAACCAGTAC
TGAGAAGCGCATGAGCTTCGAGTCCATTTCTTCCCTGCCAGAGGTTGAGCCGGACCCTGAGGCTGGGAGTGAGCA
AGAGGTATTTTCTGCTGTGGAAGGGCCCAGTGCCGAGGAGACGCCTTCAGACACAGAATCTCCAGAAGTCTTGGA
GACACAGCTTGATGCCCACCAGGGCCTTCTGGGGATGGACCCCCCAGGTGACATGGTGGACTTCGTGGCAGCTGA
GAGCACTGAGGACCTTAAGGCCCTGAGCAGCGAGGAGGAAGAAGAAATGGGAGGTGCCGCCAGGAGCCTGAGAG
CCTTCTGCCACCTCTGTGCTGGACCAGGCCAGCGTCATTGCGGAGCGATTTGTCAGCAGCTTCTCTCGGCGGAG
CAGCGTGGCACAGGAGGACAGCAAGTCCAGTGGCTTTGGGAGCCCGCGGCTGGTCAGCCGGAGCAGCAGCGTGCT
CAGCCTGGAGGGCAGCGAGAAGGGCCTGGCCCGGCATGGCAGTGCCACAGACTCCCTCAGCTGTCAGCTCTCCCC
AGAAGTGACATCAGTGTGGGGGTGGCCACAGAGGACAGCCCTTCTGTCAATGGGATGGAGCCCCCAAGCCCAGG
CTGCCAGTGGAGCCTGACCGGTCTTCTGCAAGAAGAAGGAATCAGCACTCTCCACCCGAGACCGGCTGTTGCT
AGACAAGATTAAGAGCTGGTGGCCCCACTGCACCCCCGCATCGTGACGCTCTCCACGTAATGGACAGCCACGTG
AGCGAGCGCGTCAAGAACAAGGTCTACCAGCTGGCCCGCCAGTACAGCCTCCGGATCAAGAGCAACAAGCCAGTG
ATGGCCAGGCCACCACTGCAGTGGGAAAAGGTGGCCCTGAGAGGGATGGGAAGAGCCCCACTGTGCCCTGTCTA
CAGGAAGAGGCTGGAGAGCCATTAGGTGGCAAAGGTAAGAGGAAGCCGGTGCTGTCTCTATTTGACTATGAGCAG
CTGATGGCCAGGAGCACAGCCCTCCCAAGCCCTCCTCGGCTGGGGAGATGTCACCACAGCGTTTCTTCTTCAAC
CCGTCTGCTGTGACCCAGAGGACCACCTCGCCTGGGGGCGGCCCTCCGCCCGAGCCCCCTCAGCCCCACAGAG
ACCTTCAGCTGGCCCCGACGTCCGTGAGCTCTGCTCCAAGTATGCCTCCCGCGATGAGGCACGCCGAGCAGGGGGC
GGCCGGCCCCGCGGCCACCCGTCAACAGGAGCCACTCGGTGCCGAGAACATGGTAGAGCCACCTCTGTGCGGC
AGGGTGGGCCGCTGCCGCAGCCTGAGCACCAAGAGGGGCGGGGAGGCGGAGAGGCTGCCCAATCCCCTGGGCCT
CTGCCCCAGAGCAAGCCGGATGGAGGCGAGACCCTGTATGTCACTGCAGACCTCACCTGGAGGACAACCGGCGG
GTGATTGTGATGGAGAAGGGACCCCTTCCCAGCCCCACTGCAGGGCTGGAGGAGAGCAGTGGCCAGGGACCAAGC
TCACCGGTGGCCCTGCTGGGGCAGGTTTCCAGGACTTCCAGCAGTCTGCAGAGTGCCAGCCGAAGGAAGAGGGTTCC
AGGGACCCGGCAGACCCGAGCCAGCAGGGCAGAGTGAGAAACCTTAGAGAGAAGTCCAGGCCTTGAACCTCTGTC
GGTTGATGCTGACTCCTGGGGGAGGGAGGAGTCATGTTGGAGGTTGGGGAAGAACCTGGGCATCCTTCCCCTCAA
GCCTGGGCTCATGGAGCCCCTGCCAGGGCCCTCAGGTGGGCGGAAAGTCCATCCCCTCCGCCCTTCCAGGAAGGA
TGCTCCCCTGTGACGGGCTCTCCTGCCCTGTGCCATCCACTGGGGCTCGAGACAATTTCCCACTCACCTGTGAGGC
CGGTGTGGCTGCTTCCCTTGTAATAGTTGTTCTCTGGTAAGAAGCCAAATATTTAAGCTCACTTCTTCCCAGAG
AGAGGAAGCTCTGCTCAGGCCTCCAGCGTTGGCTGGCCATGGCCACAGCCAGATGGAGGAGCCCATCCCCAGGAG
ACTCAGGCAGTGGCCTGGAGAGGCTTTGTTCTGTAACGGTGCCTTTTCTTAGGGTCCAGGCAGGAATGAAGCCAA
TAATTTATTGCTTTCCATTCTGTGGTATGATGTGCGTGTGCGTGAGTGTGTGGCCCCCTGTTTATTTCCCCTCCTGT
CAAGAATGAAGTGGATTGAGTTCAGGTACTTTTGAGGGTTGTTGTGCTGACCCTGTGGTTGTGCTGATGTACAC
ACATTTTATTATTTGCCAATGGTGCAATAACCACTGCTGACCAACAAAAAAAAAAAAAAAAAAAAA

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FIGURE 844

AATCCAACCTCACCTCCATGTTCAAGGATGTCCCTCTGACTGCAGAAAGAGGTGGAATTTGTGGTGGAAAAAGCATT
GAGCATGTTTCTCCAAGATGAATCTTCAAGAAATACCACCTTTGGTCTATCAGCTTCTGGTTCTCTCCTCCAAGGG
AAGCAGAAAAGAGTGTTTTGGAAGGAATCATAGCCTTCTTCAGTGCCTAGATAAGCAGCACAATGAGGAACAGAG
TGGTGACGAGCTATTGGATGTTGTCACTGTGCCATCAGGTGAACTTCGTCTATGTGGAAGGCACCATTATTCTACA
CATTGTGTTTGGCCATCAAATTGGACTATGAACTAGGCAGAGAACTCGTGAAACACTTAAAGGTAGGACAGCAAGG
AGATTCCAATAATACTTAAGTCCCTTCAGCATTGCTCTTCTTCTGTCTGTAACAAGAATACAAAGATTTTCAGGA
CCAGGTGCTTGATCTTTTAAAGACTTCGGTTGTAAAGAGCTTTAAGGATCTTCAACTCCTCCAAGGCTCAAAATT
TCTTCAGAATCTAGTTCCTCATAGATCTTATGTTTCAACCATGATCTTGGAAGTAGTGAAGAATAGCGTTCATAG
CTGGGACCATGTTACTCAGGGCCTCGTAGAACTTGGTTTCATTTTGATGGATTTCATATGGGCCAAAGAAGGTTCT
TGATGGAAAACTATTGAAACCAGCCCAAGTCTTTCTAGAATGCCAAACCAGCATGCATGTAAGCTCGGAGCTAA
TATCCTGTGGAACCTTTTAAAGATCCATGAGATGATCAGACAAGAAATTTTGGAGCAGGTCTCAACAGGGTTGT
TACCAGAGCATCTTCTCCCATCAGTCATTTCTTAGACCTGCTTTCAAATATCGTCATGTATGCACCCTTAGTTCT
TCAAAGTTGTTCTTCTAAAGTACAGAAGCTTTTGAATATTTGTCCTTTCTGCCCCCTTCAGACTGTACAAAGGCT
GCTTAAGGCAGTGCAGCCCCCTTCTCAAAGTCAGCATGTCAATGAGAGACTGCTTGATACTTGTCTTTCGGAAAGC
TATGTTTGCCAAACCAGCTTGATGCCCGAAAATCTGCAGTTGCTGGGTTTTTGTGCTCCTGAAGAACTTTAAAGT
TTTAGGCAGCCTGTCATCCTCTCAGTGCAGTCAGTCTCTCAGTGTCACTCAGGTTTCATGTGGATGTTTACAGCCA
TTACAATTCTGTCGCCAATGAAACTTTTTGCCTTGAGATCATGGATAGTTTGAGGAGATGCTTAAGCCAGCAAGC
TGATGTTTCGACTCACGCTTTATGAGGGGTTTTATGATGTTCTTCGAAGGAACCTCTCAGCTGGCTAATTCAGTCAT
GCAAACTCTGCTCTCACAGTTAAACAGTTCTATGAGCCAAAACCTGATCTGCTGCCTCCTCTGAAATTAGAAGC
TTGTATTCTGACCCAAGGAGATAAGATCTCTCTACAAGAACCCTGATTATCTGCTGTGTTGTATTTCAGCATTG
TTTGGCCTGGTATAAGAATACAGTCATACCCTTACAGCAGGGAGAGGAGGAAGAGGAGGAGGAAGAGGCATTCTA
CGAAGACCTAGATGATATATTGGAGTCCATTACTAATAGAATGATTAAGAGTGAGCTGGAAGACTTTGAACTGGA
TAAATCAGCAGATTTTTCTCAGAGCACCAGTATTGGCATAAAAAATAATATCTCTGCTTTTCTTGTGATGGGAGT
TTGTGAGGTTTTAATAGAATACAATTTCTCCATAAGTAGTTTCAGTAAGAATAGGTTTGAGGACATTCTGAGCTT
ATTTATGTGTTACAAAAAATCTCTGACATTCTTAATGAAAAAGCGGGTAAAGCCAAAATGGAAGTGGCCAAACAA
GACAAGTGATAGTCTTTTGTCCATGAAATTTGTGTCCAGTCTTCTCACTGCTCTTTTCAGAGTCTTGCTATGGAG
ATACACTTCAATTCCTACTTCAGTGGAAGAGTCGGGAAAGAAAGAGAAAGGAAAGAGCATCTCACTGCTGTGCTT
GGAGGGTTTACAGAAAATATTCAAGTGTGTGCAACAGTTCTATCAGCCCAAGATTTCAGCAGTTTCTCAGAGCTCT
GGATGTCACAGATAAGGAAGGAGAAGAGAGAGAAGATGCAGATGTCAGTGTCACTCAGAGAACAGCATTCCAGAT
CCGGCAATTTTCAGAGGTCCTTGTGAAATTTACTTAGCAGTCAAGAGGAAGATTTTAAATAGCAAAGAAGCCCTCCT
GCTAGTCACGGTTCTTACCAGTTTGTCCAAGTTACTGGAGCCCTCCTCTCCTCAGTTTGTGTCAGATGTTATCCTG
GACATCAAAGATTTGCAAGGAAAACAGCCGGGAGGATGCCTTGTGTTTGTGCAAGAGCTTGATGAACTTGCTCTTCAG
CCTGCATGTTTCGTATAAGAGTCTGTCTATTCTGCTGCGTGAATTTGTCCAGGATATCCACGGGCATCTGGGAGA
TATAGACCAGGATGTAGAGGTGGAGAAAACAAACCACTTTGCAATAGTGAATTTGAGAACGGCTGCCCCCACTGT
CTGTTTACTTGTCTGAGTCAGGCCGAGAAGGTTCTAGAAGAAAGTGGACTGGCTAATCACCAGCTTAAGGGACA
AGTGAGCCAAGAAACCTTATCAGAGGCCTCTTCTCAGGCAACCCCTACCAAATCAGCCTGTTGAGAAAGCTATCAT
CATGCAACTGGGAACTCTGCTTACATTTTTTCCACGAGCTGGTGCAGACAGCTCTGCCATCAGGCAGCTGTGTGGA
CACCTTGTAAAGGACTTGTGCAAAATGTACACCACACTTACAGCCCTTGTGAGATATTATCTCCAGGTGTGTCA
GAGCTCCGGAGGAATTCAAAAAATATGGAAAAGCTGGTGAAGCTGTCTGGTTCTCATCTGACCCCCCTGTGTTA
TTCTTTTCAATTTCTTACGTACAGAATAAGAGTAAGAGCCTGAACTATACGGGAGAGAAAAAGGAGAAACCTGCTGC
CGTTGCCACAGCCATGGCCAGAGTTCTTCGGGAAACCAAGCCAATCCCTAACCTCATCTTTGCCATAGAACAGTA
TGAAAAATTTCTCATCCACCTTTCTAAGAAGTCCAAGGTGAACCTGATGCAGCACATGAAGCTCAGCACCTCACG
AGACTTCAAGATCAAAGGAAACATCCTAGACATGGTTCTTCGAGAGGATGGCGAAGATGAAAATGAAGAGGGCAC
TGCATCAGAGCATGGGGGACAGAACAAGAACCAGCCAAGAAG

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FIGURE 845

MFKDVPLTAEVEFVVEKALSMFSKMNLQEIPPLVYQLLVLSKSGSRKSVLEGIIAFFSALDKQHNEEQSGDELL
DVVTVPSELRHVEGTIILHIVFAIKLDYELGRELVKHLKVGQQGDSNNNLSPFSIALLLSVTRIQRFDQVLDL
LKTSVVKSFKDLQLLQGSKFLQNLVPHRSYVSTMILEVVKNSVHSDHVTQGLVELGFILMDSYGPKKVLGDKTI
ETSPSLSRMPNQHACKLGANILLETFKIHEMIRQEILEQVLNRVVTRASSPISHFLDLLSNIVMYAPLVLQSCSS
KVTEAFDYLSFLPLQTVQRLLKAVQPLLKVSMRDCILVLRKAMFANQLDARKSAVAGFLLLLKNFKVLGSL
SSQCSQSLSVSQVHVDVHSHYNSVANETFCEIMDSLRRCLSQQADVRLTLYEGFYDVLRRNSQLANSVMQTLLS
QLKQFYEPKPDLLPPLKLEACILTQGDKISLQEPLDYLLCCIQHCLAWYKNTVIPLQQGEEEEEEEEAFYEDLDD
ILESITNRMKSELEDFELDKSADFSQSTSIGIKNNISAFVLMGVCEVLEYNFSSISSFSKNRFEDILSLFMCYK
KLSDILNEKAGKAKTKMANKTSDSLLSMKFVSSLLTALFRVLLWRYTSIPTSVESGKKEKGKSSISLLCLEGLQK
IFSAVQQFYQPKIQQFLRALDVTDKGEGEREDADVSTQRTAFQIRQFQRSLNLLSSQEEDFNSKEALLVTVL
TSLSKLLEPSSPQFVQMLSWTSKICKENSREDALFCKSLMNLLFSLHVSYSKSPVILLRDLSDIHLGLDIDQDV
EVEKTNHFAIVNLRTAAPTVCLLVLSQAEKVLEEVDWLITKLKGQVSQETLSEASSQATLPNQFVEKAIIMQLGT
LLTFFHELVTALPSGSCVDTLKDLCKMYTTLTALVRYYLQVCQSSGGIPKNMEKLVKLSGSHLTPLCYSFISY
VQNKSKSLNYTGEKKEKPAAVATAMARVLRTEKPIPNLIFAIEQYEFLLHLSKSKSVNLMQHMKLSTSRDFKIK
GNILDMVLREDGEDENEETASEHGGQNKPAKK

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FIGURE 846A

GGACGAGTCGAGCCTCCTGCGGCGCCGCGGGCTCAGAAAGGAGCTGAGCCTGCCACGCCGAGGACGTGGCTGCCG
CAGCGGGAACCGCAAGAGCTTGGTGGTAGGAACGCCCTCCCCGACCCTCTCCCGGCCCTGTGCGCCATTGTCGGT
CCCAACGGCAGGCAGCAGCCCCCTTGGATAGTCCTCGGAATTCTCGGCTGCCTCTGCCCTAAATTTCCCTTTGC
CCGGAGGGCAGACGGCAGAAGATGGTCCCTCGCGTCTCTCCCATCTTCCGGCTATGGAACCAACACACCCAGCTC
CACCCTCTCGTCAAGCTCATCCTCCCGGGAACGTCTCCACCAGCTTCCCTTCCAGCCGACGCCGGACGAGCTGCA
CTTCTGTCCAAGCACTTCCGCAGCTCAGAGAATGTGCTTGATGAGGAAGGCGGCCGGTCACCCCGCTCCGACC
CCGCTCTCGCAGTCTCAGCCCCGGGCCGTGCAACGGGGACCTTCGACAATGAGATTGTCATGATGAATCACGTGTA
CCGGGAGAGGTTCCCCAAGGCCACAGCACAGATGGAGGGCCGTCTGCAGGAGTTCTTGACGGCCTACGCGCCCGG
CGCCCGGCTGGCGCTGGCTGATGGCGTCTTGGGCTTCATCCACCACCAGATCGTCGAGCTGGCCCGAGACTGCTT
GGCCAAGTCTGGCGAGAACCTCGTCACCTCCCGCTACTTCTTAGAGATGCAGGAGAAGCTGGAGCGGCTTCTGCA
GGATGCCCATGAGCGTTCGGACAGTGAGGAGGTGAGCTTCATCGTCCAGCTTGTCCGGAAGTGTGATCATCAT
CTCACGGCCAGCTCGGCTGCTGGAGTGTCTGGAGTTTGACCCTGAGGAATTTTACCACCTGCTGGAGGCGGCTGA
GGGCCATGCGCGGGAGGGCCAAGGCATTAAGACTGACCTTCCACAGTACATCATTGGGCAGCTGGGCTGGCCAA
GGACCCCTGGAGGAGATGGTGCCACTGAGTCACCTCGAAGAAGAACAGCCCCAGCACCTGAGTCCCCAGAGAG
CCGCGCCCTGGTTCGGCCAGTCACGGAGGAAGCCATGCGAAAGCGACTTTGAGACCATCAAATCATTAGCAACGG
AGCCTATGGGGCCGTCTACCTGGTGCGGCACCGTGACACACGGCAGCGCTTGGCCATCAAGAAGATCAACAAACA
GAACTTGATCCTGCGTAACCAGATCCAGCAGGTCTTTGTGGAGCGTGACATTCTACCTTTGCCGAGAACCCCTT
TGTGGTCAGCATGTTCTGCTCCTTTGAGACCCGGCGCCACCTATGTATGGTCATGGAATACGTGGAAGGCGGCGA
CTGCGCCACGCTCCTGAAGAACATGGGCCCCGTGCCCCGTGGACATGGCCCCGCTGTACTTCGCCGAGACGGTGT
GGCGCTGGAGTACCTGCATAACTATGGCATCGTGCACCGTGACCTCAAACCAGACAATCTGCTCATCACCTCGCT
TGCCACATCAAGCTCACGGACTTCGGCCTGTCCAAGATCGGCCTCATGAGCATGGCCACCAACCTCTATGAGGG
CCACATCGAGAAGGACGCCCCGAGAGTTTCATCGACAAGCAGGTGIGTGGGACGCCGGAGTACATAGCCCCGAGGT
GATCTTCCGCCAGGGCTATGGGAAGCCAGTGGACTGGTGGGCCATGGGCGTCGTCTCTATGAGTTTCTGGTGGG
CTGCGTGCCCTTTCTTTGGAGATACCCCCGAGGAACCTTCGGTCAGGTGGTCAGCGATGAGATCATGTGGCCAGA
GGGAGATGAGGCCCTTCCAGCAGACGCCCAGGACCTCATCACCAGGTTGCTCCGGCAGAGCCCGCTGGACCGTCT
GGGCACTGGTGGCACCCACGAAGTGAAGCAGCACCCCTTTTTCCTGGCCCTGGACTGGGCAGGGCTTCTCCGACA
CAAAGCCGAGTTCGTGCCCCAGCTCGAAGCCGAGGATGATACCAGCTACTTTGACACACGTTCCGAACGTTACCG
CCATCTGGGCTCCGAGGACGACGAGACCAATGATGAAGAATCGTCCACAGAGATCCCCAGTTCTCCTCTGCTC
CCACCGGTTACAGCAAGGTCTACAGCAGCTCTGAGTTCTTGGCCGTCCAGCCACTCTACCTTCGCTGAAAGGAG
CTTCAGTGAAGACCGGGAGGAGGGGTGGGAGCGCAGCGAAGTGGACTATGGCCGCCGGCTGAGTGTGACATCCG
GCTGAGGTCTTGACATCCTCTGGATCCTCTGTGATCATCTTCGTCCAGCCCGAGCGGGGTCCAGCCCATC
TCTCCTGAATACCATCAGCCTGGACACAATGCCAAGTTTGCTTCTCATCAGAGGATGAGGGGGTAGGCCAGG
CCCTGCAGGCCCCAAGAGGCCCGTCTTCATTCTAGGGGAGCCTGACCCCCCACCAGCGGCCACCCAGTGATGCC
CAAGCCCTCGAGCCTTTCTGCCGACACAGCTGCTCTCAGCCACGCCCGCTACGGAGCAATAGCATCGGCGCCCG
ACACTCCACACCAAGGCCCTCTGGATGCCGGCCGGGGCCGCGCCTTGGGGGCCCAAGAGACCCAGCCCTGAGAA
GTCCAGAGCCTCCTCCAGCGGTGGCAGTGGTGGCGGCAGTGGGGGCCGCGTGCCCAAGTCAGCCTCTGTCTCTGC
CCTGTCCCTCATCATCACGGCAGATGATGGCAGCGCGGCCCCCTCATGAGCCCCCTTCCCCGCGCTCTCTGTC
CTCGAACCCGTGCTCCCGTGACTCTTCGCCGAGCCGAGACCCGTCCCCCGTGTGTGGCAGCCTGCGGCCCCCAT
CGTTATCCACAGCTCTGGCAAGAAGTACGGCTTCAGCCTGCGGGCGATCCGCGTCTACATGGGTGATAGCGACGT
CTACACTGTGACACACGTCGTCTGGAGTGTGGAGGACGGAAGCCCCGCCAGGAGGCGGGCTGCGGGCTGGGGA
CCTCATCACCCACATCAACGGGGAGTCAGTGTGGGGCTGGTGACATGGACGTCGTGGAGCTGCTGCTGAAGAG
CGGCAACAAGATATCCCTGCGGACCACAGCCCTGGAGAACACCTCCATCAAGGTGGGCCCCGCCGGAAGAATGT
GGCCAAGGGCCGATGGCACGCAGGAGCAAGAGGAGCCGTGCGCGGGAGACCCAGGATCGGCGGAAGTCACTTTT
CAAGAAGATCTCCAAGCAGACCTCCGTGCTGCACACCAGCCGAGCTTCTCCTCCGGACTCCACCACTCACTGTC
ATCCAGTGAGAGCCTCCCCGGCTCGCCACCCACAGCCTCTCCCCAGCCCCACCACTCCCTGCCGAAGCCCAGC
CCCTGATGTCCAGCAGATACCACTGCATCCCCACCCAGCGCATCCCCGAGCTCCAGCAGCCCCGCTCCCCAGC
TGCTGCTGGCCACACCCGCCCCAGCTCCCTGCACGGCCTGGCTGCCAAGCTTGGGGCACCCCGCCCCAAGACTGG
CCGCCGAAGTCCACCAGCAGCATCCCGCCCTCCCGCTGGCCTGCCCGCCCATCTCCGCGCCCCCACCCTCGTC

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FIGURE 846B

GCCCTCGCCCCTGCCCGGGCACCCGCCCGCACCTGCCCGATCCCCGCGGCTGCGCCGGGGCCAGTCAGCTGACAA
GCTGGGCACAGGGGAGCGGCTGGATGGGGAGGCGGGGCGGCGCACTCGTGGGCCAGAGGCCGAGCTCGTGGTCAT
GCGGCGGCTGCACCTGTCCGAGCGCCGAGACTCCTTCAAGAAGCAGGAGGCCGTGCAGGAGGTTAGCTTCGATGA
GCCGCAGGAGGAGGCCACTGGGCTGCCACCTCAGTGCCACAGATCGCCGTGGAGGGCGAGGAAGCCGTGCCAGT
AGCTCTCGGGCCCACCGGAAGAGACTGATCCCCCTGCCAGGTCTCTCCCTGGCATCAAAGTTACGCGTTTTCTTGT
GCAATGTTTTTCCGTAAAGTCATGCCTGGATGGGGACTGAGCCACCAGCCTGACACCCAGAAGGCCGAGAAGCCA
TCTCGGTCCTTGCTGGAAGGTGGAGACATCGCTTGTGTTCTGGTGTCAATCAGGGGGCTGGATGGGGCAAGAATG
GGGGACAAGGGTGGCTTTGTAAATAGCAGCAAATCCCTGCAACTAATTTATTACTTTTTTTTTTCTTTTTTTTTT
TTTTTTTGAGACAGAGTCTCACTCTGTTGCCCGGCTGGAGTGCAGCGCGTGATCTCAGCTCACTGCAACCTCC
GCCTCCCAAGTTCAAGCGATTGCTCTGCCTCAGCTTCCCAAGTGGCTGGGATTACAGGCGCCCACTATGCCC
AGCTAATTTTTTGTATTTTTAGTACAGACGGGGTTTCACCATGTTGGTCAGGCTGGTCTCGAACTCCTGACCTCA
TGATTTGCCTGCCTTTGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACTGGGCCCAGCCTAATTTATTACT
TTTTATAAGCGATAGCCGTACTGAGCGCCCCCTGAAGGCGGCTGCCAGGTCTTGCCCCAGGCACCTGGGACTCT
GTTTGCAGGCCCTGCCCTCTGGGCTGAGAAGGATGCACCTTGGACAAGTCATCTGTGTTTGTGTTTTCCAGTTTT
TCTGTACTTTTTAAGTGTTTTGTGTTACCTGGTCTCATTCCCCTCCCCACACCTACCCATTTGAGGGGATGGAGT
TGAAGTCACCTGGTCACCTGTACCGGCCAGTTTCGGCTACAACCTGGAGTGTCCGTAAACAATTCCTCTCACCCA
CAAAACAATGTAATCCCAGCGATGGACTGGATTCTGAAGGCCACTTCCCACCATCATAGCTGCCATGCCAGGCA
GTGCCTGCTCTATATATAGAGTCTGCCTCCAATCCTGCTGGCTTCAGCCTGGAGAAGGGATATGGGAGCTGGAGC
TTTGATGGATGAATAGGTGTTACCGGATCTGGGCAGAGGGGTCATCCGCTCCCCAGGTGGGCACTGATAAAGGA
AGGTACAGGCCTCACCTGGAAGTCCCAAGGCAGCCTCCAGAAATGCTCGGCTGTCTCGGGGCACGCTCCAGTATG
CCAGTCTCGGGGATTACGTCCAGCTACTTCCAGAAACACTCAGTGTCCCCCTCCCCCTCAGGCTCTGCCTTGGCCT
GGCCTTGTCCAGTCTACCTTGACAAGATGCCGTGTGTTGAGGCCCAGCAGAGTAAGCCCTTGGCCGTGATGTG
TCTGAAACACCTGTTAGGGGTTCCCTCCATATGTGAGAGCCTCTCTGGGATGAAGTTCAAGCCAGAAAACCCAGT
CGAGGCTCAAGTTTGAATTTGAGCTTCACTGTGTGGCTCTGGGAAAAATGGCTTTCCCACTCTGTGCCTCAGTTTC
CTTGTGTTTACAAGACTAATCCCATTTGACTGTTTATTAAGCACCTACTGTGTGCCAAGCGCTTTTACGTGGCTTC
TCCCTCAGCCAGCCTTGAGAAGGCTGGAGGTGGTGTGTCATCACCTCCATTTTACAGACAAAGCAGCTGAGACCCCA
GCGAGGGGCGGAGACCTGTCCACGATCACCCAGCAGGAGTCGTGGCAGAACGGAGCATCAGCCAGACCCTGTTG
TGGGCGTTGTGTCATCAAGGGAGCTTGAATGGAGGGTCTGGTGTGAGATACAGCCGACTCCAGCCCCAGCTCATCCC
CCATGATGCTGTGTGACCCACTGGGCACTCTGGTGAGGGAGCTTTCCAGACATCAACAGCCCACTCTGCTTCCCT
TTCTGAGTCCCCTGTCCAGCACTGCCTAGTGTGGAGGGTAGACCAAGGCTGTGCATGATTACCCCCCTCCTTCC
ATCCTGGAGCTGGCAGTGAATAAAAGCCCGTATTTAC

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FIGURE 847

DESSLRRRGLQKELSLPRRGRGCRSGNRKSLVVGTPSPTLSRPLSPLSVPTAGSSPLDSPRNFS AASALNFPFA
RRADGRRWSLASLPSSGYGTNTPSSTLSSSSSSSRERLHQLPFQPTPDELHFLSKHFRSSENVLDEEGGRSPRLRP
RSRSLSPGRATGTFDNEIVMMNHVYRERFPKATAQMEGRLQEFLTAYAPGARLALADGVLGFIHHQIVELARDCL
AKSGENLVTSRYFLEMQEKLRLQDAHERSDSEEVSFIVQLVRKLLIIISRPARLLECLEDPEEFYHLLAEAE
GHAREGQGIKTDLPQYIIIGQLGLAKDPLEEMVPLSHLEEEQPPAPESPESRALVGQSRKPCESDFETIKLISNG
AYGAVYLVHRDTRQRF AIKKINKQNLILRNQIQQVFVERDILTFAENPFVVMFC SFETRRLCMVMEYVEGGD
CATLLKNMGPLPVDMARLYFAETVLAL EYLHNYGIVHRDLKPDNLLITSLGHIKLTDFGLSKIGLMSMATNLYEG
HIEKDAREFIDKQVCGTPEYIAPEVIFRQGYGKPDWWAMGVVLYEFLVGCVPFFGDTPEELFGQVVSDEIMWPE
GDEALPADAQDLITRLLRQSPLDRLGTGGTHEVKQHPFFLALDWAGLLRHKA EFPQLEAEDDTSYFDTRSERYR
HLGSEDETND EESSTEIPQFSSCSHRFSKVYSSEFLAVQPTPTFAERSFSEDREEGWERSEVDYGRRLSADIR
LRSWTSSGSSCQSSSSQPERGPPSLLNTISLDTMPKFAFSSSEDEGVGPGPAGPKRPVFI LGEPDPPPAATPVMP
KPSSLSADTAALSHARLRSNSIGARHSTPRPLDAGRGRRLGGPRDPAPEKSRASSSGSGGGSGGRVPKSASVSA
LSLIITADDGSGGPLMSPLSPRSLSSNPSSRDSSPSRDPSPVCGLRPPIVIHSSGKKYGFSLRAIRVYMGDSDV
YTVHHVWVSVEDGSPAQEAGLRAGDLITHINGESVLGLVHMDVVELLLKSGNKISLRTTALENTS IKVGPARKNV
AKGRMARRSKRSRRRETQDRKSLFKKISKQTSVLHTSRFSFSSGLHHSLSSES LPSGSPTHSLSPSPTTPCRSPA
PDVPADTTASPPSASPSSSSPASPAAAGHTRPSSLHGLAAKLGP RPKTGRRKSTSSIPPSPLACPPISAPPPRS
PSPLPGHPPAPARSPLRRGQSADKLTGERLDGEAGRRTRGPEAELVVMRRLHLSERRDSFKKQEA VQEVSFDE
PQEEATGLPTSVPQIAVEGEEAVPVALGPTGRD .

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FIGURE 848

AGAAGAAGCTGGCCAAGGATATGGGAGCAACCACCATGGACCAGAAGTCTCTCTGGGCAGGTGTAGTGGTCTTGC
TGCTTCTCCAGGGAGGATCTGCCTACAACTGGTTTGCTACTTTACCAACTGGTCCCAGGACCGGCAGGAACCAG
GAAAATTCACCCCTGAGAATATTGACCCCTTCCTATGCTCTCATCTCATCTATTTCATTGCGCCAGCATCGAAAACA
ACAAGGTTATCATCAAGGACAAGAGTGAAGTGATGCTCTACCAGACCATCAACAGTCTCAAAACCAAGAATCCCA
AACTGAAAATTCCTTGTCCATTGGAGGGTACCTGTTTGTTCCAAAGGGTTCCACCCTATGGTGGATTCTTCTA
CATCACGCTTGGAATTCATTAACCTCCATAATCCTGTTTCTGAGGAACCATAACTTTGATGGACTGGATGTAAGCT
GGATCTACCCAGATCAGAAAGAAAACACTCATTTCCTGCTGCTGATTGATGAGTTAGCAGAAGCCTTTTCAGAAGG
ACTTCACAAAATCCACCAAGGAAAGGCTTCTCTTGACTGCGGGCGTATCTGCAGGGAGGCAAATGATTGATAACA
GCTATCAAGTTGAGAACTGGCAAAGATCTGGATTTTCATCAACCTCCTGTCTTTGACTTCCATGGGTCTTGGG
AAAAGCCCCCTTATCACTGGCCACAACAGCCCTCTGAGCAAGGGGTGGCAGGACAGAGGGCCAAGCTCCTACTACA
ATGTGGAATATGCTGTGGGGTACTGGATACATAAGGGAATGCCATCAGAGAAGGTGGTCATGGGCATCCCCACAT
ATGGGCACTCCTTCACACTGGCCTCTGCAGAAACCACCGTGGGGGCCCTGCCTCTGGCCCTGGAGCTGCTGGAC
CCATCACAGAGTCTTCAGGCTTCCTGGCCTATTATGAGATCTGCCAGTTCCTGAAAGGAGCCAAGATCACGCGCC
TCCAGGATCAGCAGGTTCCTACGCAGTCAAGGGGAACCAGTGGGTGGGCTATGATGATGTGAAGAGTATGGAGA
CCAAGGTTCACTTCTTAAAGAATTTAAACCTGGGAGGAGCCATGATCTGGTCTATTGACATGGATGACTTCACTG
GCAAATCCTGCAACCAGGGCCCTTACCCTCTTGTCCAAGCAGTCAAGAGAAGCCTTGGCTCCTTGTGAAGGATTA
ACTTACAGAGAAGCAGGCAAGATGACCTTGCTGCCTGGGGCCTGCTCTCTCCCAGGAATTCTCATGTGGGATTCC
CCTTGCCAGGCTGGCCTTTGGATCTCTCTTCCAAGCCTTTCTGACTTCCTCTTAGATCATAGATTGGACCTGGT
TTTGTCTTCTGTCAGCTGTTGACTTGTTGCCCTGAAGTACAATAAAAAAATTCATTTTGCTCCAGTA

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FIGURE 849

MDQKSLWAGVVVLLLLQGGSAYKLVCYFTNWSQDRQEPGKFTPENIDPFLCSHLIYSFASIENNKVIIKDKSEVM
LYQTINSLKTKNPKLKILLSIGGYLFGSKGFHPMVDSSTSRLFINSIILFLRNHNFDGLDVSWIYPDQKENTHF
TVLIHELAEAFQKDFTKSTKERLLLLTAGVSAGRQ MIDNSYQVEKLAKDLDFINLLSFDFHGSWEKPLITGHNSPL
SKGWQDRGPSSYYNVEYAVGYWIIHKGMPSEKVVMGIPTYGHSFTLASAETTVGAPASGPGAAGPITESGFLAYY
EICQFLKGAKITRLQDQQVPYAVKGNQWVGYYDDVKSMETKVQFLKNLNLGGAMIWSIDMDDFTGKSCNQGPYPLV
QAVKRSLGSL

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FIGURE 850A

GGAATAACAAAACATGCTCTTAACCATCATCCCCCTCCAGAGAAGCTGGAGGAAATTTCCCCACCAGTGACAGT
CATGAGAAAGACACAAGTTCCCAAAGCAAGTCTGACATCACAAGAGAATCATCTTTTACATCAGCCGACACTGGG
AATTCAGTGTCTGCTTTTCCAAGTTATACAGGCGCAGGGATATCTACTGAAGGAAGCTCGGACTTCTCCTGGGGA
TATGGTGAACTCGATCAAAATGCCACTGAAAAAGTCCAGACAATGTTTACAGCCATTGATGAACTCTTGATGAG
CAGAAGTTGAGTGTGCATACCAAGAGTCTACAAGAAGAGTGCCAACAGTGGACAGCTAGCTTTTCTCACCTCAGG
ATTCTAGGTAGGCAGATAATCACTCCAAGTGAAGGTTATAGATTGTATCCTAGATCCCCTTCTGCTGTTTCCGCT
TCATATGAAACAACCTTGTCTCAAGAAAGAGATTCTACTATATTTGGTATAAGGGGAAAGAAGTTACATTTTTCA
TCTTCTTATGCTCATAAAGCATCTTCCATTGCCAAATCCTCCAGCTTTTGTCTATGGAAAGAGATGAGGAAGAC
TCTATAATCGTCTCAGAAGGAATAATTGAGGAATACCTAGCATTTCGATCACATAGATATAGAAGAGGGATTTCAT
GGGAAGAAATCAGAAGCAGCTACAGAGAAACAGAAATTAGGGTATCCTCCCATTGCTCCATTTTACTGCATGAAA
GAAGATGTCCTTGCTTATGTGTTTGACAGTGTATGGTGCAAGGTTGTGAGCTGTATGGAGCAGTTGACACGTAGT
CACTGGGAAGGATTGCTCTGATGATGAGAGTAATGTTGCAGTTACCAGACCCGATTGAGAAAGTTTCTGTGTG
CTGAGTGAACATACCTTTGGTGTACCGCGAGTGCCACAGTCTAAGGTGCTGTACATTACCTCAAATCCGATG
AGTCTCTGTCAAGCAAGCAGACATCAGCCAAATGTGAATGATCTCTTGGTTCATGGAATGCCTCTACAGCCAAGA
AATCTCTCCCTAATGGACAAGCTCCTAGATCTTGATGACAAGCTACTTATGAGGCCTGGGTCCAGTACCATCCTT
TCAACTCGAAATTGGCCAAATCGAGCTGTGGAGTTAGTACATCATCTCTGTCATACACAGTGCAGTCCACCAGG
AGACGCAATCCACCACCACGAACCTTTCATCCGATCAGCAGCAGGCAATTCATGTGCTGAAACACCAAGATCTGTG
GAAGAAATCCTCAGAGGAGCCCGAGTCCAGTGGCAGCCGACTCGCTCTCCTCTCCCTCACCAGCGCCCTGAGT
CGAAATAATCTGCTACCACCTATTGGCACAGCTGAAGTGAACATGTGAGCACTGTGGGGCCACAAAGACAGATG
AAACCCCATGGCGACTCTAGTCGAGCTCAAAGTGCAGGTGGTGAACCTAATATCAGCAGCCACAAGAAAGG
CTCCTTTTGGCCGACTTTTTTCCCCAGGCCCAACACAATCAATCATTTTGGTGGATACACAGTATCGTCGCTCA
TGTGCAAGTTGAGTATCCTCATCAGGCCGACCTGGCAGGGGATCTGCAGGTCTCAGTTACATGGGTCTACAAAA
TCTCAAAGCGGAGGCAGACCAGTCTCTCGAACCAGGCAGGGACCATTAAGGCAAATGAGAAGAATCTATCAGGCTG
CAGGAAACACGAGATTTTATGAAGCAGTATTCAGTCATCAAGTGATGCAGAGCTTGTATAGAAGATCGACTAGAA
ATCATCTTCATGAAGAGTGATTTTGGCACAAGTGACCGAAGAACAAAAACCCATAGCAGCCAAAAATGACATGAG
TGTTGTTTCTATCTCCAGTTACTGTCTCTTTTTCAGCAGAAATTAACCTATCCCATTTGGAAAGGCAAGTTTGTACCC
AAAGATGCAACAGTGAATAATACCCAAATCACTGCTCATGTTATCTCTTAACAATGATCAGTTCAATCATATAGG
ATTTGATGAGCTCACACATACAAAAAGCAGCAAAATCATCAGTGACAATATCACTGGCTTCAGAATACTTCAGC
CTGTGTTTCAATTTCTGGAGAGTTGTACTCAGTTTTAAGTCATTTTGTGTTGAAAACTGACCTCATCAATAGAT
GTCATTCTTAAACTCTCTTTAGATGTCCTACCCTATCAGCAGATTAAAAATGGAAGGGGTGTGTAATAAAAAACA
TAAATGTTAAGCATTAGTATAAAGTAACTTCTGTAATAAATTATATCGCATATTTTTTTCAGATAGGACAGCTCAA
CCTTACGATGCCTACCTGATGCCAGGTGATGCTTATTTTCTTCTTAAAGTAGGTTACTGGTCATATCTTTTTTCC
AAATATTAAATGCACCTTGCCAGATATTCTCCTGCAGCTCTAAGGAAAGGAAATCAATTTAAAAATAATTTGTAG
AATCTACTATTGAGCCACCAAAGTATAATCCCTAAAAGTTTAAAGAAACCTGGCAATTAATTCAGCATAAACAT
ATCCTATAAACAGCAGGAGAGGTTGAGCTTTCTGATTTTACTGTGGACCTTTTCTAAGGGCATTTCATGAATGCA
GCAACAGTTTTTAACTATGGCTTACATTTATTTTAAATTTTCACTAAATACAAATCTTGATTGTGTCATGCCAGTTTTA
GATCTTATTAATTTTTCAGAAATGGATAAATTCAAATAATCATAAATTACGGTAACCTTTTATTATACCAAGGTGTT
CTAATGCCATCATATGAAGACAGATGCTTCAAACAACCTGCATTAAATTATATTTTAAATAAAATTAATCTAT
TTTTAACCTATTTGTAGTCACAAACCGAAAACGTGTCGCTTTTACCTTAGAGCTAAAGGCTTACTTTATGCATAC
GGTATATTTAATAGTCTACAAATCAAAGATTTAAACAGTCCCTTAAAAATTCCATATATTTTCATACCAACTCAT
CTACATAGAAATGAAAATCTCTATTGTTCTCACAACCATTAACATGAGTTCACTATAACAACCTGGATCAATATG
GCTTGCCTTTTCAAAGTTAAAGAATCAGAAAGGGGCTGTGAAGAAGTCATTTAGCCCAATTCCCTCACCCTGTGTG
TTTTCCCTCAAAGCCAGTGCAATTTTTTTTTTAAACAAAAAACTGGACATGTTTAAATACATACAGTTTGACAAATT
TGGATTTCACTCTTTGTTTTGATGTAGTAACTCTTTTATAAAAGGGAACAGATTTCAGACAAGCTCAGTGGCCCAA
CTGAAGACATTTCAGCAATTAATGGCAGGACTTCAGTAATCAGTGGCAGGACTACAACATACATCTCTTCATGCTA
GGGAAACCAGGCTCTCTATTATAAAGCTGACCAGGGCTATTGTTTTCCCTTTTCTCTCATCTTAAACACCATTC
ATATTTTTCTTAGGTACATTTTGTAGGGATCATTTACAAAGCCCCCAGAACTTAATCATCATGTTTTACCTTTT
TTATTGAATTATATACACCTCTTACAAAAATGCTTGAAGTAATTTAACACCTGTACATCAGTACAAAACCTGGCT

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FIGURE 850B

GAGTAAATGAAGAGAGGATCTATTCAAGATCATTAAAGACCAAATGTAACTGGGAAGTATGTGGAAGATAGCTG
TCCAGCAAGTGTCTGGAAGGTGTTCTAGCTGGGTAGAGAGCCTATTCTAACAGACACGCACATCGCAGAAAGCAG
CATGAACAGAACCACATCCTAGATAAGAGTTCTGTGTACAGAAGATCCATGGAGGCAAGTGCTGTCAGGAAGGAC
ACTGCCCTCCCTCCACCCTCCCAAATGTCACCACCAAGTTCCTTCAGGTGAGACCTCACACAATGTCAAGTGCTTT
CTAGGAAATACTAAGATCAGGTGAGAGATTCTGCTTGGTCTAGTCAATCTGAAAAATTGAGGCTGGAAAGACAC
CTTTTCTCAAGAGCTGAATTGACTTTTGCCTTCAAATCCTGCCTGCACCTTGCCTACGATGGCATCAATTTACAC
CTAAGGACCTTTGAAGAGAAAAATTCCATTATTTCTTTTCTTTCTTGAGAGCAGATTTTTTCCCTCCTCCTTTGG
AAGATTTGCAGTACTTTGCTTCCATCTGAGCCAGAAAATTGTCCATTTCTTTTGGCGATCCTTTTGTCTGCTCT
GTTTGAGAAGTTAAACACAAGCTTTCACAACATTATCCATAGACAGAAAGTACCTAGTGTTGCCAGGGGCTGG
AAAAGTGGAATAACTACTAATGGGTATGGAGTTTTTTTTGGAATGGTGAAAATGTCCTACAATTGGTGTTAATAAT
TGTAATACTTTGTAAATACACTTAAACCACCAAATTGTACACTTTAAAAGGACAAATAGAAGGTATGCGGTTAT
GTCTTAAAAAGAAAACAAAATACAACATTCCAAAGAAAATATTAGCAGTAGGAATCAGATCATTAAAGATGTG
GCAACAAACTGCCAAGTTTACCTGAATGGCTGCCTTCAGGCTATCCACGCCTTCATCAAGCCCCAACTCCTTTCT
GCTCATTTCTGCTTCTTTGGCCTCTTCCTGAGCCTGAAACAGGAACCTCACATGAGACTCAGGGCCACCAGGAAAT
GCTTAAAAATACATACTCTTTCCCAAAGCAAATCTATAATTCTGTTTCAATTTTATGAATATATGAATAGACAAA
ATGAATCGAATTACATAACTATGTCATTCAATTAATGGCAACAATGCTGACAGCAAGCAGTAGATCCTCTGATTC
CAATTACCATTTGTTTTTTACCCAATTCTATTTGCTAGAGGTAGTAAGTACTCTGGCACTCATAAATCACATGAT
GATAAAAAGGAACATGAGGCCGGGTATGGTGGCTCACAACCTGTAATCCCCATACCTTGGGAGGCCAAGGTGGGAG
GATCACTTGAACCTCAGGAGTTCAAGACCTGCCTGGGTAACATAGTGAGACCTCAGTTCTATAAAAAAGAAAAGAA
ATGAGCCTGGTGTGGTGGCATGTGCTTGTAGTCCCAGCTACTAGGGAGGCTGAGGTGGGAAGATGGCTTCAGTCT
GAGAGTTCAGGCTGCAATAAGCTGTGATCATGCCTCTGCACTCCAGCCTGGGTGATGGAGATGCCATCTCTTAGA
AAAAAGAG

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FIGURE 851

GITKHALNHHPPPEKLEEISPTSDSHEKDTSSQSKSDITRESSFTSADTGNLSLAFPSYTGAGISTEGSSDFSWG
YGELDQNA TEKVQTMFTAIDELLYEQKLSVHTKSLQEECQQTASFPHLRILGRQIITPSEGYRLYPRSPSAVSA
SYETTLSQERDSTIFGIRGKKLHFSSSYAHKASSIAKSSSFCSMERDEEDSIIVSEGIIEEYLAFDHIDIEEGFH
GKKSEAATEKQKLGYPPIAPFYCMKEDVLAYVFDVWCKVVSCEQLTRSHWEGFASDDENVAVTRPDSESSCV
LSELHPLVLPRVPQSKVLYITSNPMSLCQASRHQPNVNDLLVHGMPLOPRNLSLMDKLLDLDKLLMRPGSSTIL
STRNWPNRAVEFSTSSLSYTVQSTRRRNPPPRTLHPISTSHSCAETPRSVEEILRGARVPVAPDSLSSPSPTPLS
RNNLLPPIGTAEVEHVSTVGPQRQMKPHGDSSRAQSAVVDEPNYQQPQERLLLPDFFPRPNTTQSFLDQTQYRRS
CAVEYPHQARPGRGSAGPQLHGSTKSQSGRPVSRTRQGP

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FIGURE 852A

GGAATAACAAAACATGCTCTTAACCATCATCCCCCTCCAGAGAAGCTGGAGGAAATTTCCCCCACCAGTGACAGT
CATGAGAAAGACACAAGTTCCCAAAGCAAGTCTGACATCACAAGAGAATCATCTTTTACATCAGCCGACACTGGG
AATTCAGTGTCTGCTTTTCCAAGTTATACAGGCGCAGGGATATCTACTGAAGGAAGCTCGGACTTCTCCTGGGGA
TATGGTGAACCTCGATCAAAATGCCACTGAAAAAGTCCAGACAATGTTTACAGCCATTGATGAACTCTTGTATGAG
CAGAAGTTGAGTGTGCATACCAAGAGTCTACAAGAAGAGTGCCAACAGTGGACAGCTAGCTTTTCTCACCTCAGG
ATTCTAGGTAGGCAGATAATCACTCCAAGTGAAGGTTATAGATTGTATCCTAGATCCCCTTCTGCTGTTTCCGCT
TCATATGAAACAACCTTGTCTCAAGAAAGAGATTCTACTATATTTGGTATAAGGGGAAAGAAGTTACATTTTTCA
TCTTCTTATGCTCATAAAGCATCTTCCATTGCCAAATCCTCCAGCTTTTGTCTATGGAAAGAGATGAGGAAGAC
TCTATAATCGTCTCAGAAGGAATAATTGAGGAATACCTAGCATTCGATCACATAGATATAGAAGAGGGATTTCAT
GGGAAGAAATCAGAAGCAGCTACAGAGAAACAGAAATTAGGGTATCCTCCATTGCTCCATTTTACTGCATGAAA
GAAGATGTCCTTGCTTATGTGTTTGACAGTGTATGGTGCAAGGTTGTGAGCTGTATGGAGCAGTTGACACGTAGT
CACTGGGAAGGATTTGCCTCTGATGATGAGAGTAATGTTGCAGTTACCAGACCCGATTGAGAAAGTTTCTGTGTG
CTGAGTGAACCTACATCCTTTGGTGTTACCGCGAGTGCCACAGTCTAAGGTGCTGTACATTACCTCAAATCCGATG
AGTCTCTGTCAAGCAAGCAGACATCAGCCAAATGTGAATGATCTCTTGGTTCAATGGAATGCCTCTACAGCCAAGA
AATCTCTCCCTAATGGACAAGCTCCTAGATCTTGATGACAAGCTACTTATGAGGCCTGGGTCCAGTACCATCCTT
TCAACTCGAAATTGGCCAAATCGAGCTGTGGAGTTTAGTACATCATCTCTGTCTACACAGTGCAGTCCACCAGG
AGACGCAATCCACCACCACGAACCTCTTCATCCGATCAGCAGCAGCCATTGATGTGCTGAAACACCAAGATCTGTG
GAAGAAATCCTCAGAGGAGCCCGAGTCCAGTGGCACCCTGCTCTCCTCTCCCTCACCGACGCCCCCTGAGT
CGAAATAATCTGCTACCACCTATTGGCACAGCTGAAGTGGAACATGTGAGCACTGTGGGGCCACAAAGACAGATG
AAACCCCATGGCGACTCTAGTCGAGCTCAAAGTGCGGTGGTGGATGAACCTAACTATCAGCAGCCACAAGAAAGG
CTCCTTTTGCCGACTTTTTTCCCCAGGCCCAACACAACCTCAATCATTTTTGCTGGATACACAGTATCGTCGCTCA
TGTGCAGTTGAGTATCCTCATCAGGCCCCGACCTGGCAGGGGATCTGCAGGTCCTCAGTTACATGGGTCTACAAAA
TCTCAAAGCGGAGGCAGACCAGTCTCTCGAACCAGGCAGGGACCATAAGGCAAATGAGAAGAATCTATCAGGCTG
CAGGAAACACGAGATTTTCATGAAGCAGTATTCAGTCATCAAGTGATGCAGAGCTTGTATAGAAGATCGACTAGAA
ATCATCTTCATGAAGAGTGATTTTGGCACAAAGTGACCGAAGAACAAAAACCCATAGCAGCCAAAAATGACATGAG
TGTTGTTTCTATCTCCAGTTACTGTCTCTTTTCAGCAGAAATTAACCTATCCCATTGGAAAGGCAAGTTTGTACCC
AAAGATGCAACAGTGAATAATACCCAAATCACTGCTCATGTTATCTCTTAACAATGATCAGTTCAATCATATAGG
ATTTGATGAGCTCACACATACAAAAAGCAGCAAAATCATCAGTGACAATATCACTGGCTTCAGAATACTTCAGC
CTGTGTTTCAATTTCTGGAGAGTTGTACTCAGTTTTAAGTCATTTTGTGTTGAAAATCTGACCTCATCAATAGAT
GTCATTCTTAAACTCTCTTTAGATGTCCTACCCTATCAGCAGATTAAAAATGGAAGGGGTGTGTAATAAAAAACA
TAAATGTTAAGCATTAGTATAAAGTAACTTCTGTAATAAATTATATCGCATATTTTTTTCAGATAGGACAGCTCAA
CCTTACGATGCCTACCTGATGCCAGGTGATGCTTATTTTTCTTCTTAAAGTAGGTTACTGGTCATATCTTTTTTCC
AAATATTAATGACCTTGCCAGATATTCTCCTGCAGCTCTAAGGAAAGGAAATCAATTTAAAAATAAATTTGTAG
AATCTACTATTGAGCCACCAAAGTATAATTCCCTAAAAGTTTAAAGAAACCCTGGCAATTAATTCAGCATAAACAT
ATCCTATAAACAGCAGGAGAGGTTTCACTTTTCTGATTTTACTGTGGACCTTTTCTTAAGGGCATTTCATGAATGCA
GCAACAGTTTTTAACTATGGCTTACATTTATTTTTAAATTTCACTAAATACAAATCTTGATTGTCATGCCAGTTTTA
GATCTTATTAATTTTTCAGAAATGGATAAATTCAAATAATCATAAATTACGGTAACTTTTTATTATACCAAGGTGTT
CTAATGCCATCATATGAAGACAGATGCTTCAAACAACCTGCATTAAATATATTTTTTAATAAAATTAATAATCTAT
TTTTAACCTATTTGTAGTCACAAACCGAAAACGTGTCGCTTTTACCTTAGAGCTAAAGGCTTACTTTATGCATAC
GGTATATTTAATAGTCTACAAATCAAAGATTTAAACAGTCCCTTAAAAATTCATATATTTTTCATACCAACTCAT
CTACATAGAAATGAAAATCTCTATTGTTCTCACAACCATACCATGAGTTCACTATAACAACCTGGATCAATATG
GCTTGCCCTTCAAAGTTAAAGAATCAGAAAGGGGCTGTAAAGAGTCATTTAGCCCAATTCCTCACCCTGTGTG
TTTTCCCTCAAAGCCAGTGCAATTTTTTTTTTAAACAAAAAACTGGACATGTTTAAATACATACAGTTTGACAAAT
TGGATTTCACTCTTTGTTTTGATGTAGTAACTCTTTTATAAAAGGGAACAGATTCAGACAAGCTCAGTGGCCCAA
CTGAAGACATTGAGCAATTAATGGCAGGACTTCAGTAATCAGTGGCAGGACTACAACATACATCTCTTCATGCTA
GGGAAACCAGGCTCTCTATTATAAAGCTGACCAGGGCTATTGTTTTCCCTTTTCTCTCATCCTAAACACCATTTC
ATATTTTTCTAGGTCACATTTTAGTGGGATCATTTACAAAGCCCCCAGAACTTAATCATCATGTTTTACCTTTT
TTATTGAATTATATACACCTCTTACAAAATGCTTGAAGTAATTTAACACCTGTACATCAGTACAAAACCTGGCT

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FIGURE 852B

GAGTAAAATGAAGAGAGGATCTATTCAAGATCATTAAAGACCAAATGTAAACTGGGAAGTATGTGGAAGATAGCTG
TCCAGCAAGTGTCTGGAAGGTGTTCTAGCTGGGTAGAGAGCCTATTCTAACAGACACGCACATCGCAGAAAGCAG
CATGAACAGAACCACATCCTAGATAAGAGTTCTGTGTACAGAAGATCCATGGAGGCAAGTGCTGTCAGGAAGGAC
ACTGCCTCCCTCCACCCTCCCAAATGTCACCACCAAGTTCCTTCAGGTGAGACCTCACACAATGTCAAGTGCTTT
CTAGGAAATACTAAGATCAGGTTGAGAGATTCTGCTTGGTCTAGTCAATCTGAAAAATTCAGGCTGGAAAGACAC
CTTTTCTCAAGAGCTGAATTGACTTTTGCCTTCAAATCCTGCCTGCACCTTGCCTACGATGGCATCAATTTACAC
CTAAGGACCTTTGAAGAGAAAAATTCCATTATTTCTTTCTTTCTTGAGAGCAGATTTTTTCCCTCCTCCTTTGG
AAGATTTGCAGTACTTTGCTTCCATCTGAGCCAGAAAAATTGTCCATTTCTTTTGGCGATCCTTTTGTCTGCTCT
GTTTGAGAAGTTAAAACACAAGCTTTCACAACATTATCCATAGACAGAAAGTACCTAGTGGTTGCCAGGGGCTGG
AAAAGTGGATAACTACTAATGGGTATGGAGTTTTTTTGGGAATGGTGAAAATGTCCTACAATTGGTGTTAATAAT
TGTAAAACTTTGTAAATACACTTAAAACCACCAAATTGTACACTTTAAAAGGACAAATAGAAGGTATGCGGTTAT
GTCTTAAAAGAAGAAAACAAAATACAACATTCCAAAAGAAAATATTAGCAGTAGGAATCAGATCATTAAAGATGTG
GCAACAACTGCCAAGTTTACCTGAATGGCTGCCTTCAGGCTATCCACGCCTTCATCAAGCCCCAACTCCTTTCT
GCTCATTCTGCTTCTTTGGCCTCTTCCTGAGCCTGAAACAGGAACTCACATGAGACTCAGGGCCACCAGGAAAT
GCTTAAAATACATACTCTTTCCCAAAGCAAATCTATAATTCTGTTTCAATTTTATGAATATATGAATAGACAAA
ATGAATCGAATTACATAACTATGTCATTCAATTAAATGGCAACAATGCTGACAGCAAGCAGTAGATCCTCTGATT
CAATTACCATTTGTTTTTTACCCAATTCTATTTGCTAGAGGTAGTAAGTACTCTGGCACTCATAAATCACATGAT
GATAAAAAGGAACATGAGGCCGGGTATGGTGGCTCACAACCTGTAATCCCATACCTTGGGAGGCCAAGGTGGGAG
GATCACTTGAACCTCAGGAGTTCAAGACCTGCCTGGGTAAACATAGTGAGACCTCAGTTCTATAAAAAAGAAAAGAA
ATGAGCCTGGTGTGGTGGCATGTGCTTGTAGTCCCAGCTACTAGGGAGGCTGAGGTGGGAAGATGGCTTCAGTCT
GAGAGTTCAGGCTGCAATAAGCTGTGATCATGCCTCTGCACTCCAGCCTGGGTGATGGAGATGCCATCTCTTAGA
AAAAAGAG

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FIGURE 853A

GCGGCGGTGCGGCCAGGCTGCAGCTGAGCGCTCTGCGCGGCGCAGCCGGGTCTCCCGCGTGTAACACGCCGTGA
CAGGTGCAGAGTCCGGGCTGAGGACCCACCTGCAGCCGCCGCCGCGATGCCACCATGCGGAGGACCGTGTCCGA
GATCCGCTCGCGCGCCGAAGGTTATGAGAAGACAGATGATGTTTCAGAGAAGACCTCACTGGCTGACCAGGAGGA
AGTAAGGACTATTTTCATCAACCAGCCCCAGCTGACAAAATTCTGCAATAACCATGTCAGCACTGCAAAAATACAA
CATAATCACATTTCCTTCCAAGATTTCTCTACTCTCAGTTTCAAGAGCTGCTAATTCATTTTTTCTCTTTATTGTC
ACTGCTGCAGCAAATACCTGATGTGTACCAACAGGTGCTTATACAACACTGGTTTCTCTCTTATTTATTGTC
TGTGGCAGCTATCAAAGAGATAATAGAAGATATTAACGACATAAAGCTGATAATGCAGTGAACAAGAAACAAAC
GCAAGTTTTGAGAAATGGTGTCTGGGAAATTGTCCACTGGGAAAAGGTGGCAGTAGGGGAGATAGTGAAAGTGAC
CAATGGGGAACATCTCCAGCAGATCTCATCAGTCTGTCTCAAGTGAGCCCCAAGCCATGTGCTACATTGAAAC
ATCCAACCTTAGATGGTGAAACAACTTGAAAATTAGACAGGGCTTACCAGCAACATCAGATATCAAAGACGTTGA
CAGTTTGATGAGGATTTCTGGCAGAATTGAGTGTGAAAGTCCAAACAGACATCTCTACGATTTTGTGGAACAT
AAGGCTTGATGGACATGGCACCCTTCCACTGGGAGCAGATCAGATTCTTCTTCGAGGAGCTCAGTTGAGAAATAC
ACAGTGGGTTTATGGAATAGTTGTCTACACTGGACATGACACCAAGCTGATGCAGAATTCAACAAGTCCACCCT
TAAGCTCTCAAATGTGGAACGGATTACAAATGTACAAATTTTGATTTTATTTTGTATCTTAATTGCCATGTCTCT
TGTCTGTTCTGTGGGCTCAGCCATTTGGAATCGAAGGCATTCTGGAAAAGACTGGTATCTCAATCTAAACTATGG
TGGCGCTAGTAATTTTGGACTGAATTTCTTGACCTTCATCATCTTTTCAACAATCTCATTCTATCAGCTTATT
GGTTACATTAGAAGTTGTGAAATTTACCCAGGCATACTTCATAAATTGGGATCTTGACATGCACTATGAACCCAC
AGACACTGCTGCTATGGCTCGAACATCTAATCTGAATGAGGAAGTGGCCAGGTTAAATACATATTTTCTGACAA
AACTGGTACTCTGACATGCAATGTAATGCAGTTTAAAGAGTGACCATAGCGGGAGTTGCTTATGGCCATGTCCC
TGAACCTGAGGATTATGGCTGCTCTCTGATGAATGGCAGAACTCACAGTTTGGAGATGAAAAACATTTAGTGA
TTCATCATTGCTGGAAAATCTCCAAAATAATCATCCAACCTGCACCTATAATATATGAATTTCTTACAATGATGGC
AGTCTGTACACAGCAGTGCCAGAGCGAGAAGGTGACAAGATTATTTATCAAGCAGCATCTCCAGATGAGGGAGC
ATTGGTCAGAGCAGCCAAGCAATTGAATTTGTTTTCTGGAAGAACACCCGACTCGGTGATTATAGATTCACT
GGGGCAGGAAGAAAGATATGAATTGCTCAATGTCTTGGAGTTTACCAGTGCTAGGAAAAGAATGTCAGTGATTGT
TCGCACTCCATCTGGAAAGTTACGACTCTACTGCAAAGGAGCTGACACTGTAATTTATGATCGACTGGCAGAGAC
GTCAAAATACAAAGAAATTACCCTAAAACATTTAGAGCAGTTTGCTACAGAAGGGTTAAGAACTTTATGTTTTGC
TGTGGCTGAGATTTTCAAGAGAGCGACTTTCAGGAGTGGCGAGCAGTCTATCAGCGAGCATCTACATCTGTGCAGAA
CAGGCTACTCAAACCTCGAAGAGAGTTATGAGTTGATTGAAAAGAATCTTCAGCTACTTGGAGCAACAGCCATTGA
GGATAAATTACAAGATCAAGTGCCTGAAAACCATAGAAACGCTAATGAAAGCAGACATCAAAATCTGGATCCTTAC
AGGGGACAAGCAAGAAACTGCCATTAACATCGGACACTCCTGCAAACCTGTTGAAGAAGAACATGGGAATGATTGT
TATAAATGAAGGCTCTCTTGATGGAACAAGGGGAACTCTCAGTCGTCAGTGTACTACCCTTGGTGATGCTCTCCG
GAAAGAGAATGATTTTGCTCTTATAATTGATGGGAAAACCTCAAATATGCCTTAACCTTTGGAGTACGACAGTA
TTTCTGGACTTAGCTTTGTATGCAAAAGCTGTCAATTTGCTGTGCGGGTTTCTCCTCTTCAAAAATCTGAAGTTGT
TGAGATGGTTAAGAAACAAGTCAAAGTCGTAACGCTTGCAATCGGTGATGGAGCAAATGATGTCAGCATGATACA
GACAGCGCACGTTGGTGTGGTATCAGTGGCAATGAAGGCCTGCAGGCAGCTAATTCCTCTGACTACTCCATAGC
TCAGTTCAAATATTTGAAGAATTTACTGATGATTGATGTTGCTGCTGAGATCTGGTTTGCCTTTGTTAATGGCTTTTCTGGACA
GATCCTCTTTGAAAGATGGTGTATAGGTCTCTATAACGTGATGTTTACAGCAATGCCTCCTTTAACTCTTGGAAT
ATTTGAGAGATCATGCAGAAAAGAGAACATGTTGAAGTACCCTGAATTATACAAAACATCTCAGAATGCCCTGGA
CTTCAACACCAAGGTTTTCTGGGTTCAATTGTTTAAATGGCCTCTTCCACTCAGTTATTCTGTTTTGGTTTCCACT
AAAAGCCCTTCACTATGGTACTGCATTTGAAAATGGGAAAACCTCGGATTATCTGCTACTGGGAACTTTGTGTA
CACTTTTGTGGTGATAACTGTGTGTTTGAAGCTGGATTGGAGACATCATATTGGACATGGTTTCAAGCCACATAGC
GATATGGGGGAGCATCGCACTCTGGGTGGTGTGTTTGGGAATCTACTCATCTCTGTGGCCTGCCATTCCGATGGC
CCCTGATATGTGAGGAGAGGCAGCCATGTTGTTCAAGTCTGGAGTCTTTTGGATGGGCTTGTATTTCATCCCTGT
GGCATCTCTGCTCCTTGATGTGGTGTACAAGGTTATCAAGAGGACTGCTTTTAAACATTGGTTCGATGAAGTTCA
GGAGCTGGAGGCAAATCTCAAGACCCAGGAGCAGTTGTACTTGGAAAAGCCTGACCGAGAGGGCGCAACTGCT
CAAGAAGCTCTTTAAGAAGAACCAGTGAACCTGTACCGCTCTGAATCCTTGCAACAAATCTGCTCCATGGGTA
TGCCTTCTCTCAAGATGAAAATGGAATCGTTTACAGTCTGAAGTGATAAGAGCATATGATACCACGAAACAGAG

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FIGURE 853B

GCCCCACGAATGGTGATGGGGAGAGCCTGAAAGGCAGGCTCTGTTACCTCTCTAAGGAGAGCTACCAGGTTGTCA
CCGCAGTCTGCTAACCAATTCCAGTCTGGTCCATGAAGAGGAAAGGTAGATCTGAGCTCATCTCGCTGATGGACA
TTCAGATTTCATGTATATTATAGACATAAGCACTGTGCAACTGTACTGTAACACCATCTCTTTTGGATTTTTTTAA
GGTATTTGCTAAGTCTTTGTAAACGGAAATTGAAAATGACCTGGTATCTTGCCAGAGGGCTTTCTTAAACGGAGA
ATAAGTCAGTATTCTTATGCCATTACTGTGGGGCTGTAAGTACTGTAGTTCAGTTTATTGGCTGTACCACAAGGTAAC
CAACCATTAAAAAACTCTAAATGATATTTAGTTAAAGGGACTCTTGGTATCCAGACTTAGATTTTCAGGATATGCT
GAAACAAACCAGCATTCTTAAGGAACTGACTCACCTTCCTGAGCAAATTTCTAAACAAGCATTGTGTGCCAAAA
TTGCTCTTGATAAATGTTTGCCAAAGAGGTTTCAGTAAGTGTTTTTCTAGTTTCAGTAGTCATATGCCCAGAAATGTA
AGAGAAAGTTTACTTCCAGTTCCGCTGTAAGATCTGCATGCCTGACTTTCCAAATGTAAGAGTGATTTACAAAAA
TGAATATTTCAAGGCATTTGCTACTAAAAATCGGTGATGTTGCACCTTTGGCCTTACAAATGCTTCTTTGTTGTTT
GTCGTGTTTTATTTGTTAGAGGACACACGTGTTAATGTGACTCTGTTGTTATGACACTGATTTTTCAAACATGTA
TGTTTCAGGTATTTCTGATGAAGTTTCATCATCATTTAGATTTTTCTAAAAATCTGGCTAATGCAGTAGATTGAG
TGAITGCATTTTTGTCTTAAAGTTTTTCCCTCTTAAGAAACATATGCTACGTATTTACGTGGGATTTCCAAAGCTTC
TGTTGCAATATTTGGAATAACATGTCAGATAAATGCATGGGCTTTTGTCTGTGTTCCAGTTCCCACTAGAGATG
CCTGTGCTTGTGTAGCACACCCAGTGTTATGGTGACTGCCCCCTATACTGAAGACTGAAAATTATTTTCACAGTT
CACTCATCAAATAGTTCCCAAATTCGTCCATGCTGCTTATTGGGACAAATAGGTAGTACATTTTCCCCATTTA
AAAAATGCGGATTTTACTCAGGCCGGTAACTTACAGTCAGAGGACACGTTTCATCATGAGTAGCTTTTGTTAGTA
TGTTTTAAATGTATCTTCAGTTCAATTATTTTCAGCATTTACAAGACATCTGAAAATGGCTATTTTGCTACCAA
CAGTAAATGAAGGGGCTGTTTAAAAACCACAACCAGTTTTCTACACTATTTTTTAAATAATACTTTTCAATTTGAAA
AAAAGGAATTAGTTTTTCAGATACACTTCAGAGATTGAAGCAAATATTTGCCTTTTACTCAAAGCCTGCTTGCC
TTTACATGGACTTACCAGCAAAATAGGTAGAACTTTCTCTTTTAAAAAAGTCAACTAGAAATTGAGAAGAGGTGA
TTTTTTTTTCAGATCGCTTCTCGAGTTTAATATTTTCACATTCCTTTTACCCTTTTTCTCAATCTAGATTTAAAT
TAGGATATATGTCATTTTCTTGTCTGTATTTGTAGCTCCTTAGTTACCAGTATGCCTCTCCATTTTCTACAAATA
AGAGGTTATAACACATATACATAATTCTAACCTTAAGGGAACACACGTTTACATACTTTACTTCCCAAGCCCTTC
CTGTTTGGGGTACAGATTGAGAGAGTCATGAATCAACACATCTAGCAAGACCACAGGTGTAAGAGTCTAAGATCG
TCTTCAAATTTCTGAAGTCCCAGTCTTTACCTGTCCAGTGAATGAATATTCAGAGCAGCTTTTCTGGGGCTTCCC
AGTGGTGATAGCTGAGGTCAAACCACAAAAAATAAGAAAGCAAGAGTGAAATGCACCCCTCCAGAGAAAACATTT
GTAGTGTTTAATTCTGTTAATAGAGAAGAGCTGCTTCTGTTTGCCTCACTTCATCAGTGGCACCCCTTCTGCAGA
ATTTTAAATATAAAAAACATTATGGATATAATAGAAGTGGATTTTCTGACTTAAAAATGTAAGTTTATTTAATCT
TGAAACGTGGATTGTTTCTGTGGAGCTCTTAAACATGAGAAGAATACTTACGGTTGATAATGTGTAACATGATCT
GAAATGTGACTAATTTGAGCCTCTTTGTCCCATCGTCCTGTTTTTGAATTATTGACATTGTCAGTCTCTTTGCTT
CCTGGGTGAGACTTGGGGTTTGGGGACAGGGAATGACCTTCTTGGTGAAACTTAAAAATATAACATTGCAATTGC
AGTGACTTTACAGTGTTAAATTAGAGAAAATAGTCTGATTTTTTAAACCTTCCTTAACTGGAAAAAGTCACATG
GTTTTACCAGGATTGAAATAAACAGTCAATGTGACTTTTAAACATGTGTTTTTTTGAATAAAGGGCACGTACTCT
TCAATTAATAAAGTTCCCTATAGGGACTCTGGCAAATGCTAACACAGTTGCTTTACAATGTTTACAATTCAGACAA
TACGACTTATAATAGAAAATCCTCATTCATTTAGCATTGAAAAGCTGGAAGTTGCTTCTTAAATGTTGAATAGTA
TACAGTGTTATTGAGCATGGACTTTCTAAATGTTTTATATATACATATAAAAAATATATTGGTGTCTCACACCCAG
AAAGATGTTATATTGTAGATATTATTAGGAAAACAGTGTTTCTCAGGAACGTTGTAAATTTTAAATGATATATGT
ACTTCCCGTCTCCACCTCCACTCTGTGCTCTAATGTGAGACTGCTTCAGCAGTGTTGCTAAGTTAATGGAAAA
CTTTTTCTAATCAAGTCAGGTGAATGTGTATTCTGCTAAATAATGTTAGCCATTTACATGAATTGTATGGTCATT
AAATGGAATCAGTGATTCTCTTTAATTTCCAGAGGGGAAATGAATTATGGAAATCAGTCAGCATTCTGATCATT
AAATTTTATACTTTAATTTTGCCGTTTCAGCATTCTAAATATCCAATGTGAAAGTCACATGATAATTTGTTTTGCA
TTGCGTGCCTGTACAACACTTACAACCTTGTCATTTAAATGTTTTCTCGGGAAATGAATGCTAGTCAGAAAGTA
ATAGATTGTATTATTCATAGTTTTTAAATTTATGACAATGTCATAATTACTACAAAGCTAAATAATCGTGTATT
TTTGTGCAGTTGCCCTTTGATAGTTTCTGTTTTTAAACCTATTAAGTGATAATCTTACAAATAGTCATCTACA
AAATTTATGGAGAAAGTGCCAGCCCATTCACATCACATGGACCAGGAATTTCTTTGTAAATGACTTAAGGTAAC
ATCATGCAGTTCAGTGCTAATAAATGCTTTTTTAAATGATGAGCATTCTTATAATGACTCGTAAGATACCATAGTC
TGATTTTTCTCACATTAATAAATACTGAAGTCACTTGTGTAACGTAGTTATACTTTGCTGCATTTTAAATTAACCTT

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FIGURE 853C

CAACAGCTATTAAAGTGGAATGTAAGTTAAATTTTGAAGGAAAGGAAATAAATGTTTTCCATATTTTCGTCTTGAT
TTACTTTCTGTATGAGAACAGCTGTGTTTTTGATAGGTTTATGGTTTGCATGAGTTCATATTTAAAGTGATCCAG
GCCAATGCATGGCTATTGCTGTAAATCTTGATGTTTATTTCTGCCTTGTAAGTTCTATCACGGCCTACCTGGAA
TTTAAAATTTCAGTAGACAAATTAATTGGTCCTCTGCACAACCTTTTTTAATAAGTAGATTATTTTACAAAGAAATT
TGAACAAATTTAATTGAATCTTTTGTTTAGCTTGCCTCTAAGAACCTTTTCTTAATAAAGCTCCCAAACTTCTCA
GCAAATAAATCTCCCTTAAGTAGGAAAACCTAGATTTTCATATTTGCTTACTTTGAATTAACAGCAACTTTCCACAG
GTAAATCTGTTCTTGCAAAGATGTGAGCAGAATAGTTAAAAATAATATTTTTATGTTTCATGGTTCTAAATGGAA
GCCATAAATGCAGTAAATACTATCTGTTGTTTAACTACTTTAATCGTCATTTTTTACATTTTCAAGTTTATTAGG
TTAAGAAAAACAGGGCAGCCTTGGAAGGCAGCTACTACAGAAAACCTGCAGTTTTGCGTTAAAGATAAAGTAGTAT
TTTCAGCTCCCTGAAAAACCATTCTGCTGAAACTGCTGTAGAAATTGTGAAGCTGCATGAGTGGAGAGTATTGA
ATCTGTGGTTATAGTAGTTTTCTCAGGTTTGTTTATCTTGATGTTTGATGCACTGTGTTTTATAGTTATTAAAT
TGAGTAATATTATTTCTATGCAGTGTTATGTGTCATTGGCCTTTTGTGAATGTGCATGTTTTAAACTGCAATTT
TAAACATTTTGTCTCTAATTGTTATTAAAAATGAAATAAAGCTTACCATTACTTAAAAAAA

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FIGURE 854

MPTMRRTVSEIRSRAEGYEKTDVSEKTSADQEEVRTIFINQPQLTKFCNNHVSTAKYNIITFLPRFLYSQFRR
AANSFFLFIALLOQIPDVSPGTGRYTTLVPLLFILAVAAIKEIIEDIKRHKADNAVNNKKQTQVLRNGAWEIVHWEK
VAVGEIVKVTNGEHLPADLISLSSSEPQAMCYIETSNLDGETNLKIRQGLPATSDIKDVDSLMRISGRIECESPN
RHLYDFVGNIRLDGHTVPLGADQILLRGAQLRNTQWVHGIVVYTGHDTKLMQNSTSPPLKLSNVERITNVQILI
LFCILIAMSLVCSVGSIAWNRHSGKDWYLLNLYGGASNFGNFLTFIILFNNLIPISLLVTLEVVKFTQAYFIN
WDLDMHYEPTDTAAMARTSNLNEELGQVKYIFSDKTGTLTCNVMQFKKCTIAGVAYGHVPEPEDYGCSPDEWQNS
QFGDEKTFSDSSLENLQNNHPTAPIIYEFLTMMAVCHTAVPEREGDKIIYQAASPDEGALVRAAKQLNFVFTGR
TPDSVIIDSLGQEERYELNVLLEFTSARKRMSVIVRTPSGKLRLYCKGADTVIYDRLAETSKYKEITLKHLEQFA
TEGLRTLCFVAEISESDFQEWRAVYQRASTSVQNRLKLEESYELIEKNLQLLGATAIEDKLQDQVPETIETLM
KADIKIWILTGDKQETAINIGHCKLLKKNMGMIIVINEGSLDGTRETLRHCCTTLGDALRKENDFALIIDGKTLK
YALTFGVRQYFLDLALSCKAVICCRVSPLQKSEVVEMVKKQVKVVTLAIGDGANDVSMIQTAVGVGSGNEGLQ
AANSSDYSAQFKYLKNLLMIHGAWNNRVSKCILYCFYKNIVLYIIEIWFAFVNGFSGQILFERWCIGLYNVMF
TAMPPLTLGIFERSKRKENMLKYPELYKTSQNALDFNTKVFVWHCLNGLFHSVILFWFPLKALQYGTAFNGKTS
DYLLLGNFVYTFVVIITVCLKAGLETSYWTWFSHIAIWGSIALWVFLGIYSSLWPAIPMAPDMSGEAAMLFSSGV
FWMGLLFIPVASLLLDVVYKVIKRTAFKTLVDEVQELEAKSQDPGAVVLGKSLTERAQLLKNVFKKNHVNLYRSE
SLQQNLLHGYAFSQDENGIVSQSEVIRAYDTTKQRPDEW

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FIGURE 855

CGACGCGGGAGCCGCACGCGCCGGACGAGGCTCGCTGCGCTCCCTGTTGCCAGCGCGGGCCCGTTGAGGCGGAG
CCCTCAGTTCCCGGCCAGGACACGGTCTGGGCCGCCGAATCTCCGGCCGAAGAGCGGCGGGCGGCAGCGGCGGGAA
AAAAATGAAGAATGAAATTGCTGCCGTTGTCTTCTTTTTCACAAGGCTAGTTCGAAAACATGATAAGTTGAAAAA
AGAGGCAGTTGAGAGGTTTGCTGAGAAATTGACCCTAATACTTCAAGAAAAATATAAAAAATCACTGGTATCCAGA
AAAACCATCGAAAGGACAGGCCTACAGATGTATTTCGTGTCAATAAATTTTCAGAGAGTTGATCCTGATGTCCTGAA
AGCCTGTGAAAAACAGCTGCATCTTGTATAGTGACCTGGGCTTGCCAAAGGAGCTCACTCTCTGGGTGGACCCATG
TGAGGTGTGCTGTCGTAGAGATGGGGTTTCACCATGTTGGCCAGACTGCTCTCAAACCTCTGACCTCGTGATCCG
CCCGCCTTGGCCTCCCAAAGCGCTGGATTACAGGCGTGAGCCACTGCGCCCCGGCCTCCTCCTTTTTTGATTATGTA
TGGAGAGAAAAACAATGCATTCAATTGTTGCCAGCTTTGAAAATAAAGATGAGAACAAGGATGAGATCTCCAGGAA
AGTTACCAGGGCCCTTGATAAGGTTACCTCTGATTATCATTTCAGGATCCTCTTCTTCAGATGAAGAAACAAGTAA
GGAAATGGAAGTGAAACCCAGTTCGGTGACTGCAGCCGCAAGTCCTGTGTACCAGATTTTCAGAACTTATATTTCC
ACCTCTTCCAATGTGGCACCCTTTGCCAGAAAAAAGCCAGGAATGTATCGAGGGAATGGCCATCAGAATCACTA
TCCTCCTCCTGTTCCATTTGGTTATCCAAATCAGGGAAGAAAAATAAACCATATCGCCCAATTCAGTGACATG
GGTACCTCCTCCTGGAATGCATTGTGACCGGAATCACTGGATTAATCCTCACATGTTAGCACCTCACTAACTTCG
TTTTTGATTGTGTTGGTGTCATGTTGAGAAAAAGGTAGAATAAACCTTACTACACATTAAAAGTTAAAAGTTCTT
ACTAATAGTAGTGAAGTTAGATGGGCCAAACCATCAAACCTATTTTTATAGAAGTTATTGAGAATAATCTTTCTT
AAAAATATATGCACTTTAGATATTGATATAGTTTGAGAAATTTTATTAAAGTTAGTCAAGTGCCTAAGTTTTTA
ATATTGGACTTGAGTATTTATATATTGTGCATCAACTCTGTTGGATACGAGAACCCTGTAGAAGTGGACGATTTG
TTTTAGCCCTTTGAGAATTTACTTTATGGAGCGTATGTAAGTTATTTATATACAAGGAAATCTATTTTATGTCG
TTGTTTAAAGAGAATTGTGTGAAATCATGTAGTTGCAAATAAAAAATAGTTTGAGGCAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAA

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FIGURE 856

MKNEIAAVVFFFTRLVRKHKDLKKEAVERFAEKLTLILQEKYKNHWYPEKPSKGQAYRCIRVNKFQRVDPDVLKA
CENSCILYSDLGLPKELTLWVDPCEVCCRRDGVSPCWPDSCQTPDLVIRPPWPPKALDYRREPLRPASSFLIMYG
EKNNAFIVASFENKDENKDEISRKVTRALDKVTSDYHSGSSSSDEETSKEMEVKPSSVTAAASPVYQISELIFPP
LPMWHPLPRKKPGMYRGNGHQNHYPVPVFGYPNQGRKNKPYRPIPVTWVPPPGMHCDRNHWINPHMLAPH

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FIGURE 857

AATTTGGGGCCAAGATTAAACACCCCTCCTGCAGGAGGAAGACAGCCACCAGCGGCTGCTCATGGGGCTGATGGTG
TCTGAGCTAAAAGACCATTTTTTGAGACACCTACAGGGTGTAGAAAAGAAGAAAATTGAACAGATGGTTCTGGAC
TACATTTCAAACCTGCTGGATCTCATTGCCACATCGTAGAAACCAATTGGAGGAAACATAATCTTCATTCCCTGG
GTTCTCCACTTCAATAGTCGTGGCAGTGCTGCTGAATTTGCAGTTTTTTCACATCATGACCAGGATTCTGGAAGCT
ACAAACAGTTTGTTTTTACCTCTGCCTCCTGGTTTTTCATACTCTGCACACCATCCTCGGGGTCCAGTGCTCTCCCT
TTGCATAACCTGCTGCATTGCATTGACAGTGGAGTGTGTGCTTCTCACTGAAACAGCTGTGCATAAGGCTCATGAAA
GATCTGGATAATACAGAGAAAAATGAAAACTGAAATTCAGTATCATTGTGCGGCTTCTCCGCTTATTGGGCAG
AAGATTTGTAGACTTTGGGATCATCCTATGAGTTCTAACATCATTTCGCGGAACCACGTGACGCGACTGCTTCAG
AACTATAAGAAACAGCCTCGGAATTCTATGATTAAACAAGTCATCGTTCAAGTGTAGAAATTTCTGCCTCTGAACTAC
TTCATTGAAATTTCTGACAGATATAGAGTCCTCCAATCAAGCCCTGTATCCTTTTGAAGGACATGACAATGTGGAT
GCAGAATTTGTAGAGGAAGCAGCTCTGAAACACACCGCGATGCTTTTAGGCTTATGAAAAAGAAAACGCAATTGG
ATCTGCTGCTGCCATTTTAACTTTGCTCATTAACTTACTCCTCTGAGAATTTCTTAACAATATTTAAAATTGGT
AACAAAAATAGTTTAGCCATAATTGTTTAGCCATGTGAGTTTCAGGTTGGTACACGTTTACAGACAGAACTGCTGTA
TCACATTCCAATTTTGAATAGCCAGTGAGCAATCAAGTGTAGAGAAATGATAAATGGCCTAAGAAGGCATACAGT
GGCATAAACGATGCTCTTCCTAGTAGCTTAATAGGCCACAAGCTAGTTTCTGTTGCACTCTGAAATAAAATATGC
TTTAAAAATGTAGGGAACAGTGCTTAGAAAAGCAAAAACCTAGGTGTGTCATTGAAATAATAGGCATAAAAAATTAA
ATGTTACATAAGAACACTATTTGGAAAGAGGGTCCTTTTAAAACTGAATTTGTACTAAATCAGATTTGCCATGT
CCCAGTCCAGAATAATTTGTACTTAGTATTTGCAGCAGGGTTTGTCTTTGTGAATTCAGATGAAACATATTTATT
TTTTTTTATTTATAAAAGGTTGATTTAGGAATATTTTGTGAGTCATTAAAAAACCTGAAACATAAAAAAAAAA
AAAAAAA

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FIGURE 858

NLGPRLTPLLQEEDSHQRLLMGLMVSELKDHFLRHLOGVEKKKIEQMVDYISKLLDLICHIVETNWRKHNLSW
VLHFNSRGSAAEFAVFHIMTRILEATNSLFLPLPPGFHTLHTILGVQCLPLHNLLHCIDSGVLLLTETAVIRLMK
DLNTEKNEKLKFSIIIVRLPPLIGQKICRLWDHPMSSNIISRNHVTRLLQNYKKQPRNSMINKSSFSVEFLPLNY
FIEILTDIESSNQALYPFEGHDNVDAEFVEEAALKHTAMLLGL

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FIGURE 859A

GGCCGCGAGTGCATCTTCCACGAACCTAATTCATCTCTCCAGCAAAGGACACATCTCTCCAGCAAAGGACACCTC
TCTCCAGCAAAGGACACCTGCAGAGATGTCCCCAGTCCTTCACTTCTATGTTTCGTCCCTCTGGCCATGAGGGGGC
AGCCTCTGGACACACTCGGAGGAACTGCAAGGGGAACTGCCAGAGCTGCAGGGCGTCGAGACTGAACTGTGCTA
CAACGTGAACTGGACAGCTGAGGCCCTCCCCAGTGCTGAGGAGACAAAGAAGCTGATGTGGCTGTTTGGTTGCC
CTTACTGCTGGATGATGTTGCTCGGGAGTCCTGGCTCCTTCTGGCTCCAATGACCTGCTGCTGGAGGTGCGGCC
CAGGCTGAACTTCTCCACCCCAACATCCACCAACATCGTGTCACTGTGCCGCGCCACTGGGCTGGGGCCTGTGGA
TCGTGTGGAGACCACCGCGCTACCGGCTCTCGTTTGGCCACCCCCCGTCAGCTGAGGTGGAAGCCATTGCTCT
GGCTACCCTGCACGACCGGATGACAGAGCAGCACTTCCCCATCCCATCCAGAGTTTCTCCCCTGAGAGCATGCC
GGAACCCCTCAATGGCCCTATCAATATACTGGGTGAGGGCCGGCTTGGCTGGAGAAGGCCAACCAGGAGCTTGG
TCTGGCTTTAGACTCTTGGGACCTAGACTTCTACACCAAGCGCTTCCAGGAGCTACAGCGGAACCCGAGCACTGT
GGAGGCCCTTTGACTTGGCGCAGTCCAATAGCGAGCACAGCCGACACTGGTTCTTCAAGGGCCAGCTCCACGTGGA
TGGGCAGAAGCTGGTGCCTCACTGTTTGAAGTCCATCATGAGCAGCCAGGAATCCTCGAACCCCAACAACGTCTCT
CAAATCTGTGATAACAGCAGTGAATCCAGGGAAAGGAAGTCCGATTCTACGGCCTGAGGACCCACACGGCC
AAGCCGCTTCCAGCAACAGCAAGGGCTGAGACATGTTGTCTTACAGCAGAGACTCACAACCTTCCACAGGAGT
ATGCCCCCTTAGTGGTGAACCACTGGCACAGGGGGCCGGATTGAGATGTCCAGTGCACAGGCCGCGGGGCCCA
CGTGGTGGCTGGCACTGCCGGCTATTGCTTTGGAATCTGCATATTCAGGTTACAATCTGCCCTGGGAGGATCT
AAGCTTCCAGTATCCTGGGAATTTTGGCCGGCCCCCTGGAGGTTGCCATTGAAGCCAGTAATGGAGCTTCTGACTA
TGGCAACAAGTTTGGGGAACCACTGCTGGCTGGCTTGGCCGCTCCTTGGGCTCCAGCTCCCAGACGGCCAGCG
GCGTGAGTGGATCAAGCCCATCATGTTTGAAGTGGGGCATTGGGTCCATGGAAGCTGACCACATAAGCAAGGAGGC
CCCAGAGCCAGGCATGGAAGTTGTAAAGGTTGGAGGTCCCGTCTACAGGATTGGAGTTGGAGGTGGAGCTGCTTC
ATCTGTGCAGGTGCAGGGAGATAACACCAGTGACCTGGACTTTGGGGCTGTGCAGCGAGGAGACCCGGAGATGGA
ACAGAAGATGAACCGTGTGATCAGGGCTTGTGTGGAGGCCCCCAAGGGAAACCCCATCTGCAGCCTTCATGATCA
GGGCGCTGGTGGCAATGGCAATGTCTTAAAGAGCTGAGTGACCCAGCTGGAGCCATCATTTACACCAGCCGCTT
CCAGCTTGGGGACCCAAACCCCTGAATGCCCTGGAAATCTGGGGGGCTGAGTACCAGGAATCAAATGCTCTTCTGCT
GAGGTCCCCCAACCGGGAATCTCTGACTCATGTGCTGAGTCCCGTGAACGTTGCCCGGCTTGCTTCTGTTGGGACCAT
CACTGGAGACCGGAGAATAGTGTGGTGGACGATCGGGAGTGTCTGTGAGAAAGATGGCCAGGGGGATGCCCC
CCCGACACCCCCGCCAACCCTGTGGACCTGGAGCTCGAATGGGTGCTGGGCAAGATGCCTCGGAAGGAGTTCTT
CCTGCAGAGGAAGCCCCCATGCTGCAGCCTCTGGCCTTGGCCCCAGGGCTGAGCGTGCACCAGGCTCTGGAGAG
GGTTCTGAGGCTGCCCCCGTGGCCAGCAAGCGCTACCTCACCAATAAGGTGGACCGCTCCGTGGGAGGCCTGGT
GGCCAGCAGCAGTGCCTGGGGCCCCCTGCAACTCCTCTGGCAGATGTAGCGGTTGTGGCACTGAGCCATGAGGA
GCTCATAGGGGCTGCCACAGCCTTGGGAGAACAGCCAGTCAAGAGCCTGCTGGACCCAAAGTTCGCCGCCCGGCT
GGCCGTGGCCGAAGCCCTCACCAACCTGGTGTGTTGCTCTGGTCACTGACCTCCGGGATGTGAAGTGTAGCGGGAA
CTGGATGTGGGCAGCCAAGCTCCCAGGGGAGGGCGCAGCTTTGGCGGATGCCTGTGAGGCTATGTTGGCAGTGAT
GGCAGCCCTGGGTGTGGCAGTGGATGGTGGCAAGGACTCCCTCAGCATGGCTGCTCGGGTTGGCACTGAGACCGT
GCGGGCTCCTGGGTCACTGGTCACTCTCAGCCTATGCCGTCTGCCAGACATCACAGCCACTGTGACCCAGACCT
CAAGCATCCTGAAGGGAGAGGCCATCTGCTCTATGTGGCTCTGAGCCCTGGGCAGCACCGGCTCGGGGGCACAGC
TCTGGCCCACTGCTTCTCCCAGCTTGGGGAAACACCCTCCAGACCTGGACCTTCTGAGAACTTGGTGCGGGCCTT
CAGCATCACTCAGGGGCTGCTGAAAGACCGCTCCTCTGCTCAGGCCACGATGTCACTGACGGAGGCCTCGTCAC
ATGCCCTGCTGGAGATGGCCTTTGCTGGAAATTGCGGGCTACAGGTGGATGTGCTGTCCCCAGGGTTGATGTCTT
GTCTGTGCTGTTGCTGAGGAGCCAGGCCTCGTGCTGGAGGTGCAGGAGCCAGACCTGGCCAGGTGCTGAAGCG
TTACCGGGATGCTGGCCTCCATTGCCTGGAGCTGGGCCACACAGGCGAGGCCGGGGCCCCACGCCATGGTCCGGGT
GTCAGTGAACGGGGCTGTGGTTCTGGAGGAGCCTGTTGGGGAGCTGCGAGCCCTCTGGGAGGAGACGAGTTTCCA
GCTGGACCGGCTACAGGCAGAGCCTCGCTGTGTGGCAGAGGAGGAACGGGGCTGAGGGAGCGGATGGGGCCAG
CTATTGCCTGCCCCCACCTTTCCCAAAGCCTCCGTGCCCCGTGAGCCTGGTGGTCCCAGCCCCGAGTCGCCAT
CTTGGCAGAGGAGGGCAGTAATGGAGACCGGGAGATGGCCGATGCCTTCCACTTAGCTGGGTTTGAAGTATGGGA
CGTGACCATGCAGGACCTCTGCTCTGGGGCAATTGGGCTGGACACTTTCCTGGCGTGGCCTTCTGTTGGCGGCTT
CAGCTATGCAGATGTCTGGGCTCTGCCAAAGGGTGGGCAGCTGCTGTGACCTTTCATCCCAGGGCTGGGGCTGA
GCTGAGGCGCTTCCGGAAGCGGCCAGACACCTTACGCTGGGCGTGTGTAATGGCTGTCAACTGCTGGCTCTGCT

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FIGURE 859B

CGGCTGGGTGGGAGGCGACCCAATGAGGATGCTGCAGAGATGGGCCCTGACTCCCAGCCAGCCGGCCAGGCCT
TCTGCTACGCCACAACCTGTCTGGGCGCTACGAGTCTCGCTGGGCCAGCGTGCCTGTGGGGCCTGGGCCAGCCCT
GATGCTGCGAGGGATGGAGGGCGCCGTGCTGCCCCGTGTGGAGTGCACGCGGGAAGGTTACGTAGCATTTCCTT
TCCGGAACCTCCAAGCTCAGATTGAGGCCAGGGGCTTGGCTCCACTGCACTGGGCTGATGATGACGGGAACCCAC
AGAGCAGTACCCTCTGAATCCCAATGGGTCCCCAGGGGGCGTGGCTGGCATCTGCTCCTGTGATGGCCGCCACCT
GGCTGTCATGCCCTCACCCTGAGCGGGCCGTTAGGCCTTGGCAGTGGGCAATGGCGACCCCTCCATTGATACTCT
GACCACCTCCCCCTGGCTCCAGCTCTCTATCAATGCCGAACTGGACCTGGAAGGGAGCTGCTGACTGGCCAC
AGGGGCTCACCTGGGCCCCATGGCTTTTACCTAAGTGGGTCTGCCCCCTCCCCATGACCTTCAGGAGCACCC
CATATTATTTCCAAAAATATCTTGGACAGACAAGGACCAAAATGCCAAAATCTCAGCGGACTCGATGATCTGCCT
GCTGATGTTCTTCTGTGGCTGTGTCTATTTTTCAGTTCTGCTCTAACATGGCATGCCCTTCTCAGCCAGGAAA
CAGCATGTGGTTCAGAGAAAAGAGCGACAAGGAAAAGTTAGGACTCCTGAGGTCCGAACAGGGGCTTCTGTTGCC
CACTTCACAACACCCAGTGATCACCGGTGTGCAATTGCCTCCTTGGCTCTGAGGGATGTTTTGCGCTCCCTTTTC
TCATCATTGGGGTTAGCGGGTGCAGACAAATTCAGCAATAGTATGCAGATCAGCCCCTCACCACCTCATTGTTCT
CATCTGGAACCTGAACTTTCTGGATTTCTCTTGAAGTGCTACACTGCACTGAATGTAAGGAATTGTTGCTTGTGG
AAGTTTCTCAGCGTTTCTGGCTGTCTTAGGGCTGGCCTCAGAACCCAGCATTCCTGTTATTTGCTTCTAAATTAG
CAGCTCTCTTTTTTTTTTTTTTTTTTGGAGCAGTCTCACTCTGTCAACCAGGCTGGAGTGCAGTGGCGTGATCTCG
GCCCCTGCAACCTCTGCCTCCTGGGTTCAAGCAATTTTCTGCCTCAGCCTCCCGAGTAGCTGGGAGTACAGGC
ACACACCACACACCCAGCTAATTTTTGTATTTTAGTAGAGATAGGGTTTACCCTGTCTCCCAGGCTGGTCTC
AACTCCTAACCTCAAGTGATTGCCTGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGTGGGAGCCACTACAGC
TGGCCCAGCAGCTCTGTTTCTGATAGAGGTGGTTGGGGCTCTCATCCCTAGATCCTAACCTTTAGTATGCTGGA
ATTCTACTCTTCACTTACTGCATTGACTGTTGTTGATTAGTTATTATTGCAAAGCACTGCCACCGGCCTCAGGGA
GTTTATGTGTAATAGAATTAATAATAATAGCTGTGTATAACACTTAGCTCAAGCCACGCATGTGTGAGGCATTTG
GTATGTATCTGAATTAATTCTCACTAAAATTAGCAAAGGACTTGATAGCCTCTCCCGCCTTTTCAATAAAGGA
TGAATGAAGGTTG

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FIGURE 860

AASASSTNLIHLSSKGHISPAKDTSLQQRTPAEMSPVLHFYVRPSGHEGAASGHTRRKLOGKLPQLQGVETELCY
NVNWTAEALPSAEETKKLMWLFGCPLLLDDVARESWLLPGSNDLLLEVGPRLNFSTPTSTNIVSVCRATGLGPVD
RVETTRRYRLSFAHPPSAEVEAIALATLHDMTEQHFPHPIQSFSPESMPEPLNGPINILGEGRLALEKANQELG
LALDSWDLDFYTKRFQELQRNPSTVEAFDLAQSNSEHSRHWFFKGQLHVDGQKLVSLSFESIMSTQESSNPNNVL
KFCDNSSAIQKKEVRFLRPEDPTRPSRFQQQQGLRHVVFTAETHNFPTGVCPSGATTGTGGRIRDVQCTGRGAH
VVAGTAGYCFGNLHIPGYNLPWEDLSFYYPGNFARPLEVAIEASNGASDYGNKFGEPLVLAGFARSLGLQLPDGQR
REWIKPIMFSGGIGSMEADHISKEAPEPGMEVVKVGGPVYRIGVGGGAASSVQVQGDNTSDLDGAVQRGDPME
QKMNVRVIRACVEAPKGNPICSLHDQGAGGNGNVLKELSDPAGAIITYTSRFQLGDPTLNALEIWGAEYQESNALL
RSPNRDFLTHVSARERCPACFVGTITGDRRIVLVDDRECPVRRNGQGDAPPTPPPTPVDLELEWVLGKMPRKEFF
LQRKPPMLQPLALPPGLSVHQALERVLRLEPAVASKRYLTNKVDRSVGGLVAQQQCVGPLQTPADVAVVALSHEE
LIGAATALGEQPVKSLLDPKVAARLAVAEALTNLVFALVTDLRDVKCSGNWMMWAAKLPGEAALADACEAMVAVM
AALGVAVDGGKDSLMAARVGTETVRAPGSLVISAYAVCPDITATVTPDLKHPEGRGHLLYVALSPGQHRGCTA
LAQCFSQLGEHPPDLDLPENLVRAFSITQGLLKDRLLCSGHDVSDGGLVTCLEMAFAGNCGLQVDVPVPRVDVL
SVLFAEEPGLVLEVQEPDLAQVLKRYRDAGLHCLELGTGEAGPHAMVRVSVNGAVVLEEPVGELRALWEETSFQ
LDRLQAEPRCVAEEERGLRERMGPSYCLPPTFPKASVPREPGGSPRVAILREEGSNGDREMADAFHLAGFEVWD
VTMQDLCSGAIGLDTFRGVAFVGGFSYADVLGSAKWAAAVTFHPRAGAE LRFRKRPDTFSLGVCNGCQLLALL
GWVGGDPNEDAAEMGPDSQPARPGLLLRRHNLSGRYESRWASVRVGPALMLRGMGAVLPVWSAHGEGYVAFSS
PELQAQIEARGLAPLHWADDDGNPTEQYPLNPNNGSPGGVAGICSCDGRHLAVMPHPERAVRPQWAWRPPPFDTL
TTSPWLQLSINARNWTLEGSC

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FIGURE 861A

CTGCGGCCGCTGGTTTCTTGCCCTTAAGGAGCCCATTTGCCCTTTCCCGCTGAAGTCTAGATGTTGACATGTAATAA
AGCGGGCAGCAGGATGGTGGTGGATGCGGCCAACTCCAATGGGGCCTTTCCAGCCCGTGGTCTTCTCCATATTTCG
AGATGTTCTCTCTGCTGATCAAGAGAAGCTTTTTATCCAGAAGTTACGTCAGTGTGCGTCTCTTTGACTTTGT
TTCTGATCCACTAAGTGACCTAAAGTGGAAGGAAGTAAACGAGCTGCTTTAAGTGAAATGGTAGAATATATCAC
CCATAATCGGAATGTGATCACAGAGCCTATTTACCCAGAAGTAGTCCATATGTTTGAGTTAACATGTTTCGAAC
ATTACCACCTTCTCCAATCTACGGGAGCGGAATTTGACCCGGAGGAAGATGAACCAACGTTAGAAGCAGCCTG
GCCTCATCTACAGCTTGTATGAATTTTTCTTAAGATTTTTAGAGTCTCCAGATTTCCAACCTAATATAGCGAA
GAAATATATTGATCAGAAGTTTGTATTGCAGCTTTTAGAGCTCTTTGACAGTGAAGATCCTCGGGAGAGAGATTT
TCTTAAAACCACTTCCACAGAATCTATGGGAAATTCCTAGGCTTGAGAGCTTACATCAGAAAACAGATAAATAA
TATATTTTATAGGTTTATTTATGAAACAGAGCATCATAATGGCATAGCAGAGTTACTGGAAATATTGGGAAGTAT
AATTAATGGATTGCTTACCCTAAAGAAGAGCACAAGATTTCTTATTGAAGGTGTTACTACCTTTGCACAA
AGTGAAATCTCTGAGTGTCTACCATCCCAGCTGGCATACTGTGTAGTGCAGTTTTTAGAAAAGGACAGCACCTT
CACGGAACCACTGGTGTATGGCACTTCTCAAATACTGGCCAAAGACTCACAGTCCAAAAGAAGTAATGTTCTTAAA
CGAATTAGAAGAGATTTTAGATGTCTATTGAACCATCAGAATTTGTGAAGATCATGGAACCCCTCTTCCGGCAGTT
GGCCAAATGTGTCTCCAGCCCACTTCCAGGTGGCAGAGCGAGCTCTCTATTACTGGAATAATGAATACATCAT
GAGTTTAAATCAGTGACAACGCAGCGAAGATTTCTGCCATCATGTTTCTTCTTGTACCGCAACTCAAAGACCCA
TTGGAACAAGACAATAACATGGCTTGATATACAACGCCCTGAAGCTCTTCATGGAGATGAACAAAAGCTATTTGA
TGACTGTACACAACAGTTCAAAGCAGAGAACTAAAAGAGAAGCTAAAAATGAAAGAACGGGAAGAAGCATGGGT
TAAAATAGAAAATCTAGCCAAAGCCAATCCCAGTACACAGTGTATAGTCAAGCCAGCACCATGAGCATTCCGGT
TGCAATGGAGACAGATGGGCCTTTATTTGAAGATGTGCAGATGCTGAGAAAAGACAGTGAAGGACGAGGCTCATCA
GGCAGAGAAAGATCCGAAGAAGGACCGTCTCTTGCACTCCGCAAGTCCGAGCTGCCTCAGGACCCCCACACCAA
GAAAGCCTTGGAAGCTCACTGCAGGGCCGATGAGCTGGCCTCCAGGACGGCCGCTAGCCTCCGGGGCGCCGCGT
CGGGGCCGGGCCCGCCAGTTCTTTTCCGGATTCTGTAGAAAATACATACTTCTGTGCCATACCAATCAGTTACA
CTCAAAGCTTTCTTGACCCCGTTCCGTAGGCAATAACGTGCGTCCGCTCAGCGCGAGATTAGGAGTTCAAACA
ATGGTGAATTTCCAGAGCCCGCTGGCAGAGCCGCGGGTTGACGACGGTGTCTCGCAGTGTGCGCCGCCACCCAG
CGTAGTCCAAGTCAGACTATTTACAAAGTCAGAGCGATAGGAAAGCACCTTGCCCTTCATCTTCATGTTCTCCC
AAATGGAACCTTAGGATCTTTTAAACATAGGTGGTTCTGTGATAACATCAGTGTTTTCCAAATCAAAGGAACGCTTT
AAAAATAGGACCTATTTTAAAGACTTTACAGCCTTTGAAATGGTTTCCACGTGATTGTTACGCCAGCAGTTCT
TTTGTGTTGTTTTCAATCTCAGTGAAATGGCTCTTTGCTTTTCGAGTTCTCACGCAACGTACTGGGCAAATGACAA
TCCTCAGCCGCTGGTATTTTCTAAGGGTCTCTTCACTTTTGATGAGTGACATGAACACCGTGTCTCCTTCTCTTG
TGTGTACCTAAAGCCATATTTCCAAGTCTGTGGTACTCCAGGATTCCAGGAGTAAGCCTGTAGAAGAGATTTATT
TTAAAGAGATTGCTCTGAAATTTATCTTAAAGAGCTTGCTCTGTCTACCTTGACAGAAATTGGAGTTTTAAAA
TTATGTGTTAATATTTTATTTGCAGATTTTCGTTTCCGTCAACTTAAACATTGTTGCCCTTCAACAAGGCTCTTG
AATTAATAAAATTATAGTCTCTAAGAATTCACATTTTATGGAAAGTTAGAGCAAAATCATTTTGAGTTAAGCCA
GTTCTTAGCCTAATGCAAACTGCAGCGCTTTAAGCATAAAGTAACACAACAGCATTGCACGGGGCCGGCACTGC
CGCTGCCTTCACTGAAGGCTGCAGTGCTGTTCTGAGAGCTTGGAGGAGGCACCAGCGAGGATGACGTTTAGTGGA
GCTCTTTCTGTTGAAAAGAGCTCACGTTATCAACACCTTGTAAGGAAAATACAGTGTCTGAGTTTTTCATCGGTCT
TCACATGCTGCTATATATTCCACAGAGTTCTTGCATGTACTGAGCTTTTGTGTTTAGATGGAATAGCACAAAGGAG
AAAAATCTTTAACTTAGTGCTTTGTCTATTCTTTATTTCTCTCAGGGTGGCCAGTATTTTGACTTATTTATCCT
GCTTGAAAGCTACTTGAGATGTGTACTGCTATTCTAAACACGTGATCTAGTTTCTTTTCATCTCTGGCATAAGATT
ATATAACTTAATGTTAAGTGTCTTGAGGCATAAAAGACAAAATGTGGCTTATTTTAGGATCTGTTTTTTCATCGA
GGTCTCGGGTATCCTTTCAAAGATAGTGAGAAGCAGACACTGCTCCTTGTGCAGCTCTGGTACCTCCTGCCACT
GCTGTCACTTCAAGCCACTGGCAATGCTTCTGTCTCGTGTCTTGAGGAAAATCACCTGGGGGGAGGGGACTTC
TTGTGGTAAGAGCAAGTGCAGGTATGAAATGCGAAGATTGCCCCAGCTAAAAGTGGAACAAGTCCGCTTTGTGAGA
TGAATACTTCTGAGAACTTGACAAGTATCTCTCCATTTTACCATTATGAAAATATCATTAAAAAAAACAGTT
TAGATGCCTTCTCCTTTTGGGGAAAAAGGGTGCTTTTTATTGTATAAAGCAGCGTCTTATGTATTTTGATATAC
CATTGTTTGAACCTCCGTCTTTAGCTGATAGATTCTCAAATATCCTTGATTTTGGATGTTTCTAGTATGTTTGTGAG
AGAGGTTTCTGGGAAGACTCTTTTTTGCCCTCGGGAAAAGCAAAATATCAATGTTTGGGTGACTGTGTAAAGC

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FIGURE 861B

TCAGTGTGTAAGAACATCTTTTTGTCTAGGTTTTCTTTCTGCTCTTTATTGAAGACAAACACTCACCAAAAAGAA
AAATAAAAGTTTTTCAGAGAACTAATTTTCTTTGGCAAGAGTATTACTTAATATTTTGGCCTCCTAAAGTTTCCC
TAGTTAGTACTCGGACTCCTGTGCTAATTGTCAGCTTACATATCATTGTATAGAGACTGTTTATTCTGTACCAAA
CTGATTTCAAAGTACTACATTGAAAATAAACCGGTGACTGTTTTCTTCATAAAGTTCTGCGTTTGGCATCTTC
ACTCTTTCCAAAATGTATCTGTACATCAGAAATGTCACATTTCCAAGTGTCTTTTAGTGTGGCCTTTAGTATGG
CTTCCTTTTAATATTGTACATACATTGTATCTTTGTTTTATGGTAATAAGTAATAAAAATGTAGACTTCAAAAAA
AAAAGCGGCCGCAG

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FIGURE 862

MVVDAAANSNGPFQPVVLLHIRDVPPADQEKLFIQKLRQCCVLFDFVSDPLSDLKWKEVKRAALSEMVEYITHNRN
VITEPIYPEVVMFAVNMFRTLPPSSNPTGAEFDPEEDEPTLEAAWPHLQLVYEFFLRFLFLESPDFQPNIAKKYID
QKFVLQLELFDSEDPRERDFLKTTLHRIYGKFLGLRAYIRKQINNIFYRFIYETEHNGIAELLEILGSIINGF
ALPLKEEHKIFLLKVLLPLHKVKSLSVYHPQLAYCVVQFLEKDSTLTEPVVMALLKYWPKTHSPKEVMFLNELEE
ILDVIEPSEFVKIMEPLFRQLAKCVSSPHFQVAERALYYWNNEYIMSLISDNAAKILPIMFPSLYRNSKTHWNKT
IHGLIYNALKLFMEMNQKLFDDCTQQFKAEKLKEKLKMKEREEAWVKIENLAKANPOYTVYSQASTMSIPVAMET
DGPLFEDVQMLRKTIVKDEAHQAQKDPKKDRPLALRKSELPQDPHTKKALEAHCRADELASQDGR

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FIGURE 863

TTAATGGTAGGAATTTGTATTTTTTGCCTTTGTTTCAGAATACATGACATTGGTAAATATGCCACATGCCTTTGGT
GGAAGTACAACCTGTTGTTATTACTCTATACAAGTATGAGATCAGGGTTAGGAAAAAAGACAAAGAGGTGATGAC
AGACACACAGTGGAAACCCACATCGTCTCATGGCAAACCGAAGAACGGGATGTGGGAAGCTCAGCTTCATTGA
CTGCAAAGTCCCAGGGTTTTGTTGCACATTTGCTCATGCACATGGGTGGTGGGAGGAAAGGGGGATAGCAGAGAC
ACACAGAAGAGGGTACAGGGTGGGTGAGAAAGAAAGTAGAAGGGCTAATACCCCCAAAGAACAAGGCCAACTACA
CCTGGTGAGCCTCAGAGGGACAGAAACCCAGGAATGATTCCT

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FIGURE 864A

CGAATTCCTCCCTCCCTCCCATACATGCCCCACTGCCCAAATAAAAAAAAAACCAACTATGGGAGAGCAGCC
GAGACAGCAACTAGGGGCAGGGGAAAGAGACATGGAACTCGAGGGCAGCGGTGAAGAGACCATGCGTGTGCTGGG
AGGGCCCAGAGGCAGCGCGGCACAAACAGCGCAGGTACGAGTCTCTGTGTCTTCCCGGGGTTATGTATAAATA
TAGAGAGATGAGGCCTTCTCTCCCTGCTCTCCCTTCCGCTCCGTGCTGCTCGCCGCGGTCCAGCTCCTCTTTC
CACATGAGGGCGAAGGGAAGGGGGGATGAACAAGTCATCACCGAATTGCAATCAGACCCACATCCATCAGCTTCT
GGATCTTCTGTGCTATTACAGGATTCTTTAAGTGTTGCTGAGTGCCTGCTCCTGGGGACAATTCCCTTTTCCTT
TCTTCAGCCTAACCCGCGGTGGCCCTCGCGGAGTCCGGTCAGCCCCGGGGAGCGCAACCCGGGAGGGGCGTCCAA
GGGGCGTCTCGCGTCTGGGAACGGCCGGGCCCCAGCGGGCTGTGGTTCGCGGGGTGGGGGCGGAGCGGCGAGGC
CCCCCTTACCGGGCTGCGCAGGCCGCCAGGGCCCCGGGCTGAGACGGGGCCGGAGCGGCGCCCCGGCCGCCCG
CGCGGGGTCTCCCCATGGTGACGCGGGGTTCTGGGATGTCGAAGACGCTGAAGAAGAAGAAGCACTGGCTCAGCA
AGGTGCAGGAGTGCGCCGTGTCTGGGCCGGGCCCCGGGCGACTTCGGCGCGGAGATCCGCGGTGGCGCGGAGC
GTGGCGAATTCCCCTACCTGGGGCGGCTCCGCGAAGAACCCGGCGGGGGCACCTGCTGCATCGTCTCGGGCAAGG
CGCCCAACCCAAGCGATGTGCTGCTGGAGGTAAACGGGACGCTGTGTCAGCGGGCTCACCAACCGGGACACCTGG
CTGTATCCGCCACTTCCGCGAGCCCATCCGTCTCAAGACTGTGAAACCAGGCAAAGTCATTAATAAAGATTTCG
GGCATTACCTAAGTCTTTCAGTTTCAAAAAGGATCAATTGACCACAACTGCAGCAAGTGATCAGAGATAATCTCT
ACTTGAGAACCATTCCATGCACTACAAGGGCCCCCAGGGATGGAGAAGTACCAGGAGTGGATTATAATTTTCATTT
CCGTTGAACAGTTCAAAGCACTGGAGGAGAGTGGAGCATTGTTAGAAAGTGGGACATATGATGGAACTTCTATG
GAACTCCCAAGCCTCCAGCAGAACCCAGCCCTTTTCAGCCAGATCCAGTTGATCAAGTCTCTTTGATAATGAGT
TTGATGCAGAATCTCAAAGAAAACGAACGACATCTGTGACGAAGATGGAAAGAATGGATAGCTCTCTTCTGTAAG
AGGAAGAAGATGAGGACAAGGGAGCTATTAATGGCAGTGGAAACGCAGAAAACAGAGAGAGGCATTCTGAGTCAT
CTGACTGGATGAAGACTGTTCCAAGTTACAACCAAAACAAATAGCTCCATGGACTTTAGAAATTATATGATGAGAG
ATGAGACTCTGGAACCACTGCCCAAAAACCTGGGAAATGGCTACACTGACACAGGGATGATCTACTTCATTGACC
ACAATACCAAGACAACCACTTGGTTGGATCCTCGTCTTTGTAAGAAAGCCAAAGCCCCCTGAAGACTGTGAAGATG
GAGAGCTTCTTATGGCTGGGAGAAAATAGAGGACCTCAGTATGGGACATACTATGTTGATTTCACTCTTGTGCG
CCCAAGCTGGAGTGCAATGGCATGATCTCGGCTCACTGCAACCTCCGCCTCCTGGGTTCAATCACCTTAACCAGA
AAACCCAGTTTGAAAATCCAGTGGAGGAAGCCAAAAGGAAAAAGCAGTTAGGACAGGTTGAAATTGGGTCTTCAA
AACCAGATATGGAAAATCACACTTCACAAGAGATCCATCCAGCTTAAAGGTGTCCTTGTTGAGCATCACTGA
AAAAAGCACAAATGGGATTTGGTTTTACTATTATTGGTGGAGATAGACCTGATGAGTTCCTACAAGTGA AAAATG
TGCTGAAAGATGGTCCGCGAGCTCAGGATGGGAAAATTGCAACAGGCGATGTTATTGTAGACATCAATGGCACT
GTGCTTCCGTCACACTCATGCAATGTTGTCCAGATGTTTCAATTGGTACCTGTCAATCAGTATGTAAACCTCA
CTTTATGTCGTGGTTATCCACTTCTGATGACAGTGAAGATCCTGTTGTGGACATTGTTGCTGCTACCCCTGTCA
TCAATGGACAGTCATTAACCAAGGGAGAGACTTGCATGAATCCTCAGGATTTTAAGCCAGGAGCAATGGTTCTGG
AGCAGAATGGAAAATCGGGACACACTTCGACTGGTGTGATGGTCTCAATGGACCATCAGATGCAAGTGAGCAGAGAG
TATCCATGGCATCGTCAGGCAGCTCCAGCCTGAACTAGTGACTATCCCTTTGATTAAAGGGCCCTAAAGGGTTTG
GGTTTGCAATTGCTGACAGCCCTACTGGACAGAAGGTGAAAATGATACTGGATAGTCAGTGGTGTCAAGGCCTTC
AGAAAAGAAGATATAATTAAGGAAATATACCATCAAAATGTGCAGAATTTAACACATCTCCAAGTGGTAGAGGTGC
TAAAGCAGTTTCCAGTAGGTGCTGATGTACCATTTGCTTATCTTAAGAGGAGGTCTCTCTTCAACAACCAAACTG
CCAAAATGAAAACAGATAAAAAGGAAAATGCAGGAAGTTTGGAGGCCATAAATGAGCCTATTCTCAGCCTATGC
CTTTTCCACCGAGCATTATCAGGTCAGGATCCCCAAAATTGGATCCTTCTGAGGTCTACCTGAAATCTAAGACTT
TATATGAAGATAAACCACCAAAACACCAAGATTTGGATGTTTTTCTTCGAAAACAAGAGTCAGGGTTTGGCTTCA
GGGTGCTAGGAGGAGATGGACCTGACAGTCTATATATATTGGGGCTATTATTCCCTGGGAGCAGCTGAGAAAG
ATGGTCCGCTCCGCGCAGCTGATGAACTAATGTGCATTGATGGAATTCCTGTTAAAGGGAAATCACACAAACAAG
TCTTGACCTCATGACAACCTGCTGCTCGAAATGGCCATGTGTTACTAACTGTCAGACGGAAGATCTTCTATGGAG
AAAAACAACCCGAGGACGACAGCTCTCAGGCCTTCATTTCAACACAGAATGGATCTCCCGCCTGAACCGGGCAG
AGGTCCAGCCAGGCCTGCACCCAGGAGCCCTATGATGTTGTCTTGCAACGAAAAGAAAATGAAGGATTTGGCT
TTGTCTCCTCACCTCCAAAAACAACCACTCCAGGAGTTATTCCTCATAAAATTGCCGAGTCATAGAAGGAA
GTCCGGCTGACCGCTGTGGAAAACCTGAAAGTTGGAGATCATATCTCTGCAGTGAATGGGCAGTCCATTGTTGAAC
TGTCTCATGCTAACATTGTTTCAGCTGATCAAAGATGCTGGTGTACCGTCACACTAACGGTCATTGCTGAAGAAG

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FIGURE 864B

AGCATCATGGTCCACCATCAGGAACAACTCAGCCAGGCAAAGCCCAGCCCTGCAGCACAGGCCCATGGGACAGT
CACAGGCCAACCACATACCTGGGGACAGAAGTGCCCTAGAAGGTGAAATTGGAAAAGATGTCTCCACTTCTTACA
GACATTCTTGGTCAGACCACAAGCACCTTGACACAGCCTGACACCGCAGTAATTTAGTTGTAGGCAGTCGGCACA
ATCAGAACCTTGGTTGTTATCCAGTAGAGCTGGAGAGAGGCCCCGGGGCTTTGGATTTCAGCCTCCGAGGGGGGA
AGGAGTACAACATGGGGCTGTTTCATCCTTCGTCTTGCTGAAGATGGTCCTGCCATCAAAGATGGCAGAATTCATG
TTGGTGACCAAATTGTTGAAATCAATGGGGAACCTACACAAGGAATCACACATACTCGAGCAATTGAGCTCATTC
AGGCTGGTGGAATAAAAGTTCTTCTTTTGGAGCCAGGAACTGGCTTGATACCTGACCATGGTTTGGCTCCTT
CCGGTCTGTGCTCCTACGTGAAACCCGAGCAACATTAAGGCTTTCAGGGCTTTTCTTGGTCTTTCCTTAAAAAGA
CTTGGTAAATTTGCATGTCTTGTAATCACTTTCTTCTTTGTTTTCTTTTAAATTAAAAATGATGCTATTAAAT
AAAAAAAAAAAAA

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FIGURE 865

MSKTLKKKKHWLSKVQECASVWAGPPGDFGAEIRGGAERGEFPYLGRLREEPGGGTCCIVSGKAPNPSDVLLEVN
GTPVSGLTNRDTLAVIRHFRP IRLKTVKPGKVINKDLRHYLSLQFQKGSIDHKLQOVIRDNLYLRTIPCTTRAP
RDGEVPGVDYNFISVEQFKALEESGALLESPTYDGNFYGTPKPPAEPSPFQPDVPDQVLFDFNEFDAESQRKRRTS
VSKMERMDSSLPEEEDEDEDKGAINGSGNAENRERHSESSDWMKTVP SYNQTNSSMDFRNYMMRDETLEPLPKNWE
MAYTDTGMIYFIDHNTKTTTTWLDPRLCCKAKAPEDCEDGELPYGWEKIEDPQYGTYYVDFTLVAQAGVQWHDLS
LQPPPPGFNHLNQKTQFENPVEEAKRKKQLGQVEIGSSKPDMEKSHFTRDPSQLKGVLVASLKKSTMGFGFTII
GGDRPDEFLQVKNVLKDGPAADGKIAPGDVIVDINGNCVFGHTHADVVMFQLVPVNQYVNLTLCRGYPLPDDS
EDPVVDIVAATPVINGQSLTKGETCMNPQDFKPGAMVLEQNGKSGHTSTGDGLNGPSDASEQRVSMASGSSQPE
LVTIPLIKGPKGFGFAIADSPTGQKVKMILDSQWCQGLQKEDI I KEIYHQNVLNTHLQVVEVLKQFPVGADVPL
LILRGPPSTTKTAKMKTDKKENAGSLEAINEPI PQMPFPFPSIIRSGSPKLDPSEVYLKSKTLYEDKPPNTKDL
DVFLRKQESGFGFRVLGGDGPDQSIYIGAIIPLGAAEKDGRRLRAADELMCIDGIPVKGKSHKQVLDLMTTAARNG
HVLLTVRRKIFYGEKQPEDDSSQAFISTQNGSPRLNRAEVPARPAPQEPYDVVLQRKENEGFGFVILTSKNKPPP
GVIPHKIGRVIEGSPADRCGKLKVGDHISAVNGQSIVELSHANIVQLIKDAGVTVTLTVIAEEHHGPPSGTNSA
RQSPALQHRPMGQSQANHIPGDRSALEGEIGKDVSTSYRHSWSDHKHLAQPD TAVISVVGSRHNQNLGCYPVELE
RGPRGFGFSLRGGKEYNMGLFILRLAEDGPAIKDGRIHVGDQIVEINGEPTQGITHTRAIELIQAGGNKVLLLLR
PGTGLIPDHGLAPSGLCSYVKPEQH

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FIGURE 866

CCCTTCCGTCCTTCATTAGACGTTTGTCTTGTCTTAGATGCTCAGATGGTAGTGGATAGGCCTGTGACGAAGGT
GCTACCATCGTGAGAGTAAGATTATATTCTCCTGCCTTTTAAAAAGATGGACTTCAGCAGAAATCTTTATGATAT
TGGGGAACAACCTGGACAGTGAAGATCTGGCCTCCCTCAAGTTCCTGAGCCTGGACTACATTCCGCAAAGGAAGCA
AGAACCCATCAAGGATGCCTTGATGTTATTCCAGAGACTCCAGGAAAAGAGAATGTTGGAGGAAAGCAATCTGTC
CTTCTGAAGGAGCTGCTCTTCCGAATTAATAGACTGGATTGCTGATTACCTACCTAAACACTAGAAAGGAGGA
GATGGAAAGGGAACCTCAGACACCAGGCAGGGCTCAAATTTCTGCCTACAGGGTCATGCTCTATCAGATTTTCTGA
AGAAGTGAGCAGATCAGAATTGAGGTCTTTTAAAGTTTCTTTTGCAAGAGGAAATCTCCAAATGCAAACCTGGATGA
TGACATGAACCTGCTGGATATTTTCATAGAGATGGAGAAGAGGGTCATCCTGGGAGAAGGAAAGTTGGACATCCT
GAAAAGAGTCTGTGCCCAAATCAACAAGAGCCTGCTGAAGATAATCAACGACTATGAAGAATTCAGCAAAGGGGA
GGAGTTGTGTGGGGTAATGACAATCTCGGACTCTCCAAGAGAACAGGATAGTGAATCACAGACTTTGGACAAAGT
TTACCAAATGAAAAGCAAACCTCGGGGATACTGTCTGATCATCAACAATCACAATTTTGCAAAGCACGGGAGAA
AGTGCCCAAACCTTCACAGCATTAGGGACAGGAATGGAACACACTTGGATGCAGGGGCTTTGACCACGACCTTTGA
AGAGCTTCATTTTGAGATCAAGCCCCACGATGACTGCACAGTAGAGCAAATCTATGAGATTTTGAAATCTACCA
ACTCATGGACCACAGTAACATGGACTGCTTCATCTGCTGTATCCTCTCCCATGGAGACAAGGGCATCATCTATGG
CACTGATGGACAGGAGGCCCCATCTATGAGCTGACATCTCAGTTCAGTGGTTTGAAGTGCCCTTCCCTTGCTGG
AAAACCCAAAGTGTTTTTTATTAGGCTTGTCAGGGGGATAACTACCAGAAAGGTATACCTGTTGAGACTGATTC
AGAGGAGCAACCCTATTTAGAAATGGATTTATCATCACTCAAACGAGATATATCCCGGATGAGGCTGACTTTCT
GCTGGGGATGGCCACTGTGAATAACTGTGTTTCTACCGAAACCTGCAGAGGGAACCTGGTACATCCAGTCACT
TTGCCAGAGCCTGAGAGAGCGATGTCTCGAGGCGATGATATTCTCACCATCCTGACTGAAGTGAAGTATGAAGT
AAGCAACAAGGATGACAAGAAAAACATGGGGAAACAGATGCCTCAGCCTACTTTCACACTAAGAAAAAACTTGT
CTTCCCTTCTGATTGATGGTGCTATTTTGTGTTTGTGTTTGTGTTTGTGTTTTTGTGTTTTTGTGTTTTTGTG
CGCCCAGGCTGGAGTGCAGTGGCGTGATCTCGGCTCACCGCAAGCTCCGCCTCCCGGGTTCACGCCATTCTCCTG
CCTCAGCCTCCCGAGTAGCTGGGACTACAGGGGCCCCGCCACCACACCTGGCTAATTTTTTAAAAATATTTTAGT
AGAGACAGGGTTTCACTGTGTTAGCCAGGGTGGTCTTGATCTCCTGACCTCGTGATCCACCCACCTCGGCCTCCC
AAAGTGCTGGGATTACAGGCGTGAGCCACCGCGCCTGGCCGATGGTACTATTTAGATATAACACTATGTTTATTT
ACTAATTTTCTAGATTTTCTACTTTATTAATTGTTTTGCACTTTTTTATAAGAGCTAAAGTTAAATAGGATATTA
ACAACAATAACACTGTCTCCTTTCTCTTATGCTTAAGGCTTTGGGAATGTTTTTAGCTGGTGGCAATAAATACCA
GACACGTACAAAATCCAGCTATGAATATAGAGGGCTTATGATTGAGATTGTTATCTATCAACTATAAGCCCACTG
TTAATATTCTATTAACTTTAATTCTCTTTCAAAGCTAAATTCCACACTACCACATTAAAAAAATTAGAAAGTAGC
CACGTATGGTGGCTCATGTCTATAATCCCAGCACTTTGGGAGGTTGAGGTGGGAGGATTTGCTTGAACCCAAGAG
GTCCAAGGCTGCAGTGAGCCATGTTACACCGCTGCACTCAAGCTTGGGTGACAGAGCAAGACCCCGTCCCCAAA
AAAAATTTTTTTTTTAATAAAACAAAATTTGTTTGAAATCTTTTAAAAATTCAAATGATTTTTTACAAGTTTTAAAT
AAGCTCTCCCCAAACTTGCTTTATGCCTTCTTATTGCTTTTATGATATATATATGCTTGGCTAACTATATTGCT
TTTTGCTAACAATGCTCTGGGGTCTTTTTATGCATTTGCATTTGCTCTTTCATCTCTGCTTGGATTATTTTAAAT
CATTAGGAATTAAGTTATCTTTAAATTTAAGTATCTTTTTTCCAAAACATTTTTTAATAGAATAAAATATAATT
TGATCTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 867

MDFSRNLYDIGEQLDSEDLASLKFLSLDYIPQRKQEPKDALMLFQRLQEKRMLEESNLSFLKELLFRINRLDLL
ITYLNTRKEEMERELQTPGRAQISAYRVMLYQISEEVSRSELRSFKFLLQEEISKCKLDDDMNLLDIFIEMEKRV
ILGEGKLDILKRVCAQINKSLLKIINDYEFSKERSSSLEGSPDEFSGQSLPNEKQTSGLSDHQSQFCKS
TGESAQTSQH

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FIGURE 868

AAGCTAAATAAATATAGCTTTATTCATCTTTCAGAGATTGCCATTTAGCCTAGAAAATTACATCAAAAGATGAAC
TGATTTTTGCTTGAAAAAGTCAACCATGTTTAATTGCTCACACAATTTTAATTACAACAGATGTAATTTCTAATA
TATACCATTTCGATCACACACCATTTTTATGTTCTGGAGTGAGACCTGGGAGTATTTTGCTTAAGACTTCTCATT
CTCTAAACTAGCTTTGGCAGTTAACAATGTGGAGAATTCAGCACAAAAAGCACCCCTAGCCCAGCCTTTTTATTT
TATTTTTTTAAATCTCTATTTAACCCCTTCAAAGTTTCCTTTGCAGCCATATGCATTTCTAGGTGGCTCTACCTGT
AGAAGGCTGCACTTCCAAGCGGCGAGGGACTTTAATTCTCACTTXCCACCACTCC

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FIGURE 869

GGCACGAGGGAGGTCTGCATGAAGGGGATCCCCCTACATCGCAGCCTACCAGAAGGAAGTGGCTCATTCCCAGCCG
GCGGTGCAGCCCCGGCTCAAGCTGCTCCTGATGGGGCATAAGGCTGCAGGAAAGACTTTGCTGCGCCACTGCCTC
ACCGAGGAGAGAGTGGAGGGATGCCCAGGAGGAGGGGACAAGGAGAAGTGCTACCCACCGTCACCTCCCCCTGTG
AGCAAGGGCATCGAGGTGACCAGCTGGACGGCCGATGCCTCCCGGGGCCTGCGGTTTCATCGTGTATGACTTAGCT
GGGGATGAAAGTTATGAGGTGATCCAGCCCTTCTTCCTGTCCCCAGGGGCCCTATACGTGCTGGTGGTCAACTTG
GCCACCTATGAGCCTCGCCACTTTCTTACCACCGTGCGGCTCCTTCTTGATCGGGTCGGGCGAGAGTGCCCCAC
GCGGTGGTGTGCATCGTGGGCACCCACGCAGACCTGTGCGGAGAGCGTGAGCTGGAGGAGAAATGTCTGGACATT
CACCGCCAGATCGCCCTGCAGGAGAAGCACGACGCGGAGGGACTGAGCCGCTTGGCCAAGGTGGTGGACGAGGCCA
CTGGCCCCGGGACTTCGAGCTGCGCTCTGCCAGCCCCACGCAGCCTACTATGGCGTTTTCGGACAAGAACCCTTCGA
CGGCGCAAGGCCCATTTTCAATACCTGCTCAACCACCGGCTGCAGATCCTCTCCCCCGTGTTCCTGTTAGCTGC
AGGGACCCGCGCCACTTACGACGCCTTCGGGACAAGTTGCTGTGAGTTGCTGAGCACCGAGAGATCTTCCCCAAC
TTACACAGAGTACTGCCTCGATCCTGGCAGGTGCTGGAGGAACTGCATTTCCAGCCACCTCAGGCCCCAGCGACTG
TGGCTAAGCTGGTGGGACTCGGCGCGCTTGGGCCTGCAGGCGGGTCTGACCGAGGACCGACTGCAGAGTGCCCTC
TCCTACCTGCATGAGAGCGGCAAGCTACTCTACTTTGAGGACAGTCCGGCTCTCAAGGAGCACGTCTTCCACAAC
CTCACCCGCCTCATCGACATCCTCAATGTCTTCTTCCAGAGGGATCCCTCTTTGCTGCTGCATAAGCTGCTCCTA
GGGACCAGTGGAGAGGGCAAGGCGGAGGGGAAAGCTCCCCGCCATGGCGCGGTCCACCCCCAGCCAGGAAGT
CTCCGGGCCACCCAGCTCCATCAGTATGTGGAGGGCTTTCTGTTGCATGGGCTCTTGCCAGCTCATGTCAATTCGG
TTGCTGCTTAAGCCTCATGTCCAGGCCCAGCAGGACTTGACAGCTGTTGCTGGAGCTGCTGGAGAAGATGGGACTC
TGTTACTGCCTCAATAAACCCAAGGGCAAGCCTTTGAATGGGTCCACAGCTTGGTACAAGTTCCCATGCTATGTG
CAGAACGAGGTGCCCCATGCAGAAGCCTGGATTAATGGGACCAACCTAGCTGGGCAGTCTTTTGTTGGCTGAGCAG
TTGCAGATTGAATATAGCTTTTCTTTTACTTTTCCACCTGGGTTGTTTGCACGCTACAGTGTCCAGATCAACAGC
CATGTGGTGCACAGGTTCGGATGGTAAATTTAGATCTTTGCCTATAGAGGGAAAGTTTCTGTGGTTGTGAGTTAC
AGACCTGCCAGGGGAGTCTGCAGCCAGACACCCTGTCCATTGCTAGCCATGCATCATTACCAAATATATGGACC
GCATGGCAAGCCATAACCCCTTGGTGGAGGAACTGAATGTCTTACTTCAGGAATGGCCTGGACTGCACTACACC
GTGCACATTCTCTGTTCTAAGTGCCTTAAGAGAGGATCGCCCAATCCACATGCTTTTCCAGGGGAGTTGCTGAGT
CAGCCCAGACCGGAAGGAGTGGCAGAGATCATTTGCCCCAAGAACGGCAGCGAGCGAGTAAATGTTGCCTTGGTT
TACCCACCCACGCCGACTGTGATCAGCCCCTGTTCCAAGAAGAATGTTGGTGAAAAGCACAGAAACCAGTGACGT
TTGTGGCTGTGGAATTTCCATGGAGAAAAGAGAGCATCTGAACACCTGGACCATCTTTTGACCTGGCAGACCCCT
CTGCACTCACCCACGCGTGTCTGTGAACTTGAGTGACAACGCGTGCTTGACGGGTGCTTTTTTGATGACTGGGG
AAGAGGTGGGGAGGGGTGGTGGGGGAAGCATGGACGAGAACATGGAGCAAATGTTTTACAACCTGAACCTCAG
AACTGTGATCCTCCAAGGAGCGCGCTACTTGAAGAAAAAAAAAAAAAAAAAAAAA

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FIGURE 870

ATGCGGGAGATCGTGCACATCCAGGCCGGCCAGTGCGGCAACCAGATCGGGGCCAAGTTCTGGGAAGTCA~~T~~CAGT
GATGAGCATGGCATCGACCCCAGCGGCAACTACGTGGGCGACTCGGACTTGCAGCTGGAGCGGATCAGCGTCTAC
TACAACGAGGCCTCTTCTCACAAGTACGTGCCTCGAGCCATTCTGGTGGACCTGGAACCCGGAACCATGGACAGT
GTCCGCTCAGGGGCCTTTGGACATCTCTTCAGGCCTGACAATTTTCATCTTTGGTCAGAGTGGGGCCGGCAACAAC
TGGGCCAAGGGTCACTACACGGAGGGGGCGGAGCTGGTGGATTCCGGTCTGGATGTGGTGCAGGAGGAGTGTGAA
AACTGCGACTGCCTGCAGGGCTTCCAGCTGACCCACTCGCTGGGGGGGGGACGGGCTCCGGCATGGGCACGTTG
CTCATCAGCAAGGTGCGTGAGGAGTATCCCGACCGCATCATGAACACCTTCAGCGTCGTGCCCTCACCCAAGGTG
TCAGACACGGTGGTGGAAACCCTACAACGCCACGCTGTCCATCCACCAGCTGGTGGAAAACACGGATGAAACCTAC
TGCATCGACAACGAGGCGCTCTACGACATCTGCTTCCGCACCCTCAAGCTGGCCACGCCCACCTACGGGGACCTC
AACCACCTGGTATCGGCCACCATGAGCGGAGTCACCACCTCCTTGCGCTTCCCGGGCCAGCTCAACGCTGACCTG
CGCAAGCTGGCCGTCAACATGGTGCCCTTCCCGCGCCTGCATTCTTCATGCCCGGCTTCGCCCCCTCACCCAGG
CGGGGCAGCCAGCAGTACCGGGCCCTGACCGTGCCCGAGCTCACCAGCAGATGTTGATGCCAAGAACATGATG
GCCGCTGCGACCCGCGCCACGGCCGCTACCTGACGGTGGCCACCGTGTTCCGGGGCCGCATGTCCATGAAGGAG
GTGGACGAGCAGATGCTGGCCATCCAGAGCAAGAACAGCAGCTACTTCGTGGAGTGGATCCCCAACAACGTGAAG
GTGGCCGTGTGTGACATCCCGCCCCGCGGCCTCAAGATGTCCTCCACCTTCATCGGGAACAGCACGGCCATCCAG
GAGCTGTTCAAGCGCATCTCCGAGCAGTTCACGGCCATGTTCCGGCGCAAGGCCTTCCTGCACTGGTACACGGGC
GAGGGCATGGACGAGATGGAGTTCACCGAGGCCGAGAGCAACATGAACGACCTGGTGTCCGAGTACCAGCAGTAC
CAGGACGCCACGGCCGAGGAAGAGGGCGAGATGTACGAAGACGACGAGGAGGAGTCGGAGGCCACGGGCCCCAAG
TGAAACTGCTCGCAGCTGGAGTGAGAGGCAGGTGGCGGCCGGGGCCGAAGCCAGCAGTGTCTAAACCCCCGAGC
CATCTTGCTGCCGACACCCTGCTTTCCCCATCGCCCTAGGGCTCCCTTGCCGCCCTCCTGCAGTATTTATGGCCT
CGTCTCCCCACCTAGGCCACGTGTGAGCTGCTCCTGTCTGTCTTATTGCAGCTCCAGGCCTGACGTTTTTAC
GGTTTTGTTTTTTACTGGTTTGTGTTTATATTTTCGGGGATACTTAATAAATCTATTGCTGTGAGATACCCCTT

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FIGURE 871

MREIVHIQAGQCGNQIGAKFWEVISDEHGIDPSGNYVGDSDLQLERISVYYNEASSHKYVPRAILVDLEPGTMDS
VRSGAFGHLFRPDNFI FGQSGAGNNWAKGHYTEGAELVDSVLDVVRKECENCDCLOGFQLTHSLGGGTGSGMGT
LISKVREEYPDRIMNTFSVVPSPKVSDTVVEPYNATLSIHQLVENTDETYCIDNEALYDICFRTLKLATPTYGDL
NHLVSATMSGVTTSLRFPQQLNADLRKLAVNMVFPRLHFFMPGFAPLTRRGSQQYRALTVPELTQQMFDAKNMM
AACDPRHGRYLTVATVFRGRMSMKEVDEQMLAIQSKNSSYFVEWIPNNVKVAVCDIPPRGLKMSSTFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVSEYQQYQDATAEEEGEMYEDDEESEAQGPK

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FIGURE 872

ACGCCCTATACAACCTTGGCTTCACATACTTTTACACTAACTTTTATATGATTTTTAAAACTGGTCTGATCGGACT
TCTCGTCCTGGGACACTGTTTACTGGAGTCTGGCCGGCTCTCCGTGCTCCTCTTGGTACCTCATTITGGGGAGAA
CCTTAAACCCACTCGAGCAGATAATCTCCGCCCTTGACCGGTGCCACCAAAGAAGGGTTGGAACCAATGTGGACTTT
TCTGGGCATTGCCACTTTACCTATTTTTATAAGAAGTTCGGGGACTTCATCACTTTGGCCAAACAGGGAGGTCTCT
GTTGTGCGTGCTGGTGTTCCTCTCGCTGGGCCCTGGTGCTCTCCTACCGCTGTGCGCCACCGAAACGGGGGTCTCCT
CGGGCGCCAGCGGAGCGGCTCCAGTTCGCCCTCTTCTCGGATATTCTCTCAGGCCTGCCTTTTCATTGGCTTCTT
CTGGGCCAAATCCCCCCTGAATCAGAAAATAAGGAGCAGCTCGGGGCCAGGAGGCGCAGAAAAGGAACCAATAT
TTCAGAAACAAGCTTAATAGGAACAGCTGCCTGTACATCAACATCTTCTCAGAATGACCCAGAAGTTATCATCGT
GGGAGCTGGCGTGCTTGGCTCTGCTTTGGTAGCTGTGCTTTCCAGAGATGGAAGAAAGGTGACAGTCATTGAGAG
AGACTTAAAAGAGCCTGACAGAATAGTTGGAGAATTCTCGAGCCGGGTGGTTATCATGTTCTCAAAGACCTTGG
TCTTGGAGATACAGTGAAGGICTTGATGCCCAGGTTGTAAATGGTTACATGATTGATCAGGAAAGCAAATC
AGAGGTTGAGATTCTTACCCTCTGTCTAGAAAACAATCAAGTGCAGAGTGAAGAGCTTCCATCACGGAAGATT
CATCATGAGTCTCCGGAAAGCAGCTATGGCAGAGCCCAATGCAAAGTTTATTGAAGGTGTTGTGTTACAGTTATT
AGAGGAAGATGATGTTGTGATGGGAGTTCACTACAAGGATAAAGAGACTGGAGATATCAAGGAACTCCATGCTCC
ACTGACTGTTGTTGCAGATGGGCTTTTCTCCAAGTTCAGGAAAAGCCTGGTCTCCAATAAAGTTTCTGTATCATC
TCATTTTGTGGCTTTCTTATGAAGAATGCACCACAGTTTAAAGCAAATCATGCTGAACTTATTTTAGCTAACC
GAGTCCAGTTCTCATCTACCGGATTTTCATCCAGTGAAACTCGAGTACTTGTGACATTAGAGGAGAAATGCCAAG
GAATTTAAGAGAATACATGGTTGAAAAAATTTACCCACAAATACCTGATCACCTGAAAGAACCATTCTTAGAAGC
CACTGACAATTCTCATCTGAGGTCCATGCTAGCAAGCTTCCTTCCTCCTTCATCAGTGAAGAAACGAGGTGTTCT
TCTTTTGGGAGACGCATATAATATGAGGCATCCACTTACTGGTGGAGGAATGACTGTTGCTTTTAAAGATATAAA
ACTATGGAGAAAACCTGCTAAAGGGTATCCCTGACCTTTATGATGATGCAGCTATTTTCGAGGCCAACAAATCATT
TTACTGGGCAAGAAAAACATCTCATTCCCTTGTGCTGAATATCCTTGCTCAGGCTCTTTATGAATTATTTTCTGC
CACAGATGATTCCCTGCATCAACTAAGAAAAGCCTGTTTCTTTATTTCAAACCTGGTGGCGAATGTGTTGCGGG
TCCTGTTGGGCTGCTTTCTGTATTGTCTCCTAACCCCTCTAGCTTTAATTGGACACTTCTTTGCTGTTGCAATCTA
TGCCGTGATTTTTGCTTTAAGTCAGAACCTTGGATTACAAAACCTCGAGCCCTTCTCAGTAGTAGTGCTGTATT
GTACAAAGCGTGTTCTGTAATATTTCTCTAATTTACTCAGAAATGAAGTATATGGTTTCATTAAGCTTAAAGGGG
AACCATTTGTGAATGAATATTTGGAACCTTACCAAGTCCTAAGAGACTTTTGGAGAGGATATATATAGCATAGTA
CCATACCACTTATAAAGTGGAAACTCTTGGACCAAGATTGGATTAAATTTGTTTTTGAAGTTTTTGTATATAAA
TATGTAAATACATGCTTTAATTTGCAATTTAAAATGAAGGGGTAAATAAGTTAGACATTTGAAAGAAATGATTG
TTACCATAAATTAGTGCTAATGCTGAGGAGAACTACAGTTTTTCTTTTGAATTTAGTATTTGAGATGAGTTGTTG
GGACATGCAATAAAATGAAGAATGAC

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FIGURE 873

MWTF LGIATFTYFYKKFGDFITLANREVLLCVLVFLSLGLVLSYRCRHRNGG LLGRQRSGSQFALFSDILSGLPF
IGFFWAKSPPESENKEQLGARRRRKGTNISE TSLIGTAACTSTSSQNDPEVIIVGAGVLGSALVAVLSRDGRKVT
VIERDLKEPDRI VGEFLQPGGYHVLKDLGLGDTVEGLDAQV VNGYMIHDQESKSEVQIPYPLSENNQVQSGRAFH
HGRFIMSLRKAAMAEPNAKFIEGVVLQ LLEEDDVVMGVQYKDKETGDIKELHAPLTVVADGLFSKFRKSLVSNKV
SVSSH FVGFLMKNAPQFKANHAELILANPSPVLIYRISSETRVLVDIRGEMPRNLREYMVEKIYPQIPDHLKEP
FLEATDNSHLRSMLASFLPPSSVKKRGV LLLGDAYNMRHPLTGGGMTVAFKDIKLWRKLLKGIPDLYDDAAIFEA
NKSFYWARKTSHSEFVNILAQALYELFSATDDSLHQLRKACFLYFKLGGE CVAGPVGLLSVLSPNPLALIGHFFA
VAIYAVYFCFKSEPWITKPRALLSSSAVLYKACSVIFPLIYSEM KYMVH

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FIGURE 874

GGCGCCATTTTGTGAGCCTGCGACCGAGTGGGAGTGGAGTGGAGCGGCTGTGGTTGCCGACTCTTTCCTCTTC
CCCACGGTCCAGTCAGCGGGTTAATTAGGCCATCGGCCCTCGAGCCGAGACTTGTCTCTTATTTAGTTCTGGGGA
GCGCCTCGTCGACATGAGTGTGAGGAGGAAAAACAACCTTCGAGGGCAGAGTGAGTACAAAGCCGCGGGAGCCGTC
TAGGCGGCGGCCCAATGCTCGGGGTTTACGAGGAAACAAGCGCGGTTCGGGCGGGGTTGCGGGTAGTCCCGCGAGGA
GCAACCTCTGGAGCCATCGCGATTGATTCTCTCCCATCCCAAGATGGCTTCTGGGTTCCACTCCTTCCCCAAACAC
CACGGATAACACCCCTCCCCCTTTTTTGGAGGCTGACTGATACCTGGACTTCTGGGTCTCTTCCCTCCCCGCC
CCGATTGCTTCTCTCTTCTCCCCACCCCTGAGGCTTCTTATGTCTGCTCCGAGGTGTGGGTCCCCGTGCGG
TTGGGCGGGAGGAGGCGGCAGGGAGCTCCCCCTCCGTCGGGATAGTGGTAGGTGCTTCTGCGGTGGCATTTCTGG
CGACCCCGAGCATCGTAGAGGGTCTCGGGATCGAAAGTGC GCGGGGCTGCTTTCCGGGCGGGGAGAAGCTGGCGT
GGGACTAGCTGGGGCCTGTGTCTCTTGGCTCTCTATTTTCACTGAGCGGCCGCTCTCTGTTGGAACCGCGGCG
TTGCGTCTAAAAAGGCGAAAGCCTTGAGGTTGAAGGTGGGACGAGCCTAATGAAGTGGTTAGTCAACGACCGCAC
CGACCCCTAAGCGTTCTTAAGACGAGAGCTGTGAGGGGAAACTACGCAAGGAGCCCTTTTCCCTTAATGTCCCTT
CGACTTTCTTTTCACTTCGAAATGAATGTGGAATGCTGTACGCCTTATTTTTCTAATTCCTCGATGTTGGGT
TTTTCTCTTCTTTATATCTCAACTTTTAAATGCTCTTCTTCTATGACCTTTTCTAATAAACTGACCACTCTTT
ACAGGTTTTTACGGTAAAAAATCGGTCTTCTTTAATCTTACATAGCTGAACGAATTCATTGGCTCAG
TATTTTTAAGATAACTAGTCAGTATATACTGTTCTGTAACTTAAAGATGACCTGAAAATTAACAGGCCCTCTCC
CATTTCTCTTCTCACTCTATCCCCACCGAAGAGGGCTCAGAAAAAGTTTTTATTAATATATTTGGGGTCGGAG
AAATACAAACATCACAAAGAATACGATATCCCCAGCTTAAATGTACTGGAACGTTTGTGAGTGAGTTTCATTTC
AAAGTTTACCCTACATAGGGAATTGTAGAAGTGAGTTAGTAGAAGTGAGTTCGTGTGAAACCCTGGAAAGAAAC
AAAAGCCCCATGCAACACGTTCCGGGCTGTTGTGTAGATGTTTATTCTAGTCACTAGGGGAAGCACATAAAAAACA
CCTGAGGTGTGTGTGCTGAAGGGCGAATTTTGTCTTTTGGGGAGTTTCATGATATAAACATCTAGAACCAAAAAG
TCAAATCAGAAGGTCAGTTTAGGCTTTAGTTCTCTTTGAGGAAAGATTTAAAGCAATAGACTATAATAGTTACCC
GGTAGACTAAAAAATTTGCCTTTAATTCTTTTATTGATTGGAATTTTTTTTACAAAGTTTGGAGCATGGAAACAAAT
GAAAATTGAACCTGCTTATTTTTTAGGATGGTGTATTGATGGCCCCAACAGAACTTTCTAAAATCATGCGATAAA
CATATATGATAGTAGTTGTAAATGCTTCTTGTGTTTGAAGATGTTGAGTAATTATCGATAGAAATTTTGTGTCC
ATTCATACATTCTTCAATTAACCTTTTATTGTTAAAAAATTGGGGGATTGATGTTTGGTTTGGTTTGTGGGGAGT
GAAGAGGACTACTGGAGGGACCTTGTGTTGCTTCTTTTCTTTTTTAAATTTATCATCAAGTCTAGGAAAGGA
GTAAGTTGCCGACAATTGTCACCTTTCCCTCCTAAGAAAGTAACATGTTAAGATTCCCACCTACCAGCCTGGGTG
ACAGTGAGACTCCCGTCTCNNNNNNNNNNNNNNNNNNNTTCCCAACCACTTTTAAGCTAAAGTATATGTAGGCA
TTAAAGATTTATTTAATAGAAATAAAGGGCCCTCTTACGGCCCTTTGTGGTCATAGGAAATATTTTTTTCACAAG
TGGTACCCAAGTGATTT

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FIGURE 875

RHFAGACDRVGVEWSGCGCRLFPLPHGPVSGGLIRPSALEPRLVSYLVLSASST

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FIGURE 876

CCGCCGCCGCGCCATCTGAGGGAGGTACCCTGGAAACCACCTTTTATCGGTGGGGAAGTGCAGTCGCGGTGGGCGGC
TCTGGGGGCCAGCGAAACGGGAGGCCTCTAAATCTTTAGGTTGGGGCTGCATTGCCCTGGAGCCGCACTCTTGAG
TCCGAGGCCATCTTTTGTGGAGAAGGCGTCGGCGTTGGCGTTTTCCCGAGGTTGGGCTGTACAGTGTCTCCGTC
CGCGGAAAAAGAAGCCTCTGAACCCGCGCCGGCCCGCAGCCCCCGTGCCTTCCGGCCGCTGCTCGCCGTCGCCAG
AGGCTAGGCCACGTTTCCCCCAGTGCCGAGGTGTTTCTGTGACCCTCCCTCCACTCCCATTCCCTTCTGAAAGGG
CACCTGCTCTTGGTGAGAAAAGAAATTATAGCACGAAGAGCCAGTATCAGAAGAGTATCCATCACCCGCAGCAAC
CGCTCAGGGAACACCATCAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 877

CTCGACTCTTAGCTTGTCGGGGACGGTAACCGGGACCCGGTGTCTGCTCCTGTGCGCTTCGCCTCCTAATCCCTA
GCCACTATGCGGTGAGTGCACTCTCCATCCACGTTGGCCAGGCTGGTGTCCAGATTGGCAATGCCTGCTGGGAGCTC
TACTGCCTGGAACACGGCATCCAGCCCGATGGCCAGATGCCAAGTGACAAGACCATTGGGGGAGGAGATGACTCC
TTCAACACCTTCTTCAGTGAGACGGGCGCTGGCAAGCACGTGCCCCGGGCTGTGTTTGTAGACTTGGAACCCACA
GTCATTGATGAAGTTCGCACCTGGCACCTACCGCCAGCTCTTCCACCCTGAGCAGCTCATCACAGGCAAGGAAGAT
GCTGCCAATAACTATGCCCCGAGGGCACTACACCATTGGCAAGGAGATCATTGACCTTGTGTTGGACCGAATTGCGC
AAGCTGGCTGACCAGTGACCGGTCTTCAGGGCTTCTTGGTTTTCCACAGCTTTGGTGGGGGAAGTGGTTCTGGG
TTCACCTCCCTGCTCATGGAACGTCTCTCAGTTGATTATGGCAAGAAAGTCCAAGCTGGAGTTCTCCATTTACCCA
GCACCCAGGTTTCCACAGCTGTAGTTGAGCCCTACAACCTCCATCCTCACCACCCACACCACCTGGAGCACTCT
GATTGTGCCTTCATGGTAGACAATGAGGCCATCTATGACATCTGTGCTAGAAACCTCGATATCGAGCGCCCAACC
TACACTAACCTTAACCGCCTTATTAGCCAGATTGTGTCTCCATCACTGCTTCCCTGAGATTTGATGGAGCCCTG
AATGTTGACCTGACAGAATTCCAGACCAACCTGGTGCCCTACCCCCGCATCCACTTCCCTCTGGCCACATATGCC
CCTGTCATCTCTGCTGAGAAAGCCTACCATGAACAGCTTTCTGTAGCAGAGATCACCAATGCTTGCTTTGAGCCA
GCCAACCAGATGGTGAAATGTGACCCTCGCCATGGTAAATACATGGCTTGCTGCCTGTTGTACCGTGGTGACGTG
GTTCCCAAAGATGTCAATGCTGCCATTGCCACCATCAAAACCAAGCGCAGCATCCAGTTTGTGGATTGGTGCCCC
ACTGGCTTCAAGGTTGGCATCAACTACCAGCCTCCCACTGTGGTGCTGGTGGAGACCTGGCCAAGGTACAGAGA
GCTGTGTGCATGCTGAGCAACACCACAGCCATTGCTGAGGCCTGGGCTCGCCTGGACCACAAGTTTGACCTGATG
TATGCCAAGCGTGCTTTTGTTCAGTGGTACGTGGGTGAGGGGATGGAGGAAGGCGAGTTTTAGAGGCCCGTGAA
GATATGGCTGCCCTTGAGAAGGATTATGAGGAGGTTGGTGTGGATTCTGTTGAAGGAGAGGGTGAGGAAGAAGGA
GAGGAATACTAAATTATCCATTCTTTTGGCCCTGCAGCATGTCATGCTCCCAGAATTCAGCTTCAGCTTAACTG
ACAGACGTTAAAGCTTCTGTTAGATTGTTTTCACTTGGTGATCATGTCTTTCCATGTGTACCTGTAATATTT
TTCCATCATATCTCAAAGTAAAGTCATTAACATCAAAAAAAAAAAAAAAAAA

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FIGURE 878

MRECISIHVGQAGVQIGNACWELYCLEHGIQPDGQMPSDKTIGGGDDSFNTFFSETGAGKHVPRAVFVDLEPTVI
DEVRTGTYRQLFHPEQLITGKEDAANNYARGHYTIGKEIIDLVLDRIKRLADQCTGLQGFLVFHSFGGGTGSGET
SLLMERLSVDYGGKSKLEFSIYPAPQVSTAVVEPYNSILTTHTTLEHSDCAFMVDNEAIYDICRRNLDIERPTYT
NLNRLISQIVSSITASLRFDGALNVDLTEFQTNLVPYPRIHFFLATYAPVISAEKAYHEQLSVAEITNACFEPAN
QMVKCDPRHGKYMCCLLYRGDVVPKDVNAAIATIKTKRSIQFVDWCPTGFKVGINYQPPTVVPGGDLAKVQRAV
CMLSNTTAIAEAWARLDHKFDLMYAKRAFVHWYVGEGMEEGEFSEAREDMAALEKDYEYVGVDSVEGEGEEEGEE
Y

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FIGURE 879

GGCACGAGGCAGTAGCTCCCGTTGCGGCGGCACCCGTGGCAGCCCTGGCGGACGCAGGAGCGATGGCAGCGACCG
ATATAGCTCGCCAGGTGGGTGAAGGTTGCCGAACGTGTCCTCCCTGGCTGGACATGTGGGGTTTGACAGCTTGCCTG
ACCAGCTGGTGAATAAGTCCGTCAGCCAGGGCTTCTGCTTCAACATCCTGTGCGTGGGAGAGACAGGTTTGGGCA
AGTCCACCCTCATGGACACCCTGTTCAACACCAAATTCGAAGGGGAGCCAGCCACCCACACACAGCCGGGTGTCC
AGCTCCAGTCTAATACCTATGACCTCCAAGAGAGCAACGTGAGGCTAAAGCTCACGATCGTTAGCACAGTTGGCT
TTGGGGACCAGATCAACAAAGAGGACAGCTACAAGCCTATCGTGGAATTCATCGATGCACAATTCGAGGCCTACC
TGCAGGAAGAGCTAAAGATCCGAAGAGTGCTACACACCTACCATGACTCCCGAATCCATGTCTGCTTGTATTTC
TTGCCCCACGGGTCATTCCCTGAAGTCTCTGGACCTAGTGACTATGAAGAAGCTGGACAGTAAGGTGAACATCA
TCCCCATCATTGCCAAAGCAGATGCCATTTCAAGAGTGAGCTAACAAAGTTCAAAATCAAAATCACCAGCGAGC
TTGTTCAGCAACGGAGTCCAGATCTATCAGTTTCTTACAGATGATGAGTCGGTGGCAGAGATCAATGGAACCATGA
ACGCCCACCTGCCGTTTGCTGTCTATTGGCAGCACAGAAGAACTGAAGATAGGCAACAAGATGATGAGGGCGCGGC
AGTATCCTTGGGGCACTGTGCAGGTTGAAAACGAGGCCCCACTGCGACTTTGTGAAGCTGCGGGAGATGCTGATTC
GGGTCAACATGGAGGATCTGCGGGAGCAGACCCACACCCGGCACTATGAGCTGTATCGCCGCTGTAAGCTGGAGG
AGATGGGCTTCAAGGACACCGACCCTGACAGCAAACCTTTCAGTTTACAGGAGACATATGAGGCCAAAAGGAACG
AGTTCTTAGGGGAACCTCCAGAAAAAAGAGAGGAGATGAGACAGATGTTTCGTCCAGCGAGTCAAGAGAGAAAG
CGGAGCTCAAAGAGGCAGAGAAAGAGCTGCACGAGAAGTTTGACCGTCTGAAGAACTGCACCAGGACGAGAAGA
AGAACTGGAGGATAAGAAGAAATCCCTGGATGATGAAGTGAATGCTTTCAAGCAAAGAAAGACGGCGGCTGAGC
TGCTCCAGTCCCAGGGCTCCCAGGCTGGAGGCTCACAGACTCTGAAGAGAGACAAAGAGAGAAAAAACTTTTTTT
AATCTTGTCTTCAGCAGCTGCACTAAGTCTAAAGGAGAAGACTGCCATTATAGAAGAGTTAGGGTTCCATATTGT
CTCAAATCAGAAATCAACCAATTTCTCTCCCTCAAACCTGCAAGCACACACACATACACCACACCACTCAACAA
GTGTTTCATGTGTCCCTGTGTCCAGGCAAGAAGCTCTCTTCTGACTCACATGGTATTTTAAATGGAAGTGTCTTG
TCCTAACTAACAAGGCAGGAAAAAGAACCATCAGAGCTGGAAAATGGACGAAATGTAACCTCAGAGAAACAACTAC
AGGACCACTCACCAAGTGTAAGTGACTGGGGCAGGACACCTCAGCTGTGGGTATGAAAGTACTGTTCTGTTCAC
AAGGTTTTGTTTGAGTTTTATGTTTTCTTTTAAACATTTCTCTGGTTTCGATGGGTTGACTGTCTACAGCCACTG
TTAAACATTTCTGAATATGCAAGAGAAAGTCAAGTGACATTTGTATCTTCTTCAGCATTGCGAGACCTTCTATAG
ATTCCAGCAAAGGGGAAAAATGTATCCACTATCTAACACTTAGGTAGAGAAGGGAGGGGGTTTAAGCTTAGTGAG
GGCAAATTAATCCATTCCACCTTCCGAGACCAGTTAGGGTTTTGAGAGAGGTTTCTGCTCAACCTGGGATCTGG
AGGGAGAGCTTTGATGTTGGTAAATCTGCCTTGAATTCATTGGTTTTAACTTGCATCAAAATACCATGTGAGTGTG
CTCATTCTCATATATCCCTACCACCATCACCACCATCTGCTGTTTCAGTGTCTCTTGAGAGAGCCTCTTTGCAT
GTTTTCCAGAATCTGTGTGTGTTTTCTTTCTTCTCCTTTGTTCTTTTTGCTCAAAGGTGTGACCAGTCATTGC
CCCTCTGGGGCTTTTCTTCTCCAGGAGAAACATCCCAGAACCAGCACTGTTTAGCCTGATACCTTTCTAATGTCC
ATGTCAATTTTCAATAAAATTCAAAGAAATGCTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 880

MAATDIARQVGEgcRTVPLAGHVGFDSLpDQLVNKSvSQGFCFNILCVGETGLGKSTLMDTLFNTKFEGEPATHT
QPGVQLQsNTYDLQESNVRLKLTIvSTVGFGDQINKEDSYKPIVEFIDAQFEAYLQEELKIRRVLHTYHDSRIHV
CLYFIAPTGHSLKSLDLVTMKKLDskvNIIPiIAKADAISKSELTKFKIKITSELVSNGVQIYQFPtDDESVAEI
NGTMNAHLpFAVIGSTEELKIGNKMMRARQYPWGTvQVENEAHCDfVKLREMLIRVNMEDLREQTHTRHYELyRR
CKLEEMGFkDTPDSKpFSLQETYEAKRNEFLGELQKKEEEMRQMFVQRVKEKEAELKEAEKELHEKFDRLKkLH
QDEKKKLEDKKKSLDDEVNAFKQRKTAaELLQSQGSQAGGSQTLKRdKEKKNFF

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FIGURE 881

ATCAGCGAGGGATTACGGCGAAATGAGACTGTTTCGTGAGTGATGGCGTCCCGGGTTGCTTGCCGGTGCTGGCCG
CCGCCGGGAGAGCCCGGGGCAGAGCAGAGGTGCTCATCAGCACTGTAGGCCCGGAAGATTGTGTGGTCCCGTTCC
TGACCCGGCCTAAGGTCCCTGTCTTGACAGCTGGATAGCGGCAACTACCTCTTCTCCACTAGTGCAATCTGCCGAT
ATTTTTTTTTTGTATCTGGCTGGGAGCAAGATGACCTCACTAACCAGTGGCTGGAATGGGAAGCGACAGAGCTGC
AGCCAGCTTTGTCTGCTGCCCTGTACTATTTAGTGGTCCAAGGCAAGAAGGGGGAAGATGTTCTTGGTTTCAGTGC
GGAGAGCCCTGACTCACATTGACCACAGCTTGAGTCGTGAGAACTGTCCTTTCTGGCTGGGGAGACAGAATCTC
TAGCCGACATTGTTTTGTGGGGAGCCCTATACCCATTACTGCAAGATCCCGCCTACCTCCCTGAGGAGCTGAGTG
CCCTGCACAGCTGGTTCCAGACACTGAGTACCCAGGAACCATGTCAGCGAGCTGCAGAGACTGTACTGAAACAGC
AAGGTGTCCTGGCTCTCCGGCCTTACCTCCAAAAGCAGCCCCAGCCCGCTGAGGGAAGGGCTGTCACCA
ATGAGCCTGAGGAGGAGGAGCTGGCTACCCTATCTGAGGAGGAGATTGCTATGGCTGTTACTGCTTGGGAGAAGG
GCCTAGAAAGTTTGGCCCCGCTGCGGCCCCAGCAGAATCCAGTGTGCTGTGGCTGGAGAAAGGAATGTGCTCA
TCACCAGTGCCTCCCTTACGTCAACAATGTCCCCACCTTGGGAACATCATTGGTTGTGTGCTCAGTGCCGATG
TCTTTGCCAGGTACTCTCGCCTCCGCCAGTGGAACACCCCTCTATCTGTGTGGGACAGATGAGTATGGTACAGCAA
CAGAGACCAAGGCTCTGGAGGAGGGACTAACCCCCAGGAGATCTGCGACAAGTACCACATCATCCATGCTGACA
TCTACCGCTGGTTTAAACATTTTCGTTTGATATTTTTTGGTCGCACCACCCTCCACAGCAGACCAAAATCACCCAGG
ACATTTTCCAGCAGTTGCTGAAACGAGGTTTTTGTGCTGCAAGATACTGTGGAGCAACTGCGATGTGAGCACTGTG
CTCGCTTCTCGGCTGACCGCTTCTGTTGGAGGGCGTGTGTCCTTCTGTGGCTATGAGGAGGCTCGGGGTGACCACT
GTGACAAGTGTTGGCAAGCTCATCAATGCTGTGCGAGCTTAAGAAGCCTCAGTGTAAGTCTGCCGATCATGCCCTG
TGGTGCAGTCGAGCCAGCACCTGTTTCTGGACCTGCCTAAGCTGGAGAAGCGACTGGAGGAGTGGTTGGGGAGGA
CATTGCCTGGCAGTGACTGGACACCCAATGCCAGTTTATCACCCGTTCTTGGCTTCCGGATGGCCTCAAGCCAC
GCTGCATAACCCGAGACCTCAATGGGGAACCCCTGTACCCTTAGAAGGTTTTGAAGACAAGGTATTCTATGTCT
GGTTTGATGCCACTATTGGCTATCTGTCCATCACAGCCAACTACACAGACCAGTGGGAGAGATGGTGAAGAACC
CAGAGCAAGTGGACCTGTATCAGTTTCATGGCCAAAGACAATGTTCCCTTTCCATAGCTTAGTCTTTCTTCTGCTCAG
CCCTAGGAGCTGAGGATAACTATACCTTGGTCAGCCACCTCATTGCTACAGAGTACCTGAACTATGAGGATGGGA
AATTCTCTAAGAGCCGCGGTGTGGGAGTGTGTTGGGGACATGGCCCAGGACACGGGGATCCCTGCTGACATCTGGC
GCTTCTATCTGCTGTACATTGCGCCTGAGGGCCAGGACAGTGCTTTCCTGACGGACCTGCTGCTGAAGAATA
ATTCTGAGCTGCTTAACAACCTGGGCAACTTCATCAACAGAGCTGGGATGTTTGTGTCTAAGTTCTTTGGGGGCT
ATGTGCCTGAGATGGTGTCTACCCCTGATGATCAGCGCCTGCTGGCCCATGTACCCCTGGAGCTCCAGCACTATC
ACCAGCTACTTGAGAAGGTTTCGGATCCGGGATGCCTTGCGCAGTATCCTCACCATATCTCGACATGGCAACCAAT
ATATTCAGGTGAATGAGCCCTGGAAGCGGATTAAAGGCAGTGAGGCTGACAGGCAACGGGCAGGAACAGTGACTG
GCTTGGCAGTGAATATAGCTGCCTTGCTCTCTGTGTCATGCTTCAGCCTTACATGCCACGGTTAGTGCCACAATCC
AGGCCCAGCTGCAGCTCCCACCTCCAGCCTGCAGTATCCTGCTGACAACTTCTGTGTACCTTACCAGCAGGAC
ACCAGATTGGCACAGTCAGTCCCTTGTTCCAAAAATTGGAAAAATGACCAGATTGAAAGTTTAAAGGCAGCGCTTTG
GAGGGGGCCAGGCAAAAACGTCCCCGAAGCCAGCAGTTGTAGAGACTGTTACAACAGCCAAGCCACAGCAGATAC
AAGCGCTGATGGATGAAGTGACAAAACAAGGAAACATTGTCCGAGAACTGAAAGCACAAAAGGCAGACAAGAACG
AGGTTGCTGCGGAGGTGGCGAAACTCTTGGATCTAAAAGAAACAGTTGGCTGTAGCTGAGGGGAAACCCCTGAAG
CCCCTAAAGGCAAGAAGAAAAAGTAAAGACCTTGGCTCATAGAAAGTCACTTTAATAGATAGGGACAGTAATAA
ATAAATGTACAATCTCTATA

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FIGURE 882

MRLFVSDGVPGLPVLAAAGRARGRAEVLISTVGPEDCVVPFLTRPKVPVLQLDSGNYLFSTSAICRYFFLLSGW
EQDDL TNQWLEWEATELQPALSAALYYLVVQGKKGEDVLGSVRRALTHIDHSLSRQNC PFLAGETESLADIVLWG
ALYPLLQDPAYLPEELSALHSWFQTLSTQEPQRAAETVLKQQGV LALRPYLQKQPQSPAEGRAVTNEPEEEEL
ATLSEEEIAMAVTAWEGLES LPPLRPQONPVL PVAGERNVLITSALPYVNNVPHLGNIIGCVLSADV FARYSRL
RQWNTLYLCGTDEYGTATETKALEEGLTPQEICDKYHIIHADIYRWFNISFDIFGRTTTT PQQTKITQDIFQQLLK
RGFVLQDTVEQLRCEHCARFLADRFVEGVCPFCGYEEARGDQCDKCGKLINAVELKKPQCKVCRSCP VVQSSQHL
FLDLPKLEKRLEEWLGRTLPGSDWTPNAQFITRSWLRDGLKPRCITRDLKWGTPVPLEGFEDKV FYVWFDATIGY
LSITANYTDQWERWWKNPEQVDLYQFMAKDNVPFHSLVFPSCSALGAEDNYTLVSHLIATEYLN YEDGKFSKSRGV
GVFGDMAQDTGIPADIWRFYLLYIRPEGQDSAFSWTDLLLKNNSELLNNLGNF INRAGMFVSKFFGGYVPEMVL T
PDDQRLLAHVTLLELQHYHQLLEKVRIRDALRSILTISR HGNQYIQVNEPWKRIKGSEADRQRAGTVTGLAVNIAA
LLSVMLQPYMPTVSATIQAQLQLPPPAC SILLTNFLCTL PAGHQIGTVSPLFQKLENDQIESLRQRFGGGQAKTS
PKPAVVETVTTAKPQQIQALMDEVTKQGNIVRELKAQKADKNEVAAEVAKLLDLKKQLAVAEGKPPEAPKGKKKK

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FIGURE 883

GGCACGAGGCTGCTGTTTGTCTACTTCCTCCTGCTTCCTCCGCCGCCGCCGCCGCCATCATGAGGGAAATCGTGCA
CTTGCAAGGCCGGGCAGTGCGGCAACCAAATCGGCGCCAAGTTTTGGGAGGTGATCAGCGATGAGCACGGCATCGA
CCCCACGGGCACCTACCACGGGGACAGCGACCTGCAGCTGGAACGCATCAACGTGTACTACAATGAGGCCACCGG
CGGCAAGTACGTGCCCCGCCCGTGCTCGTGGATCTGGAGCCCGGCACCATGGACTCCGTGCGCTCGGGGCCCTT
CGGGCAGATCTTCCGGCCGGACAACCTTCGTTTTCGGTGAGAGTGGTGCTGGGAACAACCTGGGCCAAGGGGCACTA
CACAGAAGGCGCGGAGCTGGTGGACTCGGTGCTGGATGTTGTGAGAAAGGAGGCTGAGAGCTGTGACTGCCTGCA
GGGTTTCCAGCTGACCCACTCCCTGGGTGGGGGGACTGGGTCTGGGATGGGTACCCTCCTCATCAGCAAGATCCG
GGAGGAGTACCCAGACAGGATCATGAACACGTTTAGTGTGGTGCCTTCGCCCAAAGTGTGAGACACAGTGGTGGG
GCCCTACAACGCCACCCTCTCAGTCCACCAGCTCGTAGAAAACACAGACGAGACCTACTGCATTGATAACGAAGC
TCTCTACGACATTTGCTTCAGAACCTTAAAGCTGACCACGCCCACCTATGGTGACCTGAACCACCTGGTGTCTGC
TACCATGAGTGGGGTACCCACCTGCCTGCGCTTCCCAGGCCAGCTCAATGCTGACCTGCGGAAGCTGGCTGTGAA
CATGGTCCCCTTTCCCCGGCTGCACTTCTTCATGCCCGGCTTTGCCCCACTGACCAGCCGGGGCAGCCAGCAGTA
CCGGGCGCTGACCGTGCCCGAGCTCACCCAGCAGATGTTTGATGCCAAGAACATGATGGCTGCCTGCGACCCCCG
CCATGGCCGCTACCTGACGGTTGCCGCCGTGTTTCAGGGGCCGATGTCCATGAAGGAGGTGGATGAGCAAATGCT
TAATGTCCAAAACAAAACAGCAGCTATTTTGTGAGTGGATCCCCAACAAATGTGAAAACGGCTGTCTGTGACAT
CCCACCTCGGGGGCTAAAAATGTCCGCCACCTTCATTGGCAACAGCACGGCCATCCAGGAGCTGTTCAAGCGCAT
CTCCGAGCAGTTCACGGCCATGTTCCGGCGCAAGGCCTTCCTGCACTGGTACACGGGCGAGGGCATGGACGAGAT
GGAGTTCACCGAGGCCGAGAGCAACATGAATGACCTGGTGTCCGAGTACCAGCAGTACCAGGATGCCACAGCCGA
GGAGGAGGGCGAGTTCGAGGAGGAGGCTGAGGAGGAGGTGGCCTAGAGCCTTCAGTCACTGGGGAAAGCAGGGAA
GCAGTGTGAACCTTTTATTCACTCCCAGCCTGTCCTGTGGCCTGTCCCACTGTGTGCACTTGCTGTTTTCCCTGT
CCACATCCATGCTGTACAGACACCACCATTAAGCATTTCATAGTGAIAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AA

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FIGURE 884

MREIVHLQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGDSDLQLERINVYYNEATGGKYVPRAVLVDLEPGTMDS
VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDSVLDVVRKEAESCDCLOGFQLTHSLGGGTGSGMGT
LISKIREEYPDRIMNTFSVVPSPKVSDTVVEPYNATLSVHQLVENTDETYCIDNEALYDICFRTLKLTTPTYGDL
NHLVSATMSGVTTCLRFPGQLNADLRKLAVNMVFFPRLHFFMPGFAPLTSRGSQQYRALTVPELTQQMFDAKNMM
AACDPRHGRYLTVAAVFRGRMSMKEVDEQMLNVQNKNSSYFVEWIPNNVKTAVCDIPPRGLKMSATFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVSEYQQYQDATAEEEGEFEEEEEEVA

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FIGURE 885

CAGGAGAAGCTGACCAGCCGCAAGATGGACAGCCGCTGGGGCGGGCGCAGCGAGTCCATCAATGTGACCCTCAAC
GTGGAGCAGGCAGCCTACACCCGTGATGCCCTGGCCAAGGGGCTCTATGCCCGCCTCTTCGACTTCCTCGTGAG
GCCATCAACCGTGCTATGCAGAAACCCAGGAAGAGTACAGCATCGGTGTGCTGGACATTTACGGCTTCGAGATC
TTCCAGAAAAATGGCTTCGAGCAGTTTTGCATCAACTTCGTCAATGAGAAGCTGCAGCAAATCTTTATCGAACTT
ACCCTGAAGGCCGAGCAGGAGGAGTATGTGCAGGAAGGCATCCGCTGGACTCCAATCCAGTACTTCAACAACAAG
GTCGTCTGTGACCTCATCGAAAACAAGCTGAGCCCCCAGGCATCATGAGCGTCTTGAGCAGCGTGTGCGCCACC
ATGCACGCCACGGGCGGGGAGCAGACCAGACACTGCTGCAGAAGCTGCAGGCGGCTGTGGGGACCCACGAGCAT
TTCAACAGCTGGAGCGCCGGCTTCGTTCATCCACCACTACGCTGGCAAGGTCTCCTACGACGTACAGCGGCTTCTGC
GAGAGGAACCGAGACGTTCTTCTCCGACCTCATAGAGCTGATGCAGTCCAGTGACCAGGCCTTCCTCCGGATG
CTCTTCCCCGAGAAGCTGGATGGAGACAAGAAGGGGCGCCCCAGCACCGCCGGCTCCAAGATCAAGAAACAAGCC
AACGACCTGGTGGCCACACTGATGAGGTGCACACCCCACTACATCCGCTGCATCAAACCCAACGAGACCAAGCAC
GCCCAGACTGGGAGGAGAACAGAGTCCAGCACCAGGTGGAATACCTGGGCCTGAAGGAAAACATCAGGGTGCGC
AGAGCCGGCTTCGCCTACCGCCGCCAGTTCGCCAAATTCCTGCAGAGGTATGCCATTCTGACCCCCGAGACGTGG
CCGCGGTGGCGTGGGGACGAACGCCAGGGCGTCCAGCACCTGCTTCGGGCGGTCAACATGGAGCCCCAGCAGTAC
CAGATGGGGAGCACCAGGTCTTTGTCAAGAACCCAGAGTCGCTTTTCTCCTGGAGGAGGTGCGAGAGCGAAAG
TTCGATGGCTTTGCCCGAACCATCCAGAAGGCCTGGCGGCGCCACGTGGCTGTCCGGAAGTACGAGGAGATGCGG
GAGGAAGCTTCCAACATCCTGCTGAACAAGAAGGAGCGGAGGCGCAACAGCATCAATCGGAACCTTCGTGCGGGAC
TACCTGGGGCTGGAGGAGCGGCCGAGCTGCGTCAGTTCCTGGGCAAGAAGGAGCGGGTGGACTTCGCCGATTTCG
GTCACCAAGTACGACCGCCGCTTCAAGCCCATCAAGCGGGACTTGATCCTGACGCCCAAGTGTGTGTATGTGATT
GGGCGAGAGAAGATGAAGAAGGGACCTGAGAAAAGTCCAGTGTGTGAAATCTTGAAGAAGAAATTGGACATCCAG
GCTCTGCGGGGGGTCTCCCTCAGCACGCGACAGGACGACTTCTTCATCCTCCAAGAGGATGCCGCCGACAGCTTC
CTGGAGAGCGTCTTCAAGACCGAGTTTGTTCAGCCTTCTGTGCAAGCGCTTCGAGGAGGCGACGCGGAGGCCCTG
CCCCTCACCTTCAGCGACACACTACAGTTTCGGGTGAAGAAGGAGGGCTGGGGCGGTGGCGGCACCCGACGCGTC
ACCTTCTCCCGCGGCTTCGGCGACTTGGCAGTGCTCAAGGTTGGCGGTGCGACCCCTCACGGTCAGCGTGGGCGAT
GGGCTGCCCAAGAAGTCCAAGCCTACCGGAAAGGGATTGGCCAAGGGTAAACCTCGGAGGTGCTCCAAGCCCCCT
ACCCGGGCGGCCCTGGCGCCCCCAAGGCATGGATCGAAATGGGGCCCCCTCTGCCACAGGGGGGGGGCCCCC
TGCCCCCTGGAGAAATTCATTTGGCCCAGGGGGCACCCACAGGCCTCCCGGGCCCTCCGTCCACATCCCTGGGAT
GCCAGCAGACGACCCCGGGCACGTCCGCCCTCAGAGCACAACACAGAATTCCTCAACGTGCCTGACCAGGGGATG
GCCGGCATGCAGAGGAAGCGCAGCGTGGGGCAACGGCCAGTGCTGTGGGCCGACCCAAGCCCCAGCCTCGGACA
CATGGTCCCAGGTGCCGGGCCCTATACCAGTACGTGGGCCAAGATGTGGACGAGCTGAGCTTCAACGTGAACGAG
GTCATTGAGATCCTCATGGAAGATCCCTCGGGCTGGTGGAAAGGGCCGGCTTCACGGCCAGGAGGGCCTTTTCCCA
GGAACTACGTGGAGAAGATCTGAGCTGGGCCCTGGGATACTGCCTTCTCTTTCGCCCGCCTATCTGCCTGCCGG
CCTGGTGGGGAGCCAGGCCCTGCCAATGAAAGCCTCGTTTACCTGGGCTGCAATAGCCTAAAAGTCCAATCCTTT
GGCCTCCAGTCTTGGCCAGGCCCTGGGTCAACAGGTCACTGGTGCAGCCCCGCCCCCTGGGCCCTGGTTTCTCT
CCAACATCACACCTGCTGCCCATTTGTCCAAAAGTGTGTGTGTCAAAGGGGACTAACAGCAGAATTTACCTCCCAA
CTGCCATGTGATTAAGAAATGGGTCTTGAGTCTGTGCTGTGGCAAAGTTCCAGGCACAGTTGGGGAGGGGGGG
CCGGAATCCGC

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FIGURE 887

MTTNAGPLHPYWPQHRLRLDNFVPNDREPTWHILAGLFSVTGVLVTTWLLSGRAAVVPLGTWRRLSLCWFAVCGFI
HLVIEGWFLVYYEDLLGDQAFLSQLWKEYAKGDSRYILGDNFTVCMETITACLWGPLSLWVVIAFLRQHPLRFIL
QLVVSVGQIYGDVLYFLTEHRDGFQHGELGHPLYFWFYFVFMNALWLVLPGVLVLDAVKHLTHAQSTLDAKATKA
KSKKN

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FIGURE 888

GAATTCGGCACGAGGATGACGGAGCCGGGCGCCTCTCCCGAGGACCCTTGGGTCAAGGTGGAGTATGCCTACAGC
GACAACAGCCTGGACCCCGGGCTTTTTGTAGAAAGCACCCGCAAGGGGAGTGTAGTGTCCAGAGCTAATAGCATC
GGTTCCACCAGTGCCTCTTCTGTCCCCAACACAGATGATGAGGACAGTGATTACCACCAGGAGGCCTACAAGGAG
TCCTACAAAGACCGGCGGGCGGCGCACACACTCAGGCTGAGCAGAAGAGGAGGGACGCCATCAAGAGAGGCTAT
GATGACCTTCAGACCATCGTCCCCACTTGCCAGCAGCAGGACTTCTCCATTGGCTCCCAAAAGCTCAGCAAAGCC
ATCGTTCTACAAAAGACCATTGACTACATTCACTTTTTGCACAAGGAGAAGAAAAAGCAGGAGGAGGAGGTGTCC
ACGTTACGCAAGGATGTACCGCCCTAAAGATCATGAAAGTGAAGTATGAGCAGATTGTGAAGGCACACCAGGAC
AACCCCATGAAGGGGAGGACCAGGTCTCTGACCAGGTCAAGTTCAACGTGTTTCAAGGCATCATGGTTTCCCTG
TTCCAGTCCTTCAATGCCTCCATCTCAGTGGCCAGCTTCCAGGAGCTGTCAGCGTGTGTCTTCAGCTGGATCGAG
GAGCACTGTAAGCCTCAGACCCTGCGGGAGATTGTGATTGGCGTCTCTGCACCAATTGAAAAACCAGCTTTACTTGA

CCGTTTCTTGGAACCTGGAGAACAGCCAACAAGAGGCCCTTGAATCTCTACGTGGCCACTGAACTGCTGGGCC
GGGAGACTGGTCTACAACACCACACACTGGACAGCTGGTCTCTACTTGGTGTGTGGTTTCTCCAGCCCCATTTT
CTCTACAGCGGAGCCGCGGTGTGTGTTGTGTGAAAGCTTCTGATTAATTTATTATATTGACGATAAACTCAAAC
CTACCCAGCCTTCCCCCACTCCATGGAAGTCCTTGGGATGGGCGTCTGCTCTGGACACCCCAAAGAGCTCCTGC
CCTCTCAGCCCTTTATTCAAGCCTCAGATTTCTGCTCATGATCTACATAGATTTGGAACTGTTTCTCTGTG
TGGTCTCTTGGGCAACATTTGTGGCCCAAGTTTGGGCAACATTTGGCCCAAGTTTGGGCATTGTGGGAGTAGCTG
TATGGGAGAAAAAGAGTAAGAGGAAATATTCCACAGCCATGAAGGGTGAAAGGGCACCTTGTGCCTAGACTAGG
GCTGGCTGGTCAGTCCCAGGTGAGGACAAGGGCTTTCTGGCCATCTCAGGGAGGGGGCACAGGTTCTCCCTC
ACCCATATTCCATCACCTTCCTCCTCTGCTCTGGGTGGTAAGGGAAGCCCTCCCGGTTCCCACAGGCTATGATG
CTGCATGGCAGAGGCAGGTATAACACAGCACTACATATTGGAAATTTTTTATTTTTCTAAATACCAATGCAGTTT
TGCTACGGTTACAATTTGAAATATTAAGTGAAGCCTCAAATCACCCTTTCTGTCAAGCATATCTTGGCCTCTCC
CATGTCTCAGTGTGCTGCATTTCTCCAGGACTTGGGGTGGGGTGAAAAGCGTACAAAAGATACTTAAAGG
GCTCCTGGGGTACACAAGCCCAGCAGGTCTGAGTGAAGCCGTGGGCCCTCCAAATGCTCGTTTTATAGCAACCT
CTCTCTACCCTAGTTCTCAAATTAATCTCTGCCTTCCTCAGGTTTGATATCTGGCAGGTTTGACTATCCAGAGG
AAATTAAATATTTTTATATAAAATTAAATTATAATAAATATTGCCAATGCTAAAAAAAAAAAAAAAAAAAA

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FIGURE 889

MTEPGASPEDPWVKVEYAYS DNSLDPGLFVESTRKGSVVSRANSIGSTSASSVPNTDDESDYHQEAYKESYKDR
RRRAHTQAEQKRRDAIKRGYDDLQTIVPTCQQQDFSIGSQKLSKAIVLQKTIDYIQFLHKEKKKQEEEVSTLRKD
VTALKIMKVNYEQIVKAHQDNPHGEDQVSDQVKFNVFQGIMVSLFQSFNASISVASFQELSACVFSWIEEHCKP
QTLREIVIGVLHQLKNQLY

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FIGURE 890

ATGGTGAAAAATGACAAAGTCCAAACTTTCCAAGCGTATCTGCCGAACTGTCACCGAACGTACAGCTGTATCCAC
TGCAGAGCACACCTGGCCAATCATGACGAGCTCATCTCCAAGTCCTTTCAGGGGAGCCAGGGACGCGCCTACCTC
TTCAATTCCGTGGTGAACGTGGGCTGCGGCCCTGCAGAGGAGAGGGTCCTTCTCACCGGGCTGCATGCGGTTGCC
GACATCTACTGCGAGAACTGCAAGACCACGCTCGGGTGGAAATACGAGCATGCCTTTGAGAGCAGTCAGAAATAT
AAGGAAGGAAAATTCATCATTGAGCTTGCTCATATGATCAAAGACAATGGCTGGGAGTAA

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FIGURE 891

MVKMTKSKTFQAYLPNCHRTYSCIHCRAHLANHDELISKSFQGSQGRAYLFNSVVNVGCGPAEERVLLTGLHAVA
DIYCENCKTTLGWKYEHAFAESSQKYKEGKFIIELAHMIKDNGWE

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FIGURE 892

GCGGCCGCCGTGGCCAGGCAACCTATGGGTACCACCGGGTTCTCGCGGGTCTTGCGAACGAACTTTTCTTGAAA
CTCTCTGGATTCTGTAAACAGTGGGGCTCAGCCCCCTCAATGACTGGAGGCTTCGATGGTTCAAAGGGGACCTCC
GGAATCACAGGGCCGGGAGTCGCCATGTCCGGGCCACAGCAGCAGGAGAAAATCGGGACTCCGACCTCAGCCTCC
CGGTGAAGGTCATGAAAGGGGCGGGGAAACGAATAAATTGAGCCTTGACGCAGGCGCAAATGCTCGTTGCATCC
TGGGAGTCGTAGTGCTCAGCACGGTAGTGCTACAAAAGGACTACATTTCCCCAAATGCCCGCAAAGCCTTGTGCA
CGCCTTCCGGAAGGAGTTTGTACACGAGGTCTGAGAGACAGAGGCAGCGTGTGTTGAGCTGCTGGTGCGGTGGTC
AGCGCGCATGCCCAAGGCCAAGGGCAAACCCGGAGGCAGAAGTTTGTTTACAGTGTCAACCGAAAGCGTCTGAAC
CGGAATGCTCGACGGAAGGCAGCGCGCGGAATCGAATGCTCCACATCCGACATGCCTGGGACCACGCTAAATCG
GTACGGCAGAACCTGGCCGAGATGGGGTTGGCTGTGGACCCCAACAGGGCGGTGCCCTCCGTAAGAGAAAGGTG
AAGGCCATGGAGGTGGACATAGAGGAGAGGCCTAAAGAGCTTGTACGGAAGCCCTATGTGCTGAATGACCTGGAG
GCAGAAAGCCAGCCTTCCAGAAAAGAAAGGAAATACTCTGTCTCGGGACCTCATTGACTATGTACGCTACATGGTA
GAGAACCACGGGGAGGACTATAAGGCCATGGCCCGTGATGAGAAGAATTACTATCAAGATACCCAAAAACAGATT
CGGAGTAAGATCAACGCTCTATAAACGCTTTTACCCAGCAGAGTGGCAAGACTTCCTCGATTCTTTCAGAAAGAGG
AAGATGGAGGTGGAGTAACTGGTTTACATCACAGCTGCCCCAGGCTGAGGCGTCCCCGGACAGTGAAGCTGGA
GCCAGGGTGTAAGGCAAGGAGGTGCTGTGTGGCTCCAGAGGGGCTGGCCAGGTCCCATGGAATCAGAAGGTTACA
CACACAGTGCACACTCCCCGCTCTGGGGAAGGAACTGTTCTCAGAGGCTCCAATTTATATTCTGCGGGGTTT
ACGGAAGCCAGAACCTGCTGTTTTCAGGGTGGGTGATGTAAATATAGTGTGTACATAATAAGCAAATATATT
TTAAA

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FIGURE 893

MPKAKGKTRRQKFGYSVNRKRLNRNARRKAARGIECSHIRHAWDHAKSVRQNLAEMLAVDPNRAVPLRKRKVK
MEVDIEERPKELVKPYVLNDLEAEASLPEKKGNTLSRDLIDYVRYMVENHGEDYKAMARDEKNYYQDTPKQIRS
KINVYKRFYPAEWQDFLDSLQKRKMEVE

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FIGURE 894

GGAATAGGTTAGTTTCAGACAAGCCTGCTTGCCGGAGCTCAGCAGACACCAGGCCTTCCGGGCAGGCCTGGCCCA
CCGTGGGCCTCAGAGCTGCTGCTGGGGCATTGAGAACCGGCTCTCCATTGGCATTGGGACCAGAGACCCCGCAAG
TGGCCTGTTTGCTGACATCCACCTGTACGTCCCCAGGTTTCGGGAGGCCAGGGGCGATGCCAGACCCCGCGG
CGCACCTGCCCTTCTTCTACGGCAGCATCTCGCGTGCCGAGGCCAGGAGCACCTGAAGCTGGCGGGCATGGCGG
ACGGGCTCTTCTGCTGCGCCAGTGCCTGCGCTCGCTGGGCGGCTATGTGCTGTCGCTCGTGACGATGTGCGCT
TCCACCACTTTCCCATCGAGCGCCAGCTCAACGGCACCTACGCCATTGCCGGCGGCAAAGCGCACTGTGGACCGG
CAGAGCTCTGCGAGTTCTACTCGCGCGACCCCGACGGGCTGCCCTGCAACCTGCGCAAGCCGTGCAACCGGCCGT
CGGGCCTCGAGCCGACGCCGGGGTCTTCGACTGCCTGCGAGACGCCATGGTGCGTGACTACGTGCGCCAGACGT
GGAAGCTGGAGGGCGAGGCCCTGGAGCAGGCCATCATCAGCCAGGCCCGCAGGTGGAGAAGCTCATTGCTACGA
CGGCCACGAGCGGATGCCCTGGTACCACAGCAGCCTGACGCGTGAGGAGGCCGAGCGCAAACCTTTACTCTGGGG
CGCAGACCGACGGCAAGTTCTGCTGAGGCCGCGGAAGGAGCAGGGCACATACGCCCTGTCCCTCATCTATGGGA
AGACGGTGTACCACTACCTCATCAGCCAAGACAAGGCGGGCAAGTACTGCATTCCCAGGGCACCAAGTTTGACA
CGCTCTGGCAGCTGGTGGAGTATCTGAAGCTGAAGGCGGACGGGCTCATCTACTGCCTGAAGGAGGCCTGCCCA
ACAGCAGTGCCAGCAACGCCTCAGGGGCTGCTGCTCCACACTCCCAGCCACCCATCCACGTTGACTCATCTC
AGAGACGAATCGACACCCTCAACTCAGATGGATACACCCTGAGCCAGCACGCATAACGTCCCCAGACAAACCGC
GGCCGATGCCCATGGACACGAGCGTGTATGAGAGCCCCTACAGCGACCCAGAGGAGCTCAAGGACAAGAAGCTCT
TCCTGAAGCGCGATAACCTCCTCATAGCTGACATTGAACTTGGCTGCGGCAACTTTGGCTCAGTGCGCCAGGGCG
TGTACCGCATGCGCAAGAAGCAGATCGACGTGGCCATCAAGGTGCTGAAGCAGGGCACGGAGAAGGCAGACACGG
AAGAGATGATGCGCGAGGCGCAGATCATGCACCAGCTGGACAACCCCTACATCGTGCGGCTCATTGGCGTCTGCC
AGGCCGAGGCCCTCATGCTGGTCATGGAGATGGCTGGGGGCGGGCCGCTGCACAAGTTCTGGTCCGCAAGAGGG
AGGAGATCCCTGTGAGCAATGTGGCCGAGCTGCTGCACCAGGTGTCCATGGGGATGAAGTACCTGGAGGAGAAGA
ACTTTGTGCACCGTGACCTGGCGGCCCGCAACGTCCTGCTGGTTAACCGGCACTACGCCAAGATCAGCGACTTTG
GCCTCTCCAAAGCACTGGGTGCCGACGACAGCTACTACACTGCCCCTCAGCAGGGAAGTGGCCGCTCAAGTGGT
ACGCACCCGAATGCATCAACTTCCGCAAGTTCTCCAGCCGACGCGATGTCTGGAGCTATGGGGTCAACATGTGGG
AGGCCTTGTCCTACGGCCAGAAGCCCTACAAGAAGATGAAAGGGCCGAGGTCATGGCCTTCATCGAGCAGGGCA
AGCGGATGGAGTGCCACCAGAGTGTCCACCCGAAGTGTACGCACTCATGAGTGACTGCTGGATCTACAAGTGGG
AGGATCGCCCCGACTTCTGACCGTGGAGCAGCGCATGCGAGCCTGTTACTACAGCCTGGCCAGCAAGGTGGAAG
GGCCCCCAGGCAGCACACAGAAGGCTGAGGCTGCCTGTGCCTGAGCTCCCGCTGCCCAGGGGAGCCCTCCACGCC
GGCTCTTCCCCACCCTCAGCCCCACCCAGGTCCTGCAGTCTGGCTGAGCCCTGCTTGGTTGTCTCCACACACAG
CTGGGCTGTGGTAGGGGGTGTCTCAGGCCACACCGGCCCTTGCAATTGCCTGCCTGGCCCCCTGTCTCTCTGGCTG
GGGAGCAGGGAGGTCCGGGAGGGTGC GGCTGTGCAGCCTGTCTGGGCTGGTGGCTCCCGGAGGGCCCTGAGCTG
AGGGCATTGCTTACACGGATGCCTTCCCTGGGCCCTGACATTGGAGCCTGGGCATCCTCAGGTGGTCAGGCGTA
GATCACCAGAATAAACCCAGCTTCCCTCTTGAAAAAAAAAAAAAAAAAAAAACC

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FIGURE 895

ACACGGACCAAGGAGTCTAACACGTGCGCGAGTCGGGGGCTCGCACGAAAGCCGCCGTGGCGCAATGAAGGTGAA
GGCCGGCGCGCTCGCCGGCCGAGGTGGGATCCCGAGGCCCTCTCCAGTCCGCCGAGGGCGCACCACCGGCCCGTCT
CGCCCGCCGCGCCGGGGAGGTGGAGCACGAGCGCACGTGTTAGGACCCGAAAGATGCTGAACCTATGCCTGGGCAG
GGCGAAGCCAGAGGAACTCTGGTGGAGGTCCGTAGCGGTCTGACGTGCAAATCGGTCTGCCACCTGGGTATA
GGGGCGGGCTCCAGGCGAGGCGGTTCGACGCTCCTGAAAACCTGCGCGCGCGCTCGCGCCACTGCGCCCGGAGCGA
TGAAGATGGTTCGCGCCCTGGACGCGGTTCTACTCCAACAGCTGCTGCTTGTGCTGCCATGTCCGCACCGGCACCA
TCCTGCTCGGCGTCTGGTATCTGATCATCAATGCTGTGGTACTGTTGATTTTATTGAGTGGCCTGGCTGATCCGG
ATCAGTATAAATTTTCAAGTTCTGAACCTGGGAGGTGACTTTGAGTTTCATGGATGATGCCAACATGTGCATTGCCA
TTGCGATTTCTCTTCTCATGATCCTGATATGTGCTATGGCTACTTACGGAGCGTACAAGCAACGCGCAGCCTGGA
TCATCCCATTTCTTCTGTTACCAGATCTTTGACTTTGCCCTGAACATGTTGGTTGCAATCACTGTGCTTATTTATC
CAAACCTCCATTCAGGAATACATACGGCAACTGCCTCCTAATTTTCCCTACAGAGATGATGTCATGTGAGTGAATC
CTACCTGTTTGGTCCTTATTATTCTTCTGTTTATTAGCATTATCTTGACTTTTAAGGGTTACTTGATTAGCTGTG
TTTGAACTGCTACCGATACATCAATGGTAGGAACCTCCTCTGATGTCCTGGTTTATGTTACCAGCAATGACACTA
CGGTGCTGCTACCCCGTATGATGATGCCACTGTGAATGGTGTGCCAAGGAGCCACCGCCACCTTACGTGCTGTG
CCTAAAGCCTTCAAGTGGGCGGAGCTGAGGGCAGCAGCTTGACTTTGCAGACATCTGAGCAATAGTTCTGTTATTT
CACTTTTGCCATGAGCCTCTCTGAGCTTGTGTTGCTGAAATGCTACTTTTTTAAAATTTAGATGTTAGATTGAA
AACTGTAGTTTTCAACATATGCTTTGCTAGAACACTGTGATAGATTAAGTGTAGAATTCTTCTGTACGATTGGG
GATATAATGGGCTTCACTAACCTTCCCTAGGCATTGAAACTTCCCCCAAATCTGATGGACCTAGAAGTCTGCTTT
TGTACCTGCTGGGCCCCAAAGTTGGGCATTTTTCTCTCTGTTCCCTCTCTTTTGGAAATGTAAAATAAAACCAA
AATAGACAACTTTTTCTTCAGCCATTCCAGCATAGAGAACAAACCTTATGGAAACAGGAATGTCAATTGTGTAA
TCATTGTTCTAATTAGGTAAATAGAAGTCCTTATGTATGTGTTACAAGAATTTCCCCCACAACATCCTTTATGAC
TGAAGTTCAATGACAGTTTGTGTTTGGGTGGTAAAGGATTTTCTCCATGGCCTGAATTAAGACCATTAGAAAGCA
CCAGGCCGTGGGAGCAGTGACCATCTGCTGACTGTTCTTGTGGATCTTGTGTCCAGGGACATGGGGTGACATGCC
TCGTATGTGTTAGAGGGTGAATGGATGTGTTTGGCGCTGCATGGGATCTGGTGGCCCTCTTCTCCTGGATTAC
ATCCCCACCCAGGGCCCGCTTTTACTAAGTGTCTGCCCTAGATTGGTTCAAGGAGGTATCCAACCTGACTTTAT
CAAGTGGAATTGGGATATATTTGATATACTTCTGCCTAACACATGGAAAAGGGTTTTCTTTTCCCTGCAAGCTA
CATCCTACTGCTTTGAACTTCCAAGTATGTCTAGTCACCTTTTAAAATGTAAACATTTTTCAGAAAAATGAGGATT
GCCTTCCTTGTATGCGCTTTTTACCTTGACTACCTGAATTGCAAGGGATTTTTATATATTCATATGTTACAAAGT
CAGCAACTCTCCTGTTGGTTTATTATTGAATGTGCTGTAAATTAAGTTGTTTGCAATTAACAAGGTTTGCCCA
CAAAAAAAAAA

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FIGURE 896

MVNYAWAGRSQRKLWWRSVAVLTCKSVVRPGYRGGLQARRSTLLKTCARARATAPGAMKMVAPWTRFYNSCCLC
CHVRTGTILLGVWYLIINAVVLLILLSALADPDQYNFSSSELGGDFEFMDDANMCIAIAISLLMILICAMATYGA
YKQRAAWIIPFFCYQIFDFALNMLVAITVLIYPNSIQEYIRQLPPNFPYRDDVMSVNPTCLVLIILLFISIILTF
KGYLISCWNCYRYINGRNSSDVLVYVTSNDTTVLLPPYDDATVNGAAKEPPPPYVSA

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FIGURE 897

GGCACGAGGCCGAGTTGCGATGCTGTACTTCTCTTTGTTTTGGGCGGCTCGGCCTCTGCAGAGATGTGGGCAGCT
GGTCAGGATGGCCATTTCGGGCTCAGCACAGCAACGCAGCCCAGACTCAGACTGGGGAAGCAAACAGGGGCTGGAC
AGGCCAGGAGAGCCTGTTCGGACAGTGATCCTGAGATGTGGGAGTTGCTGCAGAGGGAGAAGGACAGGCAGTGTCG
TGGCCTGGAGCTCATTGCCTCAGAGAACTTCTGCAGCCGAGCTGCGCTGGAGGCCCTGGGGTCTGTCTGAACAA
CAAGTACTCGGAGGGTTATCCTGGCAAGAGATACTATGGGGGAGCAGAGGTGGTGGATGAAATTGAGCTGCTGTG
CCAGCGCCGGGCCCTTGAAGCCCTTGACCTGGATCCTGCACAGTGGGGAGTCAATGTCCAGCCCTACTCCGGGTC
CCCAGCCAACCTGGCCGTCTACACAGCCCTTCTGCAACCTCACGACCGGATCATGGGGCTGGACCTGCCCCGATGG
GGGCCATCTCACCCACGGCTACATGTCTGACGTCAAGCGGATATCAGCCACGTCCATCTTCTTCGAGTCTATGCC
CTATAAGCTCAACCCCAAACCTGGCCTCATTGACTACAACCAGCTGGCACTGACTGCTCGACTTTTCCGGCCACG
GCTCATCATAGCTGGCACCAGCGCCTATGCTCGCCTCATTGACTACGCCCGCATGAGAGAGGTGTGTGATGAAGT
CAAAGCACACCTGCTGGCAGACATGGCCACATCAGTGGCCTGGTGGCTGCCAAGGTGATTCCCTCGCCTTTCAA
GCACGCGGACATCGTCACCACCACTACTCACAAGACTCTTCGAGGGGCCAGGTACAGGGCTCATCTTCTACCGGAA
AGGGGTGAAGGCTGTGGACCCCAAGACTGGCCGGGAGATCCCTTACACATTTGAGGACCGAATCAACTTTGCCGT
GTTCCCATCCCTGCAGGGGGGCCCCACAATCATGCCATTGCTGCAGTAGCTGTGGCCCTAAAGCAGGCCTGCAC
CCCCATGTTCCGGGAGTACTCCCTGCAGGTTCTGAAGAATGCTCGGGCCATGGCAGATGCCCTGCTAGAGCGAGG
CTACTCACTGGTATCAGGTGGTACTGACAACCACCTGGTGCTGGTGGACCTGCGGCCCAAGGGCCTGGATGGAGC
TCGGGCTGAGCGGGTGCTAGAGCTTGTATCCATCACTGCCAACAAGAACACCTGTCCTGGAGACCGAAGTGCCAT
CACACCGGGCGGCCTGCGGCTTGGGGCCCCAGCCTTAACCTTCTCGACAGTTCCGTGAGGATGACTTCCGGAGAGT
TGTGGACTTTATAGATGAAGGGGTCAACATTGGCTTAGAGGTGAAGAGCAAGACTGCCAAGCTCCAGGATTTCAA
ATCCTTCCTGCTTAAGGACTCAGAAACAAGTCAGCGTCTGGCCAACCTCAGGCAACGGGTGGAGCAGTTTGCCAG
GGCCTTCCCCATGCCTGGTTTTGATGAGCATTGAAGGCACCTGGGAAATGAGGCCACAGACTCAAAGTTACTCT
CCTTCCCCCTACCTGGGCCAGTGAAATAGAAAGCCTTTCTATTTTTTGGTGCGGGAGGGAAGACCTCTCACTTAG
GGCAAGAGCCAGGTATAGTCTCCCTTCCAGAATTTGTAAGTGAAGATCTTTTCTTTTCTTTTCTTTTGGTAA
CAAGACTTAGAAGGAGGGGCCAGGCACCTTCTGTTTGAACCCCTGTCATGATCACAGTGTGAGAGACGCGTCCTC
TTTCTTGGGGAAGTTGAGGAGTGCCCTCAGAGCCAGTAGCAGGCAGGGGTGGGTAGGCACCTCCTTCTCTGTTT
TTATCTAATAAAATGCTAACCTGCCCTGAGTTTCCATTACTGTGGGTGGGGTTCCCCTGGGCCAAACAGTGATTT
GTCTCCCTCAATGTGTACACCGCTCCGCTCCACACCGCTACCACAAGGACCCCGGGGCTGCAGCCTCCTCTT
TCTGTCTCTGATCAGAGCCGACACCAGACGTGATTAGCAGGCGCAGCAAATTCATTTGTTAAATGAAATTGTAT
TTTGAAAAAAAAAAAAAAAAAAAA

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FIGURE 898

MLYFSLFWAARPLQRCGQLVRMAIRAQHSNAAQTQTGEANRGWTGQESLSDSDPEMWELLQREKDRQCRGLELIA
SENFCSRAALEALGSCLNKYSEGYPGKRYYGGAEVVDEIELLCQRRALEAFDLDPAQWGVNVQPYSGSPANLAV
YTALLQPHDRIMGLDLPDGGHLTHGYMSDVKRISATSIFFESMPYKLNPKTGLIDYNQLALTARLFRPRLIIAGT
SAYARLIDYARMREVCDEVKAHLLADMAHISGLVAAKVIPSFFKHADIVTTTTHKTLRGARSGLIFYRKGVKAVD
PKTGREIPYTFEDRINFVFPSTLQGGPHNHAIAAVALKQACTPMFREYSLQVLKNARAMADALLERGYSLVSG
GTDNHLVLVDLRPKGLDGARAERVLELVSITANKNTCPGDRSAITPGGLRLGAPALTSRQFREDDFRVVD FIDE
GVNIGLEVKSKTAKLQDFKSFLDKDSETSQR LANLRQVEQFARAFFMPGFDEH

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FIGURE 900

MHHNKQATENAKEEVRRLGLLDAYLKTRTFLVGERVTLADITVVCTLLWLYKQVLEPSFRQAFPNTNRWFLTCTI
NQPQFRAVLGEVKLCEKMAQFDKAKFAETQPKKDTPRKEKGSREEKQKPQAERKEEKAAAAPAPEEEMDECEQAL
AAEPKAKDPFAHLPKSTFVLDEFKRKYSNEDTSLVALPYFWEHFDKDGWSLWYSEYRFPEELTQTFMSCNLITGM
FQRDKLRKNAFASVILFGTNNSSISGVWVFRGQELAFPLSPDWQVDYESYTWKLDPGSEETQTLVREYFSWE
GAFQHVKGAFNQGKIFK

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FIGURE 901A

CAAGCCAATTATGGCTCCCTTTCCCAATGGTAGTTTGTGAATGGCTTTAATTCGCCAGGATCTTATAAAACAAAT
GCTGCTGCTATGAATATGGGTCGACCATTCCAAAAAATCGTGTGAAGCCTCAGTTTAGGTCAICTGGTGGTTCA
GAACACTCAACAGAGGGGCTCTGTATCCTTGGGGGATGGACAGTTGAACAGATATAGTTCAAGAAACTTTCCAGCT
GAACGGCATAACCCACAGTAACCTGGGCATCAGGAGCAAACCTTACCTTCAGAAGGAGACTTCCACTTTGCAGGTG
GAACAGAATGGGGACTATGGTAGGGGCAGGAGAAGCTCTCTTCAGAGGTGCGAAGACGACGAGAAGATGACAGGATC
TCAAGACCTCATCCTTCAACAGCTGAATCAAAGGCTCCAACACCAAAGTTTGACTTATTAGCCTCAAATTTTCCA
CCTTTACCTGGAAGTTCATCAAGAATGCCAGGTGAACCTCGTTTGGAGAATAGGATGTCTGATGTTGTTAAAGGTG
TCTACAAAGAAAAGGATAATGAAGAGTTGACAATTAGTTGCCAGTGCCCTGCAGATGAGCAGACAGAATGCACTT
CTGCCCAGCAACTCAATATGAGTACCAGTTCTCCATGTGCTGCTGAGCTTACTGCATTAAGCACAACTCAGCAAG
AAAAGGATCTAATAGAAGATTCTCTGTTCAGAAGGATGGTCTCAATCAGACAACATAACCAGTTTCTCCTCCAA
GTACTACAAAGCCATCGAGGGCAAGTACTGCTTCACCATGTAATAATAACATAAATGCAGCTACAGCTGTGGCTC
TACAGGAACCCCGAAAAGTTAAGTTATGCTGAAGTGTGCCAGAAGCCCCCTAAAGAGCCATCTTCAGTTCTTGTGC
AGCCACTACGGGAACCTTCGCTCCAATGTGGTGTCTCCACCAAAAATGAAGACAATGGAGCTCCTGAGAACTCCG
TTGAGAAACCATGAGAAGCCAGAAGCAAGGGCTAGTAAGGATTATTCTGGCTTCCGAGGCAATATAATCCCCA
GGGGAGCAGCAGGAAAAATCAGGGAACAGAGACGCCAGTTTAGCCATAGGGCTATACCTCAGGGAGTGACTCGAC
GTAATGGCAAAGAGCAATATGTGCCACCCAGATCACCAAAGTAAAAAACAACAAACTATTCAAAAACCTTCACTC
TCTTCCCATTAACCTTGAACGTGGCTATATTGAACTGTTTTGGAGGGGAGGGGGTAGCCAGGAAGGAAACAAGA
GAAAGTACGTCCATTTTATTATGGATTTTGGAGTTGTGAGTGATAGGATCCCAAAATTCATCTCTAATGTGGTTT
TTAAATGCTGGAGGATTCCAATCAATATAAATATATATATATATACACACACATATATAAAAAGTATAATTTT
TCTATTTTTGTTTTGGTTTTAATTTGCAGAGATTTGCTGCCAGGAATCAATTTTGAGGGTTCAGATTTAGCTTG
GAAGAAAAAAGAAACATACATCCTTCAGTATAGGAGATGAGGGAATGAGAGAAAATATTTTTTGAAGAAGCAT
TTCTGTAAATTAGAAATTACTTTTTTAAATCTATTTAAAGTTTGGCTTGAAGAATGCCATCTCTGACTATATGG
CCTGTATTGCAAAGCAGATCAGTGGCTGGGGTGCCTGTTGTGGGTGTGAGTGTGTACAAGAGCGATTGAAGCCA
AATCTGTTGTCTATTTAGTAAATGATTTGAAAACCTGAATGTAATACTTGAGTAGATTTTTTTTTTCTAGTTTGAAA
TTTAGTCTGTCTTTTTGACCTTACTAATATTTTCAATTAACAAGTTGTAAACTCTGATTGTACTTAGAGATGTGA
CTACCAATCAGTTTGATACTCAAGGAAAGGGGGTATTCAAGAAATTGAAAATTTTATCTTGGACCTCAGTGCAT
CGGTCAAATGGATTTTCAAGAGGTTTAAACTTCCCTGTGATTCCCCCTGAATACCCCCAAAATGAGAAACAAAATTT
TTTTCTTACTCCATTTGTTACTCTCTGTTCTTTGACTGCCACCCACAGAAAAGCAAATAACCAACTACCTAC
TCAATTGTGTGTTTGTAAATGCTTTGAGCAGTCTAGTCAAATCATATAAATTGTTCTAAATTTTCAAGATTGAACA
TTGAAGTATTAACCTCTTCTGTTTACACATTTTAGAATTTTAGCTCCCAAGATGGTAGGGCAGACTGACCGTACAGT
AATTTATTTGTGTTAGTGTAAAGATTAAGCATAGTAACTGACTCTTAAGTGTAAATAATGTAGAAGTAAAAA
AATTTTTTTTTAAAGGCTTAATTTGGGAGGGGGGACTTATTTCTGTTTACAGTGTATTACCTTCTTCCCTCCTCT
TCTCCCCCACACCCAACAAAATACAGTTTGAATTCAGTGAACAGTACCAGCAAGTCATGAGATTTTTTTAGTA
AAGATGAGAAAGATGGTTGAAGAAAATTAGTGCATAATTTCTCAGTGAATAAAGTTGTAGCTCTCATATACTAAA
TAGACAAGTTTACATGCTGTTATTTAGAAAATGACTAAAATATAAAAACCGTGTGTGTTAATCTGTTTTAAGT
CATACCATGTTTCAAGATTCTATGTAAGGTGGGTTTTATTTTTCTTTTAAGGGATAGTTTGTAAATAGTAAGAACTG
TCCCATATGTTAGTAAATTACATATGTACAAATTGAACTGTAAATTTGTGAACACTGGAAAGCACCATTGTGACA
TAGAGTAAACATCTTAGTAATATATTAAGTGAATGTAAATGGTGGTTAAAATTACATTACTGTGAAATTCATCT
TCCAACCTTAAGTTAAGCTTTGGAGATACATGTTAGTGGTTAACTGTAAAGAGCTTTGAAAACACTGCACATATC
TGTACAAGCCAGAATTACTATTTCTTTGACTTATTATTAGCTTGGCAGTTGCTTTTTGATTTGATTGTTTTATGAC
ATGGTATATCTACTATATTTACTCAGTTTGAACATATTCTATTTCTACACACTATTTTTTAAAAATTGCCCTACTAGGT
GAAACATAACAATAAACTACCTGTGCTGAAATTTGGGGGAAGTTTAGTCCTTTTAAAAAACATATTAATCATT
GACTACATCTATGATAAAAGTGCTTATTTTTGGTTTTACTAAGATAATGCAGTTGGTGGAAATGATAAACGTTTTAA
GTGTTAACATCCTTTGAATGCGTTGGATTTTCAAGAGAATAAACATTTTGTAAAAATCACTTGGTAAGGATTATAAA
CTTAATTACTGCACCTTAAATGAAACATTACTTTTTTTTAAACAATGTGTCACAAATGTAGGTCTGTATTACTTGT
ATGCTTGTGTGACTTACTGTTAGTCCAGCTCTAAAAATTTAAAGGTTGTAAATGAAATACAAGAAAAGAGCCTTC
TTTTAGAAGAAAGCAAGTATATTTTTGCTTTTACTTCAAATGTTATTTAAAGTAGAAATTTAATTTGTAGATATA
ACCTTTAAAAATTTTCTCATTAAAGACAATGTTTTTAATTTAATTTGCCTCATTACATCTAATAGTTCCCATTTGA

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FIGURE 901B

TGGCATGTATAGGGAAGAGTGANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNAATATTTATATATATATTCACAGTATG
TATTTAGCATTTATTTTATTACAGCAGATTTAAAGTTTGTATCTAAATAATGCCTATGAGTTGTGTGAAGCTCTT
GGCTTTTTTCCAACGTTACTTTGTAACATAATGAGGGTGGATGTTTCATTGTAGTTTATTTATTTGGTTCTTTAGAT
GGAGGAATTTAAAAAATCAAATTTTTCTCTTCACCTTTATGACTTGACATTTCCCTTGATCTGTTGGAGGCTAAAA
GTAGGTATAAATGATATTGAATGTTGGGTATAGTGATACTCTGCCATAGTTCTTACTGCATGAAGAGAACAAGAG
TCACACAAGTTCACCACTTTGCACCTTCATAGAGAAGGTACATAGAGACATTGCAAAACCTGTCTCCATTTGCTAT
CCTGATAATTAAGGTTTTTATAATACCTAGGGCCTGTCTCTGAGTAATTTTAATTTTGCCAAATACACTGACATT
TAAATAGTGATCCATCTAAATTTTTTTCAGCTGGGTTTTGAGGAATATAAGAGCTTTCAATGATAAAGGTTTGT
TGTAAGTGTCTTATGTGCTGAATTTGCAGATGATCAGATGCTGTGCAGAATTCTGATTTATTTTTGTTTCCTAAA
ATTAAGATAGCTTGAATATTATTTACATTCCTTTTTCTTTTTTAAATAAACAGGTTTGCTTTGGAAAGGCTTAA
TGATGGAATGTTAGCATCTTCACTAGGGTAAAGAAGAACAAAAAGAATGTTGCTGGAACGTAAATAGTATTTAA
AAGTTAATGAACACTTCTCTAGTTTTCTTAGTTATGGCCTTAATAATTAGTCTCTTGGCTTAAATGTCCACTGGT
TTTACTTTGACACAGTTGAACAACACTGGGGTTAAGTCTCTGGTATTTAGGCTGGCAATATATATATTAACCATA
TTTTAAAAGTACCAATTTTGTTTTTTACAGAAAAGATAAACTCAAAAGAGAACAGTGTATTCCTTCTGAGGGGCT
TTTATAAATTATTAATAATATATATGATGGATTTTTTCCTAATTTTTTATATTTTCCTTACAATTTTGGTGGCCA
TTAATTTAACTTTAGGCTTTTGGGCATATGCTAGTCTGAGCTTCCGAAAAGATACATATATGTTTCCCTTTTCAT
TAGCTGAATGAGGATATTTAAGAAGTTGAAAGAGAATTTATTTTCAAGTTGTGAGTAAATCCTCCTTTGAAATT
CACCTGATTATTAGATAACTTAAAGTTTATTTTTTAAAAGCTGACAACTTTTTATGAATCTTCGAGTTGACAGTTC
CTAAAAGCGTAACTCAGATATTAATGGGCTGTGTATTAAATGGTTTTATTTTCAGTTTTGCAGCACAGAACTG
TTGAAATATCCATATCAACTTGATTTTTTTAACCTAATTCAGGTGTCCTTTGCATCTCTTAAATGTTGGGGGTGG
GGGTCAGAGCCAGTTATCCGGCTTCTGTTTTGTGCGATTGCTTAGATTTGTTCCCTGTTGTCAAACTGTTACCCCC
AAAATTGGTGTGACACATGCTCATGATAAAATGTTAAAATGAGTACATCCTTGTATTTGTATTTGTTTTCAACA
TCGCCAAGGTGCTATGGGAAATTAACAAAATTAGAAAAAAATAAAATTTATTAATAAGCAGAAAAA

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FIGURE 902

MNMGRPFQKNRVKPFQFRSSGGSEHSTEGSVSLGDGQLNRYSSRNFP AERHNPTVTIGHQEQTYLQKETSTLQVEQN
GDYGRGRRTLFRGRRRREDDRISRHPSTAESKAPTPKFDLLASNFPPLPGSSSRMPGELVWRIGCLMLLKVSTK
KRIMKSTISCPVPADEQTECTSAQQLNMSTSSPCAAELTALSTTQQEKDLIEDSSVQKDGLNQTTIPVSPSTTK
PSRASTASPCNNNINAATAVALQEPRKLSYAEVCQKPPKEPSSVLVQPLRELRSNVVSP TKNEDNGAPENSVEKP
HEKPEARASKDYSGFRGNIIPRGAAGKIREQRRQFSHRAIPQGVTRRNGKEQYVFPSPK

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FIGURE 903

AAAAGGGAAGCCTGCAACAAGTTAAGCTGAAGACCGAAGCAAGAGCTGGTTACGCCTGCCAGTGGAGACACTGGG
CCCGGCATCCAGGATGGACCCAGAATCTGAGAGAGCCCTGCAGGCCCTCACAGCCCCTCCAAGACAGATGGGAA
AGAATTAGCTGGGACCATGGATGGAGAAGGGACGCTCTTCCAGACTGAAAGCCCTCAGTCTGGCAGCATTCTAAC
AGAGGAGACTGAGGTCAAGGGCACCCCTGGAAGGTGATGTTTGTGGTGTGGAGCCTCCTGGCCCAGGAGACACAGT
AGTCCAGGGAGACCTGCAGGAGACCACCGTGGTGACAGGCCTGGGACCAGACACACAGGACCTGGAAGGCCAGAG
CCCTCCACAGAGCCTGCCTTCAACCCCCAAAGCAGCTTGGTTTCAGGGAGGAGGGCCGCTGCTCCAGCAGTGACGA
TGACACCGACGTGGACATGGAGGGTCTGCGGAGACGGCGGGGCCGGGAGGCCGGCCACCTCAGCCCATGGTGCC
CCTGGCTGTGGAGAACCAGGCTGGGGGTGAGGGTGACAGCGGGGAGCTGGGCATCTCCCTCAACATGTGCCTCCT
TGGGGCCCTGGTTCTGCTTGGCCTGGGGGTCTCTCTTCTCAGGTGGCCTCTCAGAGTCTGAGACTGGGCCCAT
GGAGGAAGTGGAGCGGCAGGTCTCTCCAGACCCGAGGTGCTGGAAGCTGTGGGGGACAGGCAGGATGGGCTAAG
GGAACAGCTGCAGGCCCCAGTGCCTCCTGACAGTGTCCCCAGCCTGCAAAAACATGGGTCTTCTGCTGGACAAGCT
GGCCAAGGAGAACCAGGACATCCGGCTGCTGCAGGCCAGCTGCAGGCCCAAAAGGAAGAGCTTCAGAGCCTGAT
GCACCAGCCCCAAAGGGCTAGAGGAGGAGAATGCCAGCTCCGGGGGGCTCTGCAGCAGGGCGAAGCCTTCCAGCG
GGCTCTGGAGTCAGAGCTGCAGCAGCTGCGGGCCCGGGCTCCAGGGGCTGGAGGCCGACTGTGTCCGGGGGCCAGA
TGGGGTGTGCCTCAGTGGGGATAGAGGCCACAGGGTGACAAGGCCATCAGGGAGCAAGGCCCCAGGGAGCAGGA
GCCAGAACTCAGCTTCCCGAAGCAGAAGGAACAGCTGGAGGCTGAGGCACAGGCATTAAGGCAAGAGTTAGAGAG
GCAGCGACGGCTGCTGGGGTCTGTACAGCAGGATCTGGAGAGGAGCTTGACAGATGCCAGCCGCGGGGACCCAGC
TCATGCTGGCTTGGCTGAGCTGGGCCACAGATTGGCCAGAACTGCAGGGCTGGAGAATGGGGCCAGGACCC
TGGGGTCTCTGCCAATGCCTCAAAGGCCTGGCACCAGAAGTCCCACTTCCAGAATTCTAGGGAGTGGAGTGGAAA
GGAAAAGTGGTGGGATGGGCAGAGAGACCGGAAGGCTGAGCACTGGAAACATAAGAAGGAAGAATCTGGCCGGGA
AAGGAAGAAGAATGGGGAGGTGAGGAGACAGGGAGCCAGCAGGAAGGTGGAAGGAGGGCAGGCCAAGGGTGGAA
GGAGTCGGGGAGCAAGAAGGAGGGCAAGCGACAGGGCCCCGAAGGAACCCCCAAGGAAAAGTGGTAGCTTCCACTC
CTCTGGAGAAAAGCAGAAGCAACCTCGGTGGAGGGAAGGGACTAAGGACAGCCATGACCCCTGCCATCTGGGC
AGAGCTGTTGAGGCCCAAGTACCGGGCACCCAGGGCTGCTCAGGTGTGGACGAGTGTGCCGGGCAGGAGGGCCT
GACTTTCTTTGGCACAGAGCTAGCCCCAGTGCGGCAACAGGAGCTGGCCTCTCTGCTAAGAACATACTTGGCACG
GCTGCCCTGGGCTGGGCAGCTGACCAAGGAGCTACCCCTCTCACCTGCTTTCTTTGGTGGAGATGGCATCTTCCG
TCATGACCGCCTCCGCTTCCGGGATTTTGTGGATGCCCTGGAGGACAGCTTGGAGGAGGTGGCTGTGCAACAGAC
AGGTGATGATGATGAAGTAGATGACTTTGAGGACTTCATCTTCAGCCACTTCTTTGGAGACAAAGCACTGAAGAA
GAGGTGAGGGAAGAAGGACAAGCACTCACAGAGCCCAAGAGCTGCGGGGCCCCAGGGAGGGGCACAGCCATAGCCA
CCACCACCACCACCGGGCTGACACCCCTGCCCCACAGGGAATGGCCTTGGCCTGGCCCAGCCCAAGATCCAGCG
TTATCTAACTCCTGGAGGGTGGACTCTGTCTGGCTTGTGTTGGTGTCTCAGATATCTTTCACACAGTAGAGCAA
AATCACCAGCCCTGCACTGATGTCACTTTATGTAGAAAAAGGCCTTAGCTGGACCTGTGTTGCCGTCTATGCAAA
TGCATGCAAAATACTCCAGGCCCTGGGATGTGGGCTTGTGTTTTGTCACTGTGAAGGGGGAGATGGGAGAGGAGCC
TGTTTTGGGGTGGGGTCTGGGGAAGGCAATCTGATTCTGAAGCTAAAAGAGCTTTCATCCTCTTGAGTGTATGTCC
CCATAGTGGGCCCCCTTGACCCACATGCTGACCGGTGCCTTGGGATTTGACTAGAGTTGCTGGCTCGAGGCCCAGC
ACGAGGACTTACCTGGGGTTTTGTTAGGTTTTGGAAGCAGCTGTCCCTAGGGGGTGAAGTCCCCCCCCCTTTTTTT
TTTTACCCCTGCTTCTCCACGGCTTACCTCCCTATGTGAAGTGTAGACTCAGATCCCAATAAAGTGCTGTTGC
AGCTATGATGCTAGGTGGTTTTCTAAGCACAGGGGACACCCACACCCCTGCCTGAATGGATGGGTCCATCCAG
GCACTGGTACTTGCCCCCTTGTCTGTATCCCCCTTTGCCCTTGCCCTTGCCCTTCCAACAAACCCTAGGCCCTTG
AGAAGCTGATACTTCTCCTTTTGTCTACAGCTGCCTTGGCCCCACCCCTGGGAGATGTAGCAAATTGAGTGTGGG
TTTTGGAGTCTGAGCCTCAGGCTCAAATCCAGGCCAAGTGATCTTGGGCAAGTTAATCTCTGGGGACTTTGGGT
TCTTATCTCAAAAAAGGCGATGGAAGGGCTGGGGAAGTGATTAATAAAAGCAACGCAAGAAAAATGCC

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FIGURE 904

MDPESERALQAPHSPSKTDGKELAGTMDGEGTLFQTESPQSGSILTEETEVKGTLEGDVCGVEPPGPGD TVVQGD
LQETT VVTGLGPD TDLEGQSPPQSLPSTPKAAWFREEGRCSSDDDDTDVDMEGLRRRRRGREAGPPQPMVPLAVE
NQAGGEGAGGELGISLNMCLLGALVLLGLGVLLFSGGLSESETGPMEEVERQVLPDPEVLEAVGDRQDGLREQLQ
APVPPDSVPSLQNMGLLLDKLAKENQDIRLLQAQLQAQKEELQSLMHQPKGLEEENALRGALQQGEAFQRALES
ELQQLRARLQGLEADCVRGPDGVCLSGDRGPQGDKAIREQGPREQEPELSFPKQKEQLEAEAQALRQELERQRR
LGSVQQDLERSLQDASRGDPAHAGLAELGHRLAQKLOGLLENWGQDPGVSANASKAWHQKSHFQNSREWSGKEKWW
DGQRDRKAEHWKHKKEESGRERKKNWGGQEDREPAGRWKEGRPRVEESGSKKEGKRQGPKEPPRKSGSFHSSGEK
QKQPRWREGTKDSDPLPSWAELLRPKYRAPQGC SGVDECARQEGLTFFGT ELAPVRQQELASLLR TYLARLPWA
GQLTKEPLSPAFFGEDGIFRHDRLRF RDFVDALEDSLEEVAVQQTGDDDEVDDFEDFIFSHFFGDKALKKRSGK
KDKHSQSPRAAGPREGHSHSHHHHHRG

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FIGURE 905

CGAGGATGTGCGTGGGGGCTCGGCGGCTGGGCCGCGGGCCGTGTGCGGCTCTGCTCCTCCTGGGCCTGGGGCTGA
GCACCGTGACGGGGCTCCACTGTGTGCGGGGACACCTACCCAGCAACGACCGGTGCTGCCACGAGTGCAGGCCAG
GCAACGGGATGGTGAGCCGCTGCAGCCGCTCCCAGAACACGGTGTGCCGTCCGTGCGGGCCGGGCTTCTACAACG
ACGTGGTCAGCTCCAAGCCGTGCAAGCCCTGCACGTGGTGTAACCTCAGAAAGTGGGAGTGAGCGGAAGCAGCTGT
GCACGGCCACACAGGACACAGTCTGCCGCTGCCGGGCGGGCAGCCAGCCCCTGGACAGCTACAAGCCTGGAGTTG
ACTGTGCCCCCTGCCCTCCAGGGCACTTCTCCCCAGGCGACAACCAGGCCTGCAAGCCCTGGACCAACTGCACCT
TGGCTGGGAAGCACACCCTGCAGCCGGCCAGCAATAGCTCGGACGCAATCTGTGAGGACAGGGACCCCCAGCCA
CGCAGCCCCAGGAGACCCAGGGCCCCCGGCCAGGCCCATCACTGTCCAGCCCCTGAAGCCTGGCCCAGAACCT
CACAGGGACCCCTCCACCCGGCCCCGTGGAGGTCCCCGGGGGCGGTGCGGTTGCCGCCATCCTGGGCCTGGGCCTGG
TGCTGGGGCTGCTGGGCCCCCTGGCCATCCTGCTGGCCCTGTACCTGCTCCGGAGGGACCAGAGGCTGCCCCCG
ATGCCACAAAGCCCCCTGGGGGAGGCAGTTTCCGGACCCCCATCCAAGAGGAGCAGGCCGACGCCCACTCCACCC
TGGCCAAGATCTTGACTGGGCCCACCAAGGTGGACGCTGGGCCCCGCCAGGCTGGAGCCCGGAGGGTCTGCTGGG
CGAGCAGGGCAGGTGCAGGCCGCCTGCCCCGCCACGCTCCTGGGCCAACTCTGCACCGTTCTAGGTGCCGATGGC
TGCCTCCGGCTCTCTGCTTACGTATGCCATGCATACCTCCTGCCCCGCGGGACCACAATAAAACCTTGGCAGAC
GGGAGTCTCCGACCGGCAAAAAAAAAAAAAAAAAA

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FIGURE 906

MCVGARRLGRGPCAALLLLGLGLSTVTGLHCVGDTYP SNDRCCHECRPGNGMVSRCRSQNTVCRPCGPGFYNDV
VSSKPCKPCTWCNLRSGSERKQLCTATQDTVCRCRAGTQPLDSYKPGVDCAPCPPGHFSPGDNQACKPWINCTLA
GKHTLQPASNSSDAICEDRDPPATQPQETQGPPARPI TVQPTTEAWPRTSQGPSTRPVEVPGGRAVAAILGLGLVL
GLLGPLAILLALYLLRRDQRLPPDAHKKPPGGGSFRTPIQEEQADAHSTLAKI

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FIGURE 907

ATGACCAAAGCTGATCTCATAAATAATTTGGGAACCATTGCCAAGTCTGGTACTAAAGCATTTCATGGAGGCTCTT
CAGGCTGGTGCAGACATCTCCATGATTGGGCAGTTTGGTGTGGCTTTTATTCTGCCTACTTGGTGGCAGAGAAA
GTGGTTGTGATCACAAGCACAACGATGATGAACAGTATGCTTGGGAGTCTTCTGCTGGAGGTTCCCTTCACTGTG
CGTGCTGACCATGGTGTAGCCCATTGGCAGGGGTACCAAAGTGATCCTCCATCTTAAAGAAGATCAGACAGAGTAC
CTAGAAGAGAGGCGGGTCAAAGAAGTAGTGAAGAAGCATTCTCAGTTCATAGGCTATCCCATCACCCCTTTATTTG
GAGAAGGAACGAGAGAAGGAAATTAGTGATGATGAGGCAGAGGAAGAGAAAGGTGAGAAAGAAGAGGAAGATAAA
GATGATGAAGAAAAGCCCAAGATCGAAGATGTGGGTTTCAGATGAGGAGGATGACAGCGGTAAAGGATAAGAAGAAG
AAACTAAGAAGATCAAAGAGAAATACATTGATCAGGAAGAACTAAACAAGACCAAGCCTATTTGGACCAGAAAC
CCTGATGACATCACCCAAGAGGAGTATGGAGAATTCTACAAGAGCCTCACTAATGACTGGGAAGACCACTTGGCA
GTCAAGCACTTTTCTGTAGAAGGTTCAGTTGGAATTCAGGGCATTGCTATTTATTCCTCGTCGGGCTCCCTTTGAC
CTTTTTGAGAACAAGAAGAAAAAGAACACATCAAACCTCTATGTCCGCCGTGTGTTTCATCATGGACAGCTGTGAT
GAGTTGATACCAGAGTATCTCAATTTTATCCGTGGTGTGGTTGACTCTGAGGATCTGCCCCCTGAACATCTCCCGA
GAAATGCTCCAGCAGAGCAAAATCTTGAAAGTCATTTCGCAAAAACATTGTTAAGAAGTGCCTTGAGCTCTTCTCT
GAGCTGGCAGAAGACAAGGAGAATTACAAGAAATTTCTATGAGGCATTCTCTAAAAATCTCAAGCTTGGAAATCCAC
GAAGACTCCACTAACCGCCGCCGCTGTCTGAGCTGCTGCGCTATCATACCTCCAGTCTGGAGATGAGATGACA
TCTCTGTCTAGAGTATGTTTCTCGCATGAAGGAGACACAGAAGTCCATCTATTACATCACTGGTGAGAGCAAAGAG
CAGGTGGCCAACTCAGCTTTTGTGGAGCGAGTGCGGAAACGGGGCTTCGAGGTGGTATATATGACCGAGCCCATT
GACGAGTACTGTGTGCAGCAGCTCAAGGAATTTGATGGGAAGAGCCTGGTCTCAGTTACCAAGGAGGGTCTGGAG
CTGCCGTGAGGATGAGGAGGAGAAGAAGAAGATGGAAGAGAGCAAGGCAAAGTTTGAGAACCTCTGCAAGCTCATG
AAAGAAATCTTAGATAAGAAGGTTGAGAAGGTGACAATCTCCAATAGACTTGTGTCTTCACCTTGCTGCATTGTG
ACCAGCACCTACGGCTGGACAGCCAATATGGAGCGGATCATGAAAGCCAGGCACTTCGGGACAACCTCCACCATG
GGCTATATGATGGCCAAAAAGCACCTGGAGATCAACCCTGACCACCCCATTTGTGGAGACGCTGCGGCAGAAGGCT
GAGGCCGACAAGAATGATAAGGCAGTTAAGGACCTGGTGGTGTCTGCTGTTTGAAACCGCCCTGCTATCTTCTGGC
TTTTCCCTTGAGGATCCCCAGACCCACTCCAACCGCATCTATCGCATGATCAAGCTAGGTCTAGGTATTGATGAA
GATGAAGTGGCAGCAGAGGAACCAATGCTGCAGTTCCCTGATGAGATCCCCCTCTCGAGGGCGATGAGGATGCG
TCTCGCATGGAAGAAGTCGATTTAGGTTAGGAGTTCATAGTTGGAAAACCTTGTGCCCTTGTATAGTGTCCCCATGG
GCTCCCACTGCAGCCTCGAGTGCCCCCTGTCCACCTGGCTCCCCCTGCTGGTGTCTAGTGTTTTTTT

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FIGURE 908

MTKADLINNLGTIAKSGTKAFMEALQAGADISMIGQFGVGFYSAYLVAEKVVVITKHNDDEQYAWESSAGGSFTV
RADHGEP IGRGTKVILHLKEDQTEYLEERRVKEVVKKHSQFIGYPITLYLEKEREKEISDDEAEEEEKGEKEEEDK
DDEEKPKIEDVGSDEEDDSGKDKKKKTKKIKEKYIDQEELNKTPIWTRNPDDITQEEYGEFYKSLTNDWEDHLA
VKHFSVEGQLEFRALLFIPRRAPFDLFENKKKKNNIKLYVRRVFIMDSCDELIPEYLNFIIRGVVDSEDLPLNISR
EMLQQSKILKVIRKNIVKKCLELFSELAEDKENYKKFYEAFSKNLKLGIHEDSTNRRRLSELLRYHTSQSGDEMT
SLSEYVSRMKETQKSIYYITGESKEQVANSASFVERVRKRGFEVVYMTPEIDEYCVQQLKEFDGKSLVSVTKEGLE
LPEDEEEKKKMEESKAKFENLCKLMKEILDKKVEKVTISNRLVSSPCCIVTSTYGWTANMERIMKAQALRDNSTM
GYMMAKKHLEINPDHPIVETLRQAEADKNDKAVKDLVLLFETALLSSGFSLEDPQTHSNRIYRMIKLGLGIDE
DEVAAEEPNAAPVDEIPPLEGDEDASRMEEVD

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FIGURE 909

ACTCTTCTGGTCCCCACAGACTCAGAGAGAACCCACCATGGTGCTGTCTCCTGCCGACAAGACCAACGTCAAGGC
CGCCTGGGGTAAGGTCGGCGCGCACGCTGGCGAGTATGGTGCGGAGGCCCTGGAGAGGATGTTCTGTCTTCCC
CACCACCAAGACCTACTTCCCGCACTTCGACCTGAGCCACGGCTCTGCCCAGGTTAAGGGCCACGGCAAGAAGGT
GGCCGACGCGCTGACCAACGCCGTGGCGCACGTGGACGACATGCCCAACGCGCTGTCCGCCCTGAGCGACCTGCA
CGCGCACAAGCTTCGGGTGGACCCGGTCAACTTCAAGCTCCTAAGCCACTGCCTGCTGGTGACCCTGGCCGCCCA
CCTCCCCGCCGAGTTCACCCCTGCGGTGCACGCCTCCCTGGACAAGTTCCTGGCTTCTGTGAGCACCGTGCTGAC
CTCCAAATACCGTTAAGCTGGAGCCTCGGTAGCCGTTCTCTCTGCCGCTGGGCCTCCCAACGGGCCCTCCTCCC
CTCCTTGACCGGCCCTTCTGGTCTTTGAATAAAGTCTGAGTGGGCGGC

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FIGURE 910

MVLSPADKTNVKAANGKVGAGHAGEYGAEALERMFLSFPTTKTYFPHFDLSHGSAQVKGHGKKVADALTNAVAHV
DMPNALSALSDLHAHKLRVDPVNFKLLSHCLLVTLAAHLPAEFTPAVHASLDKFLASVSTVLTSKYR

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FIGURE 911

GGAGTGC GGGGCGCCCGGCCAGGGGAGCCGCCACAGCCATCGGATTGCAAAGATAGACCAGCTTTTCCAGTTAA
GAAGTTAATACAAGCCCGTCTGCCGTTTAAGCGCCTGAATCTTGTCCTAAAGGGGAAAGCCGATGACATGTCAGA
CGATCAGGGTACTTCTGTGCAAAGTAAAAGCCCCGATTAGAGGCCTCTTTGGACACCTTGGAAAACAACTGTCA
TGTGGGTTCTGACATAGACTTTAGACCGAAACTTGTCAACGGGAAGGGTCCCTTAGATAACTTTTTAAGAAATAG
AATCGAAACCAGTATTGGCCAGAGCACAGTCATCATTGATTTGACAGAGGACTCGAATGAGCAGCCAGACAGTCT
TGTGGACCACAATAAACTAAATTCTGAAGCCTCTCCCTCCAGGGAGGCAATAAATGGCCAGCGAGAAGACACTGG
GGATCAGCAGGGGTTGTTGAAGGCCATTGAGAACGACAAGTTGGCATTTCCTGGAGAGACCTTTTCAGACATTCC
TTGCAAAACAGAGGAGGAGGGTGTGGCTGTGGAGGTGCAGGGAGGAGAGGGCGACTCCAGGAATGTTCCGCCAG
GAGCTGCCCGGAGCTGACGAGTGGCCCCGAGAAATGTGCCCCAGAAAGGAGCAGGACAGTTGGAGTGAAGCTGGGGG
CATCTGTTCAAAGGGAAGGTGCCTATGGTGGTCTTGACAGGACATCTTGGCTGTGAGACCACCGCAAATCAAGTC
CCTTCCAGCCACACCCCAAGGCAAGAACATGACCCCTGAGAGTGAAGTGTGGAATCTTTCCCGAAGAAGACTC
TGTACTCAGCCATTTCGTCCCTGAGCTCTCCCTCTTCCACCAGCTCGCCCGAGGGGCGCGCTGCTCCCCAAAGCA
GCACAGCAGTACCAGTCCCTTCCCCACCTCCACGCCCCCTCCGAGAATAACTAAGAAATTCGTCAAAGGCTCTAC
AGAGAAGAACAAGCTCAGACTGCAAAGAGATCAGGAGCGTCTGGGCAAGCAGCTCAAGTTACGTGCAGAAAGGGA
AGAAAAGGAGAAGCTGAAGAGAGGAGGCCAAGCGGGCAAGGAGGAGGCCAAGAAGAAGAAGGAGGAAGAGAAGGA
GCTTAAGGAAAAGGAGAGGCGGGAGAAGCGGGAGAAGGATGAGAAGGAGAAGGCGGAGAAGCAGCGGCTCAAGGA
GGAGCGGCGCAAGGAGAGACAGGAAGCCCTGGAGGCTAACTTGAGGAAAAAGGAAAAAGGAAGAAGAGAAACG
GTTAAGAGAAGAAGAGAAGCGCATTAAAGCAGAGAAGGCCGAAATCACGAGGTTCTTCCAGAAACCAAAGACTCC
ACAGGCCCCCAAGACCCTGGCCGGCTCCTGTGGGAAGTTTGCCCCCTTTGAAATTAAAGAGCACATGGTCCTGGC
CCCTCGGCGTCGGACCGCTTTCCATCCAGACCTCTGCAGTCAGCTGGACCAGCTCCTCCAGCAGCAGAGCGGCGA
GTTCTCCTTCTTGAAAGACCTCAAAGGCCGGCAGCCCCCTGAGGTCCGGACCCACGCACGTTTCCACCCGGAATGC
AGATATTTTTAACAGTGAATGTCGTATCGTGGAGCGTGGGAAGGGCGACGGTGTTCCTCCGAGAGGAGGAAGTTTG
CAGGATGAAGCTCCTGCAGTTCTGTGAGAACCACCGGCTGCCTACTGGGGTACCTGGAATAAGAAGACGGCACT
CATCCGCGCGCAGACCCCTGGGCCCAGGACACGAAGCTCCTGGACTATGAGGTGGACAGTGAAGAGTGGGA
AGAAGAGGAGCCTGGGGAGTCCCTGTCCACAGTGAGGGGGATGATGATGACGACATGGGAGAGGATGAAGATGA
GGACGATGGTTTCTTTGTGCCCCATGGGTACCTGTCTGAGGACGAAGGTGTGACAGAGGAGTGTGCCGACCCCTGA
GAACCATAAGGTCCGCCAGAACTGAAGGCCAAGGAGTGGGACGAGTTCTGGCTAAGGGGAAGCGCTTTTCGCGT
CCTGCAACCTGTGAAGATCGGCTGCGTGTGGGCGGCTGACAGAGACTGCGCAGGCGATGACCTGAAGGTACTGCA
GCAGTTTCGACGCTGCTTCCCTGGAGACCTTGCCGGGCCAGGAGGAGCAGACGCCCCAAGGCCTCCAAGCGGGAGAG
GAGAGACGAGCAGATCCTGGCCCAGCTGCTGCCGCTCCTGCACGGCAATGTGAACGGGAGCAAGGTCATCATCCG
GGAGTTCCAGGAGCACTGCCGCCGGGGACTGCTCAGCAACCACACCGGCAGCCCGCGGACGCCCTCCACCACCTA
CCTGCACACCCCCACCCCCAGCGAGGATGCCGCCATCCCCCTCTAAGTCCCGGCTCAAGCGGCTCATTTCGAGAA
CTCAGTGTATGAGAAGCGGCCTGACTTCAGGATGTGCTGGTACGTGCACCCGCAGGTGCTACAGAGCTTCAGCA
GGAGCACCTGCCCGTGCCGTGCCAGTGGAGCTATGTGACATCGGTGCCCTCGGCCCCAAAGAGGACAGTGGCAG
CGTCCCCCTCCACGGGGCCCAGCCAGGGCACTCCCATCTCGCTGAAGAGGAAGTCAGCGGGCAGCATGTGCATCAC
CCAATTATGAAGAAGCGCAGGCACGACGGCCAGATTGGTGTGTAAGACATGGACGGCTTCCAGGCAGACACGGA
GGAGGAGGAAGAGGAGGAGGGCGACTGTATGATCGTGGATGTCCCGGATGCTGTGGAGGTCCAAGCCCCGTGTGG
AGCCGCTTCCGGAGCTGGGGGTGGTGTGGGGGTGGACACCGGCAAGGCCACCCTGACCGCGAGCCCACTGGGTGC
ATCCTGAGAGCAGGGGTGACGTATGTAGAACGCTTAGGGTGTCTCCCCACAGAGCAGATACTTGAACCGACTCA
ATTCTGTGTAAAGAGCACTTTGTCTGCTTCACGGACCTCCCCAAAGTGTGCAGAGTTCTATATAGGATGCTGG
ATTAGTTCTTTGATATTTGTAAAAATTCCCCCAAGAGCCGCATATGAATCTGCCCTTTAATAAAGCATTATTGA
GATTGCTGGCCTATTGGGAAGCTGCGGGCACAGGA

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FIGURE 912

MDCKDRPAFPVKKLIQARLPFKRLNLVPGKADDMSDDQGTSTVQSKSPDLEASLDTLENNCHVGSDIDFRPKLVN
GKGPLDNFLRNRIETSIGQSTVIIDLTTEDSNEQPDSDLVDHNKLNSEASPSREAINQREDTGDQQGLLKAIQNDK
LAFPGETLSDIPCKTEEGVGCGGAGRRGDSQECSPRSCPELTSGPRMCPRKEQDSWSEAGGILFKGKVP MVVLQ
DILAVRPPQIKSLPATPQGKNMTPSEVLESFPEEDSVLSHSSLSSPSSTSSPEGPPAPPKQHSSTSPFFTSTPL
RRITKKFVKGSTTEKNKLRLQRDQERLGKQLKLRAEEREKEKLKEEAKRAKEEAKKKKEEEKELKEKERREKREK
EKEKAEKQRLKEERRKERQEALAEAKLEEKRKKEEEKRLREEEKRIKAEKAEITRFFQKPKTPQAPKTLAGSCGKF
APFEIKEHMLAPRRRTAFHPDLCSQLDQLLQQQSGEFSFLKDLKGRQPLRSGPTHVSTRNADIFNSDVVIVERG
KGDGVPERRKFGRMKLLQFCENHRPAYWGTWNKKTALIRARDPWAQDTKLLDYEVDSDDEEWEEEEPGESLSHSEG
DDDDDMGEDEDEDDGFFVPHGYLSEDEGVTEECADPENHKVRQKLKAKEWDEFLAKGKRFRVLQPVKIGCVWAAD
RDCAGDDLKVLQQFAACFLETLP AQEEQTPKASKRERRDEQILAQLLPLLHGNVNGSKVIIREFQEHCRRLLSN
HTGSPRTPSTTYLHTPTPSEDAAIPSKSRLKRLISENSVYEKRPDFRMCWYVHPQVLQSFQQEHLVPVCQWSYVT
SVPSAPKEDSGSVPSTGPSQGTPI SLKRKSAGSMCITQFMKKRRHDGQIGAEDMDGFGQADTEEEEEEEEGDCMIVD
VPDAVEVQAPCGAASGAGGGVGVDTGKATLTASPLGAS

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FIGURE 913

GGCACGAGGTTCCGAGTTGCGATGCTGTACTTCTCTTTGTTTTGGGCGGCTCGGCCTCTGCAGAGATGTGGGCAG
CTGGTCAGGATGGCCATTTCGGGCTCAGCACAGCAACGCAGCCCAGACTCAGACTGGGGAAGCAAACAGGGGCTGG
ACAGGCCAGGAGAGCCTGTCCGACAGTGATCCTGAGATGTGGGAGTTGCTGCAGAGGGAGAAGGACAGGCAGTGT
CGTGGCCTGGAGCTCATTGCCTCAGAGAACTTCTGCAGCCGAGCTGCGCTGGAGGCCCTGGGGTCTGTCTGAAC
AAACAAGTACTCGGAGGGTTATCCTGGCAAGAGATACTATGGGGGAGCAGAGGTGGTGGATGAAATTGAGCTGCTG
TGCCAGCGCCGGGCTTGAAGCCTTTGACCTGGATCCTGCACAGTGGGGAGTCAATGTCCAGCCCTACTCCGGG
TCCCCAGCCAACCTGGCCGTCTACACAGCCCTTCTGCAACCTCACGACCGGATCATGGGGCTGGACCTGCCCGAT
GGGGGCCATCTCACCCACGGCTACATGTCTGACGTCAAGCGGATATCAGCCACGTCCATCTTCTTCGAGTCTATG
CCCTATAAGCTCAACCCCAAACTGGCCTCATTGACTACAACCAGCTGGCACTGACTGCTCGACTTTTCCGGCCA
CGGCTCATCATAGCTGGCACCAGCGCCTATGCTCGCCTCATTGACTACGCCCGCATGAGAGAGGTGTGTGATGAA
GTCAAAGCACACCTGCTGGCAGACATGGCCACATCAGTGGCCTGGTGGCTGCCAAGGTGATTCCCTCGCCTTTC
AAGCACGCGGACATCGTCACCACCCTACTCACAAGACTCTTCGAGGGGCCAGGTGAGGGCTCATCTTCTACCGG
AAAGGGGTGAAGGCTGTGGACCCCAAGACTGGCCGGGAGATCCCTTACACATTTGAGGACCGAATCAACTTTGCC
GTGTTCCCATCCCTGCAGGGGGGCCCCACAATCATGCCATTGCTGCAGTAGCTGTGGCCCTAAAGCAGGCCTGC
ACCCCATGTTCCGGGAGTACTCCCTGCAGGTTCTGAAGAATGCTCGGGCCATGGCAGATGCCCTGCTAGAGCGA
GGCTACTCACTGGTATCAGGTGGTACTGACAACCACCTGGTGTGGTGGACCTGCGGCCCAAGGGCCTGGATGGA
GCTCGGGCTGAGCGGGTGTAGAGCTTGTATCCATCACTGCCAACAAGAACACCTGTCTGGAGACCGAAGTGCC
ATCACACCGGGCGGCTGCGGCTTGGGGCCCCAGCCTTAACTTCTCGACAGTTCCGTGAGGATGACTTCCGGAGA
GTTGTGGACTTTATAGATGAAGGGGTCAACATTGGCTTAGAGGTGAAGAGCAAGACTGCCAAGCTCCAGGATTTT
AAATCCTTCTGCTTAAGGACTCAGAAACAAGTCAGCGTCTGGCCAACCTCAGGCAACGGGTGGAGCAGTTTGCC
AGGGCCTTCCCCATGCCTGGTTTTGATGAGCATTGAAGGCACCTGGGAAATGAGGCCACAGACTCAAAGTTACT
CTCCTTCCCCCTACCTGGGCCAGTGAATAGAAAGCCTTTCTATTTTTTGGTGCGGGAGGGAAGACCTCTCACTT
AGGGCAAGAGCCAGGTATAGTCTCCCTTCCCAGAATTTGTAAGTGAAGATCTTTTCTTTTTCTTTTTTTGGT
AACAAGACTTAGAAGGAGGGGCCAGGCACTTTCTGTTTGAACCCCTGTCATGATCACAGTGTGAGAGACGCGTCC
TCTTTCTTGGGGAAGTTGAGGAGTGCCCTTACAGAGCCAGTAGCAGGCAGGGGTGGGTAGGCACCCCTCCTTCCTGT
TTTTATCTAATAAAATGCTAACCTGCAAAAAAAAAAAAAAAAAAAAAAAAAAATCAGACTAGGTGGACTCTGCCTG
CCTACCTGGTCTGGGAAGATGTTCTACCATATCTCCCTAGAGCACGAAATCCTGCTGCACCCGCGCTACTTCGGC
CCCAACTTGCTCAACACGGTGAAGCAGAAGCTCTTCACCGAGGTGGAGGGGACCTGCACAGGGAAGTGAGTGTG
AGCTCACCGCACCGCCAGATCGTTTCGATGCGCACACGGGGCGCTATACCTGCAACCCCTCCCCAACTCCTACTCG
TCCTGCCACCCACTCTGGGGACCCCTCTCCTCTCTCAGGCAGCCAGTTGCTTCCTGCTTTGGGTTCCAGGGCGC
CCTCTGCAATGCTGGACAATAAGACTTCCTTCTCTCAGCTGAGATGGGTCAATCATTGACTCCTCAAACATTTTA
AAAAACCTTGGTGTGTGCCAGGACCCGTGTTGGGCTCAGAACAAGGTAGAATGGGAACAAGATAGAATGAGGACA
GCCCCGTGTGGAGCTCACAGTGTAAATCATTGTTCCCTGTGTCTGCTCTCCCTCTGTATTCTGTGTTTTCTCTTA
TCCCCGTGTGCCAGGGACCACACACCATGGGCCTCTATATATCTTCTGAATGAATGACCAGAAAAAGCAGATCGA
GAGTTTGGGGGAGGAAGGAAGTAGCCTGGGATTTGACCATCTCTGGGCTTTGCACAGAGGGGCTCTCTGATATT
AATGAGCTGGGACCCAGCTCAGGGCAGTGGAGTACTTGGGCCTCCAGCATCAGAAAAACCTGCAGGAACATGCAG
ATTCTGAGCCTCCTTATTCCTACAGAATCAAGACTGTCTGGGGCAGACCTGAGAATCTGCATTTTAAGAAGAT
GATTCTCAGGCATCCCGAAGATTGAGATCTGTTGCCTCAAGGACTCCAGCCTTCTTGGACATTTATTGTGAAATT
ACCAGAACAGCATTTGGTCTTACACATACTGATCTCTGTTCTGTCTTCTTTTGGTTCATTAAGCTCTCTGGGAGCA
GAGGTGCTATCTACTTGTCTTTTGTCTCTCCCCGACCCTACCCCCAAGAGCTCAGCGACTTTTATTGCAGATGTC
TTTAGAGGCTCTTGGACACACAGTGTCTTCTGTTTCTCATCTCCTTGCAGGTTGGACTCTTACAGAAATTGG
GCCCATGTCTTGTCTCATCTCTCGACATTCCATCCCTTACAGATGGAGTTTGATCCTAACTCCAACCCACCATG
TTACAAGACAATGGATGAGGATATTGTGATTGAGCAGGACGATGAGATCCGCTTAAAGATTGTGGGGACCCGTGT
GGACAAGAATGACATTTTGTATTGGCTCCCTGATGGACGATTACTTGGGGCTTGAAGCTGAGCCTGGTGGCC
TCCTACCCCTTGGTCTACTCTAGGAAGTGTGATTGTACACTTATCATGTTGTCCAGAGGTCCAGTCTGGCTGCT
GTTGTGGAGGCAAGGAAGGCAACTCATCCAGAAGGCATCTGGTGCTTCTTGTAGCTTAACTACTGCCTCCTCAT
TTTTCAGTATGTGTTCTAAGTATAAAAAGTCCTTGGTTCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAA

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FIGURE 914

MLYFSLEFWAARPLQRCGQLVRMAIRAQHSNAAQTQTGEANRGWTGQESLSDSDPEMWELLQREKDRQCRGLELIA
SENFCSRAALEALGSCLNNKYSEGYPGKRYYGGAENVDEIELLCQRRALEAFDLDPAQWGVNVQPYSGSPANLAV
YTALLQPHDRIMGLDLPDGGHLTHGYMSDVKRISATSIFFESMPYKLNPKTGLIDYNQLALTARLFRPRLIAGT
SAYARLIDYARMREVCDEVKAHLLADMAHISGLVAAKVIPSPFKHADIVTTTTHTKTLRGARSLIFYRKGVKA
VD
PKTGREIPYTFEDRINFAVFPSLQGGPHNHAIAAVAVALKQACTPMFREYSLQVLKNARAMADALLERGYSLVSG
GTDNHLVLVDLRPKGLDGARAERVLELVSITANKNTCPGDRSAITPGGLRLGAPALTSRQFREDDFRRVVD
FIDE
GVNIGLEVKSKTAKLQDFKSFLDKDSETSQRLANLRQVEQFARAFPM PGFDEH

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FIGURE 915

CTGCCCCGTCCGGCGCACGCTCCGCCTCCGTCAAGTTGGCTCCGCTGTCGGGTGCGCGGCGTGAGCGGCAGCCGG
TCTGGACGCGCGGCCGGGGCTGGGGGCTGGGAGCGCGGCGCAAGATCTCCCGCGCGAGAGCGGCCCCCTGCCA
CCGGGCGAGGCCTGCGCCGCGATGGCAGAGATGGGCAGTAAAGGGGTGACGGCGGGAAAGATCGCCAGCAACGTG
CAGAAGAAGCTCACCCGCGCGCAGGAGAAGGTTCTCCAGAAGCTGGGGAAGGCAGATGAGACCAAGGATGAGCAG
TTTGAGCAGTGCCTCCAGAATTTCAACAAGCAGCTGACGGAGGGCACCCGGCTGCAGAAGGATCTCCGGACCTAC
CTGGCCTCCGTCAAAGCCATGCACGAGGCTTCCAAGAAGCTGAATGAGTGTCTGCAGGAGGTGTATGAGCCCCGAT
TGGCCCGGCAGGGATGAGGCAACAAGATCGCAGAGAACAACGACCTGCTGTGGATGGATTACCACCAGAAGCTG
GTGGACCAGGCGCTGCTGACCATGGACACGTACCTGGGCCAGTTCCCCGACATCAAGTCACGCATTGCCAAGCGG
GGGCGCAAGCTGGTGGACTACGACAGTGCCCGGCACCACTACGAGTCCCTTCAAAGTGCACAAAAGAAGGATGAA
GCCAAAATTGCCAAGGCCGAGGAGGAGCTCATCAAAGCCAGAAGGTGTTTGAGGAGATGAATGTGGATCTGCAG
GAGGAGCTGCCGTCCCTGTGGAACAGCCGCGTAGGTTTCTACGTCAACACGTTCCAGAGCATCGCGGGCCTGGAG
GAAAAGTTCACAAAGGAGATGAGCAAGCTCAACCAGAACCTCAATGATGTGCTGGTTCGGCCTGGAGAAGCAACAC
GGGAGCAACACCTTACGGTCAAGGCCAGGCCAGTGACAACGCGCCTGCAAAAGGGAACAAGAGCCCTTCGCCT
CCAGATGGCTCCCCGTCCCGCCACCCCGAGATCAGAGTCAACCACGAGCCAGAGCCGGCCGGCGGGGCCACGCCC
GGGGCCACCCTCCCCAAGTCCCATCTCAGCTCCGGAAAGGCCACCAGTCCCTCCGCCTCCCAAACACACCCCG
TCCAAGGAAGTCAAGCAGGAGCAGATCCTCAGCCTGTTTGAGGACACGTTTGTCCCTGAGATCAGCGTGACCACC
CCCTCCCAGCCAGCAGAGGCCTCGGAGGTGGCGGGTGGGACCCAACCTGCGGCTGGAGCCAGGAGCCAGGGGAG
ACGGCGGCAAGTGAAGCAGCCTCCAGCTCTCTTCCCTGCTGTCGTGGTGGAGACCTTCCAGCAACTGTGAATGGC
ACCGTGGAGGGCGGCAGTGGGGCCGGGCGCTTGGACCTGCCCCAGGTTTCATGTTCAAGGTACAGGCCACGAC
GACTACACGGCCACTGACACAGACGAGCTGCAGCTCAAGGCTGGTGTATGTGGTGCTGGTGATCCCCCTTCCAGAAC
CCTGAAGAGCAGGATGAAGGCTGGCTCATGGGCGTGAAGGAGAGCGACTGGAACCAGCACAAAGGAGCTGGAGAAG
TGCCGTGGCGTCTTCCCCGAGAACTTCACTGAGAGGGTCCCATGACGGCGGGGCCAGGCAGCCTCCGGGCGTGT
GAAGAACACCTCCTCCCGAAAAATGTGTGGTTCTTTTTTTTGTGTTTGTGTTTCGTTTTTCATCTTTTGAAGAGCAA
AGGGAAATCAAGAGGAGACCCCGAGGAGGGGCGTCTCCCAAAGATTAGGTCGTTTTTCCAAAGAGCCGCGTC
CCGGCAAGTCCGGCGGAATTCACCAAGTGTTCCTGAAGCTGCTGTGTCCTCTAGTTGAGTTTCTGGCGCCCCCTGCC
TGTGCCCCGATGTGTGCTGGCCGCAGGGCGGGGCTGGGGGCTGCCGAGCCACCATGCTTGCCTGAAGCTTCGGC
CGCGCCACCCGGGCAAGGTCCTCTTTTCTGGCAGCTGCTGTGGGTGGGGCCAGACACCAGCCTAGCCTGGCT
CTGCCCCGCAGACGGTCTGTGTGCTGTTTGAAAATAAATCTTAGTGTTCAAACAAAATGAAACAAAAAAAAT
GATAAAAACCTTTCAG

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FIGURE 916

MAEMGSKGVTAGKIASNVQKKLTRAQEKVLQKLGADETKDEQFEQCVQNFNKQLTEGTRLQKDLRTYLASVKAM
HEASKKLNECLQEVYEPDWPGRDEANKIAENNDLLWMDYHQKLVDQALLTMDTYLGQFPDIKSRIAKRGRKLVDY
DSARHHYESLQTAKKKDEAKIAKAEELIKAQKVFEEMNVDLQEELPSLWNSRVGFYVNTFQSIAGLEENFHKEM
SKLNQNLNDVLVGLEKQHGSENTFTVKAQPSDNAPAKGNKSPSPPDGSPAATPEIRVNHEPEPAGGATPGATLPKS
PSQLRKGPVPPPPKHTPSKEVKQEQILSLFEDTFVPEISVTTPSQPAEASEVAGGTQPAAGAQEPGETAASEAA
SSSLPAVVVETFPATVNGTVEGGSGAGRLDLPPGFMFKVQAQHDYTATDTDELQKAGDVVLVIPFQNPPEEQDEG
WLMGVKESDWNQHKELEKCRGVFPENFTERVP

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FIGURE 917

AAAGCAGAATTGAGAGTTTGTCTTACACACAAGTTTAAATGCCACCTTCCTCTGTCTGCCATGGACCAACAAGCA
ATATATGCTGAGTTAAACTTACCCACAGACTCAGGCCCAGAAAGTTCTTCACCTTCATCTCTTCCTCGGGATGTC
TGTCAGGGTTCACCTTGGCATCAATTTGCCCTGAAACTTAGCTGTGCTGGGATTATTCTCCTTGTCTTG GTTGT
ACTGGGTTGAGTGTTTCAGTGACATCCTTAATACAGAAATCATCAATAGAAAAATGCAGTGTGGACATTCAACAG
AGCAGGAATAAAACAACAGAGAGACCGGGTCTCTTAAACTGCCCAATATATTGGCAGCAACTCCGAGAGAAATGC
TTGTTATTTTCTCACACTGTCAACCCTTGGAATAACAGTCTAGCTGATTGTTCCACCAAAGAATCCAGCCTGCTG
CTTATTGAGATAAGGATGAATTGATACACACACAGAACCTGATACGTGACAAAGCAATTCTGTTTTGGATTGGA
TTAAATTTTTCATTATCAGAAAAGAACTGGAAGTGGATAAACGGCTCTTTTTTAAATTCTAATGACTTAGAAATT
AGAGGTGATGCTAAAGAAAACAGCTGTATTTCCATCTCACAGACATCTGTGTATTCTGAGTACTGTAGTACAGAA
ATCAGATGGATCTGCCAAAAAGAACTAACACCTGTGAGAAATAAAGTGTATCCTGACTCTTGA

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FIGURE 918

MDQQAIYAE LNLP TD SGPESSSPSSLPRDVCQGSPWHQFALKLSCAGIILLVLVVTGLSVSVTSLIQKSSIEKCS
VDIQQSRNK TTERPGLLNCPIYWQQLREKCLLF SHTVNPWNNSLADCSTKESLLLIRDKDELIHTQNLIRDKAI
LEWIGLNFSLSEKNWKWINGSFLNSNDLEIRGDAKENS CISISQTSVYSEYCS TEIRWICQKELTPVRNKVYPDS

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FIGURE 919

ATGACCATGGAAACAGTTGAATCCCAGCATGATGGAAGTATAACAGCTTCTTTGACAGAGAGCAAGTCTGCTCAT
GTGCAGACTCAGACTGGGCAAATTTCAATCCCTGCTTTAGCTCAGTGCAGTGAGCTGAGATCAGGCACCAGAAGA
GGCTCCCCAGCTGTAACCTCTAGTGCAGTTACCTTCGGGCCAAACTATACATGTCCAGGGAGTAATTCAGACACCA
CAGCCATGGGTTATTTCAGTCATCAGAAATACACACCGTTCAGGTAGCAGCAATTGCAGAGACAGATGAATCTGCA
GAATCAGAAGGTGTAATTGATTCTCATAAACGTAGAGAAATCCTTTCACGAAGACCCTCTTATAGGAAAATACTG
AATGAACCTGTCCTCTGATGTGCCTGGTGTTCCTAAGATTGAAGAAGAGAGATCAGAGGAAGAAGGAACACCACCT
AGTATTGCTACCATGGCAGTACCAACTAGCATATATCAGACTAGCACGGGGCAATACATTGCTATAGCCCAAGGT
GGAAACAATCCAGATTTCTAACCCAGGATCTGATGGTGTTCAGGGACTGCAGGCATTAACAATGACAAATTCAGGA
GCTCCTCCACCAGGTGCTACAATTGTACAGTACGCAGCACAAATCAGCTGATGGCACACAGCAGTTCTTTGTCCCA
GGCAGCCAGGTTGTTGTTCAAGCTGCCACTGGTGACATGCCAACTTACCAGATCCGAGCTCCTACTGCTGCTTTG
CCACAGGGAGTGGTGTATGGCTGCATCGCCGGAAGTTTGACACAGTCCCCAGCAGCTGGCAGAAGAAGCAACACGC
AAACGAGAGCTGAGGCTAATGAAAAACAGAGAAGCTGCCCGGGAGTGTCGCAGGAAGAAGAAAGAATATGTCAAA
TGTCTTGAAAATCGTGTGGCTGTGCTTGAAAACCAAAACAAGACTCTCATTGAGGAACTCAAGGCCCTCAAAGAT
CTTTATTGCCATAAAGTAGAGTAACTGTCTTTGACTTGGACCTTGTTTTACTCTAATCAAGGCAGGAGATGCAGCA
GTCTTACTTATTGCCATGTGGACTTGTGGGAAGGACACGTGTGACCCTTAAGAATCCAGTTTGGATTAGTGTGTTG
AAATTGAATTGGGAATGTTGTTCCAGGATGTGGAATGCAGCGTGATCACACTTACCGAGCTTACTTTGATCTGTT
TGTC AATAGCATGCAAAAAATGCTTTGTTTGCCCTTTGCTTCTGCTTTTTTTTCAGGGAAGCTGCCAAAGAATGTC
GACGTCGAAAGAAAGAATATGTAAAATGCCTGGAGAGCCGAGTTGCAGTGCTGGAAGTCCAGAACAAGAAGCTTA
TAGAGGAACCTTGAAACCTTGAAAGACATTTGTTCTCCCAAACTGATTACTAGAAATATTTAACTATGAACTGAT
TACAGA

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FIGURE 920

MAVTGDETDEETDLAPSHMAAATGDMPTYQIRAPTTALPQGVVMAASPGSLHSPQQLAEEATRKRELRLMKNREA
AKECRRRKKEYVKCLESRVAVLEVQNKKLIEELETLDICSPKTD

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FIGURE 921

ATGGACTTCTCATCCTGGCCCTCCTTGGCATCTGCTCTCTCACTGCATACATTGTGGAAGGTGTAGGGAGTGAA
GTCTCACATAGGAGGACCTGTGTGAGCCTCACTACCCAGCGACTGCCAGTTAGCAGAATCAAGACCTACACCATC
ACGGAAGGCTCCTTGAGAGCAGTAATTTTTATTACCAAACGTGGCCTAAAAGTCTGTGCTGATCCACAAGCCACG
TGGGTGAGAGACGTGGTCAGGAGCATGGACAGGAAATCCAACACCAGAAATAACATGATCCAGACCAAGCCAACA
GGAACCCAGCAATCGACCAATACAGCTGTGACCCTGACTGGCTAG

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FIGURE 922

MRLILALLGICSLTAYIVEGVGSEVSHRRTC VSLTTQRLPVSRIKTYTITEGSLRAVIFITKRGLKVCADPQAT
WVRDVVRSMDRKSNTNRNNMIQTKPTGTQQSTNTAVTLTG

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FIGURE 923

CACGTGGCTGCAGCGGGGCCAGAGCAGCAATGGCGGCGGGCGGGCGGGTAGCTGCGACCCCCTGGCCCCCTGCTG
GGGTCCCTTGCGCCTTCTCCCCGCACAGCCAGGCCTACTTCGCTTTGGCCTCTACCGACGGTCACCTTACGAGTAT
GGGAGACGGCCAACAACCGGCTGCACCAGGAGTACGTGCCTTCCGCGCACCTCAGTGGTACCTGCACCTGTCTGG
CCTGGGCGCCAGCGCGGCTGCAGGCCAAGGAAAGTCCCCAGAGGAAAAAAGGAAATCAGAAGCTGTAGGAATGA
GTAACCAGACTGACTTATTGGCTCTTGGCACAGCAGTTGGTAGCATTTTATTATACAGCACAGTAAAGGAGAGT
TACACAGTAAATTAATAAGTGGTGGACATGACAACAGAGTCAACTGCATACAGTGGCATCAAGACAGTGGCTGTT
TATATAGTTGTTTACAGATGATAACATATTGTGGAATGGAACGTACAGACATGCAAAGTAAAGTGCAAATGGAAAG
GGGACAATAGCAGTGTACAGTTCCCTATGTATCAGCCCAGATGGAAAGATGTTGCTTTCAGCTGGTTCGAACAATCA
AACTATGGGTTTTTGGAGACCAAGAAGTCTACAGGCATTTTACAGGACATGCAACGCCAGTTTTCGTCACTGATGT
TCACTACCATCAGACCTCCTAATGAGAGCCAGCCCTTTGATGGAATTACAGGTCTTTATTTCTTATCTGGAGCAG
TACATGACCGGTTACTTAATGTCTGGCAGGTCCGATCAGAAAACAAAGAAAGAGTGCAGTGATGTCAATTTACAG
TTACCGATGAACCTGTCTATATTGACTTAACTTTGTTCAGAAAACAAAGAGCCTGTCAAGTTGGCTGTTGTTT
GCAGAGATGGTCAAGTCCATCTTTTTGAACACATATTAATGGGTACTGCAAAAAGCCTTTGACTTCAAACCTGCA
CAATTCAGATAGCAACACCTGGGAAAGGCAAGAAGTCAACACCAAACCCATCCCTATTCTAGCTGCTGGTTTTT
GCTCAGACAAAATGTCTATTGTTGCTTGTATATGGCAGTTGGTTTCAGCCTACTATTGAGCGAGTGGCTTTAACT
CCAGAGAACCTCATATGTGTTTTAGTAAGAGATATTTCAAACCTGCTGGGCCCCCAAAGTAGAAACAGCTATAACAA
AGGTGAGGACACCAGTGATGAATTCTGAAGCAAAAGTTCTGGTGCCTGGGATTCTGGTTCATCATGCAGCTATCA
AGCCCGCTCCTCCACAAACCGAGCAAGTAGAGAGCAAGAGGAAGTCAGGGGGAAATGAGGTTAGCATTGAAGAAC
GTCTGGGAGCAATGGATATAGACACACAAAAAGGAAAGGAAGACCTCCAGACGAATAGCTTTCCAGTCTTC
TTACCCAGGGCTTAGAAAGTAACGATTTTGAAATGCTAAATAAAGTACTTCAAACCTAGGAATGTAAACCTTATAA
AGAAGACTGTATTAAGGATGCCCCCTGCATACTATTATTCGTTGTTACAAGAGCTTACAAAGAGGTTACAAGGAC
ATCCTAATAGTGCTGTGCTAATGGTTTCACTGGCTAAAAATGTGTGTTAACAGTTTCATGCATCATACTGTCCACGT
TGCCTGACCTGGTACCCAGCTGGGGACACTCTACCAGTTAATGGAAAGCAGAGTCAAACTTTTTCAGAACTTT
CACACCTTCATGGAAAGCTTATTCTTCTAATTACACAAGTAACAGCATCAGAGAAGACAAAGGGAGCAACTTCCC
CTGGACAGAAGGCAAAGTTGGTGTATGAAGAAGAGTCTTCTGAAGAGGAGTCTGATGATGAAATAGCAGATAAGG
ATTCTGAAGATAATTGGGATGAAGATGAGGAGGAGAGTGAAAGTGAAAAAGATGAGGACGTTGAAGAGGAAGATG
AGGATGCCGAAGGAAAAGATGAAGAAAATGGCGAGGACAGAGATACAGCAAGTGAAAAAGAATTAATGGAGATT
CTGACTTAGATCCTGAAAATGAAAGTGAAGAAGAAATGAAGACAGCAAAGCAAGCCGGTCAAACCTATATAAACTCT
GGCTCACCTTGCCAGTGGTGAGGGCTGCCTCTGTGCCAGGATGCCAAGGACCGCTGCACATTTCCAAATTCACA
GCAGTGGATCCCATGCCACTTTGCTGTCTGAGCACCCCAGACTTGACTGTGTAAATAAGAGTGTTCATTCAAA
TGTTAATAAACTTTTACACAGTATATAGACACATTTTCTGCAATGTACTGACATCAGTGTCCAATATATGGTATAT
TTTTATAATATAATATCCTAGTATGATTGGTTATATCAAGAATTGACAAGTGCAGATAAAGACCTTTCCCATAGG
AGTTCAAGAACTGGACTGTTGTGAAGAAGTCAGCTCTTATCTCAGGTTGGTATCTTTTCATCAAAATCCAGATGCAA
AGCAGCACTAGTGAAAATTTTTTTAATTTAGTACATTTAATTTGGTACATTTTTCATAAAATATGAAGGGATAACT
ACAACTGGAGTAAAAATGATGGTAATTAATAAAAAATCCTCAGTATCCCTAGCTTGTCTATTAACTGTGATAATC
TGACTTGAGTCAGATTGAATATTTGGAGTGCTTCCCAGAATAACCCTTATTTTTGAAGCTATCATGTGAAGTA
TTTTTTTTAAACAAAACAAAATTTATGGTCATTAAAAACTAGAGAATTAGCCATATTAAGGATTTTTCTTGACT
GCAAATTACTTCTAAAGAATCATCAGTGTATAGATTAGAAGTGCTCATTACCTGCACTTTTAAAAAAATTCAG
TTATAGCTGCTTTTGAAGAGGTTTCCATTTTTATTAAATTACTAATGGATCAAAGAACAATTGTTTATTTTTTC
TCTTTGGTTTTAGATATTAATGATAACCTTGTGGAATTTTTTTTTCCAAAGAAAATATTTTTATAATTAATAAT
TTAATGTTTTTCTTCTTTTTCATTACCTACTCTGGCAGTGTTAGGGTATCTGTTTACCTTTAAATGATAAGTC
TCACTCAAGATTTTTTATCTATGTATAAATATTTTGGTGTGCTACAAAAGCCTTTACAAATTATCAGTAGTAGTT
TTTTTTTTTTTTTTTTTTTTTAAAGAATGAGCCGATATTGGCTTAGTGCTCACTAGGGGACATGCACATGGGAAGC
TCACCTCTAAGAAAGGGCTGGGCAGATGGATTTATTTTTTCCACCTGTGAATATGTAAAACAAAACCATTTATCT
TTGAGGGAGTTTTTAATACCAATGACAGAACAGAGATTTGTGTGCTCATCTTAAGAGCCAGAGCCATATAAGCAT
CTTGGGAAAGCAAGTTTGAACCAGCTGCTGGTGTAAATGTACAGTTATATTTGTCTATAAATGGAGCTGTTTATGG
CAATTTAATACCATTCTCTTTGTAAAGTGAATAAATATTCATCTTTTCCC

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FIGURE 924

RGCSGARAAMAAGGGGSCDPLAPAGVPCAFSPHSQAYFALASTDGHLRVWETANNRLHQEYVPSAHLSGTCTCLA
WAPARLOAKESPQRKKRKSEAVGMSNQTDLLALGTAVGSILLYSTVKGELHSLISGGHDNRVNCIQWHQDSGCL
YSCSDDKHIVEWNVQTCKVKCKWKGDNSSVSSLCISPDGKMLLSAGRTIKLWVLETKEVYRHFTGHATPVSSLMF
TTIRPPNESQPFDGITGLYFLSGAVHDLRLNVWQVRSENKEKSAVMSFTVTDEPVYIDLTLSENKEEPVKLAVVC
RDGQVHLFEHILNGYCKKPLTSNCTIQIATPGKGKKSTPKPIPIAAGFCSDKMSLLLVIYGSWFQPTIERVALNS
REPHMCLVRDISNCWAPKVETAITKVRTPVMNSEAKVLVPGIPGHAAIKPAPPQTEQVESKRKSGGNEVSIEER
LGAMDIDTHKKGKEDLQTNSEFPVLLTQGLSNDFEMLNKVLQTRNVNLIKKTVLRMPLHTIIPLLQELTKRLQGH
PNSAVLMVQWLKCVLTVHASYLSTLPDLVPQLGTLYQLMESRVKTFQKLSHLHGKLILLITQVTASEKTKGATSP
GQKAKLVYEEESSEESDDEIADKDSNWDNDEDEESESEKDEDVEEEDEDAEGKDEENGEDRDTASEKELNGDS
DLDPENEESEE

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FIGURE 925

GCCACTTGCAGTGATGTTTTGTTCTTCCCTAGCTCCTGCAGATACCTAAAGATAGTCCATAATCTTTTTGGGTCT
CACTTCTGCAAATTGGAGTTCATACTTGCCTATCTTTTGTGAAGAACCCTCAAGATAGTTGCAAAAAGTATTT
TGAAAAGTATAAAGTGATGGGTTTAATGTAAATGTTTTATTCAATACTACTATCCTCTAGACTAATTTGGTTGTA
GTTACATTACAGTAGCTGCTTCGTAAGTGATTTTGG

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FIGURE 926

ATCSDVLFPPSSCRYLKIVHNLF GSHFCKLEFILALSFVEEPSR

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FIGURE 927

GAATCTCTTTCTCTCCCTTCAGAATCTTATCTTGGCTTTGGATCTTAGAAGAGAATCACTAACCAGAGACGAGAC
TCAGTGAGTGAGCAGGTGTTTTGGACAATGGACTGGTTGAGCCCATCCCTATTATAAAAATGCTCTCAGAGCAACC
GGGAGCTGGTGGTTGACTTTCTCTCCTACAAGCTTTCCCAGAAAGGATACAGCTGGAGTCAGTTTAGTGATGTGG
AAGAGAACAGGACTGAGGCCCCAGAAGGGACTGAATCGGAGATGGAGACCCCCAGTGCCATCAATGGCAACCCAT
CCTGGCACCTGGCAGACAGCCCCGCGGTGAATGGAGCCACTGCGCACAGCAGCAGTTTGGATGCCCCGGGAGGTGA
TCCCCATGGCAGCAGTAAAGCAAGCGCTGAGGGAGGCAGGCGACGAGTTTGAAGTACGGGTACCGGCGGGCATTCA
GTGACCTGACATCCCAGCTCCACATCACCCAGGGACAGCATATCAGAGCTTTGAACAGGTAGTGAATGAACTCT
TCCGGGATGGGGTAAACTGGGGTCGCATTGTGGCCTTTTTCTCCTTCGGCGGGGCACTGTGCGTGGAAAGCGTAG
ACAAGGAGATGCAGGTATTGGTGAGTCGGATCGCAGCTTGGATGGCCACTTACCTGAATGACCACCTAGAGCCTT
GGATCCAGGAGAACGGCGGCTGGGATACTTTTGTGGAAGTCTATGGGAACAATGCAGCAGCCGAGAGCCGAAAGG
GCCAGGAACGCTTCAACCGCTGGTTCTGACGGGCATGACTGTGGCCGGCGTGTTCTGCTGGGCTCACTCTTCA
GTCGGAAATGACCAGACACTGACCATCCACTCTACCCTCCCACCCCCTTCTCTGCTCCACCACATCCTCCGTCCA
GCCGCCATTGCCACCAGGAGAACCCG

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FIGURE 928

MSQSNRELVVDFLSYKLSQKGYSWSQFSDVEENRTEAPEGTESEMETPSAINGNPSWHLADSPAVNGATAHSSSL
DAREVIPMAAVKQALREAGDEFELRYRRAFSDLTSQLHITPGTAYQSFEQVVNELFRDGVNWGRIVAFFSFGGAL
CVESVDKEMQVLVSRIAAMATYLNHLEPWIQENGWDTFVELYGNNAAAESRKGQERFNRWFLTGMTVAGVVL
LGSLSRK

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FIGURE 929

CGCCTCTTCACGGCACTGGGATCCGCATCTGCCTGGGATCATCAAGCCCTAGAAGCTGGGTTTCTTTAAATTAGG
GCTGCCGTTTTCTGTTTCTCCCTGGGCTGCGGAAAGCCAGAAGATTTTATCTAGCTTATACAAGGCTGCTGGTGT
TCCCTCTTTTTTCCACGAGGGTGTTTTTGGCTGCAATTGCATGAAATCCCAATGGTGTAGACCAGTGGCGATGG
ATCTAGGAGTTTACCAACTGAGACATTTTTCAATTTCTTTCTTGTATCCTTGCTGGGGACTGAAAACGCTTCTG
TGAGACTTGATAATAGCTCCTCTGGTGCAAGTGTGGTAGCTATTGACAACAAAATCGAGCAAGCTATGGATCTAG
TGAAAAGCCATTTGATGTATGCGGTCAGAGAAGAAGTGGAGGTCTCAAAGAGCAAATCAAAGAATAATAGAGA
AAAATTCCAGCTGGAGCAGGAGAACAATCTGCTGAAGACACTGGCCAGTCCTGAGCAGCTTGCCCAGTTTCAGG
CCCAGCTGCAGACTGGCTCCCCCCTGCCACCACCCAGCCACAGGGCACCACACAGCCCCCGCCCAGCCAGCAT
CGCAGGGCTCAGGACCAACCGCATAGCTGCCTATGCCCCGCAGAAGTGGCTGCTGCGTGTGAACGAACAGACG
GAGAAGATGTGCTAGGGAGAATCTGCCTCCACAGTCACCCATTTTATTGCTCGCTGCGAAAGAGACGTGAGACTG
ACATATGCCATTATCTCTTTTCCAGTATTAAACACTCATATGCTTATGGCTTGGAGAAAATTTCTTAGTTGGGTGA
ATTAAAGGTTAATCCGAGAATTAGCATGGATATACCGGGACCTCATGCAGCTTGGCAGATATCTGAGAAATGGTT
TAATTCATGCTCAGGAGCTGTGTGCCTTTCCATCCCTTCCGGCTCCCTACCCCTCACTTCCAAGGGTTCTCTCTC
CTGCTTGCCTTAGTGTCTACATGGGGTTGTGAAGCGATGGAGCTCCTCACTGGACTCGCCTCTCTCCTCTCCT
CCCCCAGGAGGAACCTTGAAAGGAGGGTAAAAAGACTAAAATGAGGGGGAACAGAGTTCACTGTACAAATTTGAC
AACTGTCACCAAAATTCATAAAAAACAATAGTACTGTGCCTCTTTCTTCTCAAACAATGGATGACACAAAACAT
GAGAGTGACAAAATGGTGACAGGTAGCTGGGACCTAGGCTATCTTACCATGAAGGTTGTTTTGCTTATTGTATAT
TTGTGTATGTAGTGTAACTATTTTGTACAATAGAGGACTGTAATACTACTATTTAGGTTGTACAGATTGAAATTTAG
TTGTTTCATTGGCTGTCTGAGGAGGTGTGGACTTTTATATATAGATCTACATAAAAACTGCTACATGACAAAAAC
CACACCTAAACCCCTTTTAAGAATTTGGCACAGTTACTCACTTTGTGTAATCTGAAATCTAGCTGCTGAATACGC
TGAAGTAAATCCTTGTTCACTGAAGTCTTTCAATTGAGCTGGTTGAATACTTTGAAAAATGCTCAGTTCTAACTA
ATGAAATGGATTTCCAGTAGGGGTTTCTGCATATCACCTGTATAGTAGTTATATGCATATGTTTCTGTGCATGT
TCTCTACACAATTGTAAGGTGTCACTGTATTTAACTGTTGCACTTGTCAACTTCAATAAAGCATATAAATGTTG

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FIGURE 930

MKSQWCRPVAMDLGVYQLRHFSISFLSSLLGTENASVRLDNSSSGASVVAIDNKIEQAMD LVKSHLMYAVREEVE
VLKEQIKELIEKNSQLEQENLLKTLASPEQLAQFQAQLQTGSPATTQPQGTTPPAQPASQSGSPTA

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FIGURE 931

CAGAGGCAGGGAAAACACGCAGAAGCAGGAGCTGAAGACCTCAGACCGGCACCAGGACAGCTTAATGAAGACAA
ACTGAAGGGGAAACTGAGATCCTTAGAAAACAGCTATACACCTGTACCCAGAAATACTCCCCTTGGGGAATGAA
AAAAGTACTACTGGAGATGGAAGACCAGAAAAACAGCTATGAGCAGAAGGCCAAGGAGTCACTGCAGAAAGTGCT
GGAGGAGAAAATGAATGCAGAGCAGCAACTACAGAGCACACAGGTATGGGGATGCCACATAGACATGGGGCTGGG
GACTCCAGGCAGCTTGGGGAACAAGGGGAGCCAGCTGCACAACCTCCCTGGAGCCCTCTCCTCTCTGATCTCCCTC
AGCGATCCCTGGCCCTGGCAGAGCAGAAGTGTGAAGAGTGGAGGAGCCAGTATGAGGCTCTGAAGGAGGACTGGA
GGACCCCTTGGGACCCAGCACAGGGAGCTGGAGAGCCAACTCCACGTGCTTCAGTCCAACTGCAGGTACCAGGCA
CTGGGGGTGGGGAGGGGAAGACAGGGTATGGGGAGGAGGGATGGTGATGAAAAGAAGCTGTTCTGGATTAGGGACTC
CAAAGGCAGCTGACAGCATCTGGCTTTTCAGTTCCTCAGTCACCACTACTTTGTACCAAATTCAGTGTCTGGCTC
TGAAATCTAATTTTGGAGTTTAGCAAGGATGTCTGCATTGCTCATGCAATGAACCTAAGCGTTCATTGGAATGACA
CCATCACCACCCAAATGAAAAGAAGTGGCTGGAATATTATCATCAGCCTACTAATGTCATCTCCCAACCCACTCTCC
AAACTCCATCCCAAAAAAGCATCCAGTTTCAAGATTGCCCACTGTTGGCAAAGAAAGAATGTCATAATTTATTTA
CAGGTGAGTATTAACACTTTCTGCCAATGTGTATTTTAAGCAATTACATTTAGCAATTACAATTAGATTCTTGGC
ATCCTCAAGGGTTCATCATCTTCAATCTGTCTAAGCCTCAGTTTCCCCATCTCTAGAATGAGGATAATAGTA
CCTACATCATAAGGTGGCTCTGAGTATTAAGTAAGATGATCCATGTCAAGCACTTAGCACAAATGCCTGGCACACA
AAAACACTCAGTAAATATTAGCTATTATTTTGCATAGATTATTTACCTGGTTTGGAAATTTGAGGATCCACCTC
AAAAGCTGATCTTTGTAATTTTCTGAAGCAGGGCTCAGAACAGCCCACTTGATAAGAGACAGAGTATGTGAGTC
TTATCAAAGGAGTGAACCCAGCTGGTCACTCTGCGTGGTATCCACAGCTCAACCTTTGTTGTTTTCTTCTTCCCA
TCACCTATAAGGCAACTCCTATGAAGATTTTGTGAGGGGTTTTTAACTTTAAATCTTTGTGGAAGAAAAAAGA
CCCTAACCAAAAAAAAGTGAATCTGCCAGAAGTAGAAAAAAGAGAAATGAAACATCCAGAAAACCTAATGACT
TTGTATTCTTAATTTGGTGATTTACCAAAGTGTCAAGACATGACTCCCACACCAATGACAACCACTTACATTTT
CCCTAGAAATGGCAGATTTTTTAACGTACTGGGTTTTCTAAAGCAATTCTTATTTTATATATTCTAATTTATGTAC
ATGAATGTGTCACTTAGACCTGTCACTAGGGATGGTTTAGAAAAATAAATCTTACCTGCACATGCCTCAGTCCACT
TCAAACTNN
NN
NNNNNNNNNNNNNNNNNNNNNAGACGCGAGTTCTTGTGAATATCAAAAGTCTAATCTGCTGTTATAAATATGAGGA
ACAAAGCAAAGGGAAGAAATAGGAAAAAAGAAAGACTTCTCTATTTTCTCATCTCCCTAACATTCTTTCTATCTC
TAAATTCAGACTTTTCTACATTTTCTCTTCCATGGTACCCGCCCCCAACCTCCACCCCAACACTGACCATC
CTTCTATATTGGCCCTCCTCCTCTTACAGGGAGCAGATAGCAGGGACTTACAGATGAACCAGGCCCTGCGATT
TTTGGAAAATGAGCACCAGGAAGTGCAGGCCAAGATTGAATGCCTGCAAGGGGACAGAGACCTGTGCAGCTTGGAA
TACCCAGGACCTACAAGGTAATCTTCTCTTGGAGGCCTTGAGTGCATGGCAGCCATGGCCAAGTGAGCTAAGAA
AAAAGAACTGAATTAAGAGAAAGGCTTCAGCCTTTTATTTGTTTGCTTGATTGGTTGATTGGCTTTTATAATCTC
ATTTTACCTTGAGGGAGAGGCAGGACTGTTTTAATCATCCAAATGAAAATTAATTTCACTGTAGTAGATAGAG
TATCTTGTGTCTGAGCTCTCTTTTTTAGCCCATCCCTCTGGGCCAGATCACAGCTGCTCCACATCAGTCACAT
ATGTCAAGGCCACAGTCTTAATTTGAAAGGGAAAGGTCAGTTGAAACACAAGGCATAGAGAAAGTCTCTCAGTCA
CATCTCTGTGTCCGCTGATAGAGAGGACTAGATAGTGTGTAAACACAAGCCTCAATGCAACCCAACATTGTTGA
TGCACAAAAACCTGAGGTACTTGGCTTCTGGTTTACCTCTTCAGAACTGGGACACGAAGATAGAGCAACTTCCAA
TAGACACACGTTAAAGACCATGACAAGACAGCATCTATTACTAATTTCCATCCTAAGTACTGAGTTTATTAGTC
TTGGGTTCTTTATTTTGGCTTGCATTATTGCATTTTCAGATCAACTAAAAGGTCAGAGGCAGAGAACTCACC
CTGGTGACCAGAGTACAGCAGTTGCAGGGTTTGCTTCAAAATCAATCCTTACAGCTTCAAGAACAGGAGAACTC
TTAACAAGAAAGGTCAGCAAATTTATTACCACAAATTTCTAAGATATTGCTCTTCTTACCTGCCTAGAGGCAG
CGGGATGGACTACATGACCTCCTGGAGTCCCAGCCAGTTCTGGGAGTCTGTTAAGTCCGGGATGTGTGGGAGCTT
TTTAAGGACTGATCATTGGCTCTGAGGACACTTCAACTAGTTAGCCTTCTATCTTGAGGTATATAAACTGTGAAA
AGGGTTCTATTCTCTCTGAAAGCACATGTCT

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FIGURE 932

RGRENHAEAGAEDLRPAPGQLNEDKLKGKLRSLNQLYTCTQKYSPPWGMKKVLLEMEDQKNSYEQKAKESLQKVL
EEKMNAEQQLQSTQVWGCHIDMGLGTPGSLGNKGSQ L HNSLEPSPL

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FIGURE 933

GTTGGAAATAACTATAACTTAAAGCAAATCTAACCCAGTAAGCTATCAAAAAGAAAAATTATATAATTACCAAGT
AGAGTTAATTTACCTGAGTTCTATGAACATATTCATTATTAAAGGAAACCTCAAATTATTGTCCATTGGAAGC
AAAATATACATTTATAAATAGCCATTTCTCGTTTTAAAAAACTAATAACATTGAAATAAACAGAACTTAAGCTC
TTCTAGTTTGCCAAAACCAGAAAGCAAACATCATATACTAAATGATGAAATGCCAAAGCCATTTCCATTATATC
AGAAACGAGACTAATACTTCTGTTCATCTTTACATGATTGTCACTATTATTAAGCATTGTTTTGGTAGTTCTAG
CCATTGCAGTAAGACAGTAGACAGAAAGTCAAATAATTGGCATAAATATTGGAAACAAAAAATTATTTCTACTTT
GAAATGATACAATAGAATAGCTGGAAAGCCCAGGGGGACTCTAGTAGAAAACAGCAATGAGGATTAAATGTAAGA
CACTTTGGAAAGCTGATGTGTGAGAAATGTACACAACTAATAGCTTTCTCTTTATTAGTAGTCATCAGTTGAAA
ATGGAAATGACCAAGCAAAAAATATTCAACAGAATGACAAACTATTGGTTACACCTAGGAATAAATGTGTTAAAG
AAAGGTACAGAGTGAAGGTAATGACCCTTATGAAGAAAACCTTGATATTATAAAAAAGTAGTCCTTTTCTCCCTCAG
TTTTTGTCTTCAAAATGTTTACTTGGGACAGATCGTGGTTTACATGATGGTCCTCAAACATATTGTGAACAACAT
TAAAAAAGACACATTTTACTCAATAAGTAACATTTTTTGAAGCTACTATGTGCTAGGGACCTAGTTTTTT
AGTGCAGTGGTCTCCAAAATAATGTACTGGCAGTATGGGAAGAGCGTTTAGAACACTGTACCTTTTTATTTGGGA
GGAGAAAAGAAACCTTTGTCAAATATTTAACACCTGCTGCCAGAGGTCTGTAGATTGTGATGATTGTGTGCCATGA
GTTACACACAGACTCCTAAATCAGTTTCACCTGTGGTGTCTCATTCTGTTTACTTTGAGCATTTTGCATTCTAT
ATCTGCTTAGTTATATGGATTTATTCGTCCCATATAATATGTGTAGCCACATGGACACATGTTTTAAAGGTTTT
AAATTCTGCAAGATAGTGACGATGATGTAAACACAAGAAAAGGGCAAATGGATACATTTTCTACTCTGTGCTCA
TCAAACATATTACAGGATAAAATTATTGGCTATCTAATAAAAACACAGACTAATAAGACCTGATAAGTTGGACAA
AATGTTTTAAAAATTAACATGAAGATGATAGGAAGTATGAATCTATATTTACTGTCATTAAATGTCAAACCTTTACC
TTATGGTATATTGTACTTTGAGAAATTA

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FIGURE 934

MSNLYLMVYCTLRN

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FIGURE 935A

AAAATTGCGTTTGAGTTTGCCGCGAGCCGGGCCAATCGGTTTTGCCAACGCATGCCACGTGCTGGCGAACAAAT
GTAAACACGGAGATCGTGTGCCGGGCACCTTGGTTTCGTGGTGGGCAACTGTGCTGCTGTTTCTTTTGGCCGCGGA
CAAGGTCGGCAGAGGTGGACCCCTGCTTGGGAGAGCTCTTCTCGCTGTGCTGACACCCGCCCTAACAGTCACCC
ACCCCGGGGAAATAATGGGGCTCGGAGGCCTCCTCCAGCCAGTGTCCAGCCTAAGCACATCGGCTCCCGCAGTT
CAGAAAGTCCCGAGGCCCGAGTCACCATTTCCGGCTCAGACCTCGACCCGGAACGTGGCTGCCCACTGCCACGC
CCACTACGCCCCAGTGGCTCGCCCCAGGGGACGAGGGGCAAGAAGCGGCCTCCGAGGGCAGCGGCCGAAGGCCAT
TCGGTCCCTGGCTCTTCCAGCTCGCAGAGACCCGGAAGCGCTGCCCGGCCCTGCCCTCTTCAGATCCCCCA
GCACCGGAGGAGCAGCGAGGGGGCTGCGTCCAGGCCGGCTTTCGGGTGGCTTAGGCGAATCCAGCTCTCTTTTG
CCCCCTCCAGAAGGCCAGCCCCGTCCGGGCGGTGTTCCGGCGCGCCGGGCCGGGCCCCCGCCGCCCCAGGCT
CGCTCATAGGCCCGGAACACCACAGCCCGCCAGACTTGGCTGGCGCCGAGCCGGGGGTGGAGCCAGCGGGTTCC
CGCCAAAATCGCGTAGCTGGTCTTCCCCCGGGGCTACGTCGCGCCCTCCTTTTTTTTTTCAAACCCGGAGCTGC
ACTGGGATTGGTGGACTGGGCACTCACGTGGTTAACGGTTCGCGGGAAGCCGCGGAGCCCGAACCTGAGACTGGAC
CTGAGGAGACCTCAGCCTCGGTGCTCGGGCCGCCCGCCTCTGCCGGAAGTCCGCGCCGCGCTGCCGCCACCG
TCCGCAGCCCGAGCGCCCCGAGCCGAGGCCGCCCGCCGCGCAGAGACGCCGCGGCTGCGACTAGGCGCGCCAG
CCGCACGTGGCGGACCCGCCCCAGGCCCGCAGTGTCTGGACCCCGCAGGCCTCCGCTCTCTGTCTCGGCC
CGTCCCCAGGGCCGCGATGAGCTTCTGAGCCGACAGCAGCCGCCGCCACCCGCGCGCGGGCGGCCTGCAC
CTTGCGGCAGAAGCTGATCTTCTCGCCCTGCAGCGACTGTGAGGAGGAGGAAGAAGAGGAGGAGGAGGGCAG
CGGCCACAGCACCGGGGAGGACTCGGCCTTCAAGAGCCGACTCGCCGCTGCCGCCGCGCGGAGCCCCACGGA
GCCCGGGCCCGAGCGCCGCGCTCGCCCGGGCGGCCCGGGAGCCCCGCGGAGCTGGAGGAGGACCTGTTGCT
GCCCGGCGCTGCCCGGGCGCGGACGAGGCGGGCGGTGGGGCGGAGGGCGACTCGTGGGAGGAGGAGGGCTTCGG
CTCTCGTCGCCGCTCAAGTCGCCGGCGGCCCTACTTCTGGGTAGCTCTTCTCGCCGGTGCCTGCGGCGG
CCCAGGAGATGCGTCGCCCGGGGTTGCGGGGCGCGCCGGGCGGGCGAAGGCCGCGCTCGCCCGGGCCGGACCA
CCCGGGCACCCCGCCACACAAGACCTTCCGCAAGCTGCGACTCTTCGACACCCCGCACACGCCCAAGAGTTTGCT
CTCCAAAGCTCGGGGAATTGATTCCAGCTCTGTTAAACTCCGGGGTAGTTCTCTCTTCATGGATACAGAAAAATC
AGGAAAAAGGGAATTTGATGTGCGACAGACTCCTCAAGTGAATATTAATCCTTTTACTCCGGATTCTTTGTTGCT
TCATTCTCAGGACAGTGTCTGCTAGAAAAGAGAACGTATTGGAATGATTCTGTGGTGAAGACATGGAAGCCAG
TGATTATGAGCTTGAAGATGAAACAAGACCTGCTAAGAGAATTACAATTACTGAAAGCAATATGAAGTCCCGGTA
TACAACAGAATTTATGAGCTAGAGAAAAATCGGCTCTGGAGAATTGGTTCTGTATTTAAGTGTGTGAAGAGGCT
GGATGGATGCATTTATGCCATTAAGCGATCAAAAAAGCCATTGGCGGGCTCTGTTGATGAGCAGAACGCTTTGAG
AGAAGTATATGCTCATGCAGTGCTTGGACAGCATTCTCATGTAGTTCGATATTTCTCTGCGTGGGCAGAAATGA
TCATATGCTTATACAGAATGAATATTGTAATGGTGGAAGTTTAGCTGATGCTATAAGTGAAAACCTACAGAATCAT
GAGTTACTTTAAAGAAGCAGAGTTGAAGGATCTCCTTTTGCAAGTTGGCCGAGGCTTGAGGTATATTCAATCAAT
GTCTTTGGTTTACATGGATATAAAACCTAGTAATATTTTCATATCTCGAACCTCAATCCCAAATGCTGCCTCTGA
AGAAGGAGACGAAGATGATTGGGCATCCAACAAAGTTATGTTTAAATAGGTGATCTTGGGCATGTAACAAGGAT
CTCCAGTCCACAAGTTGAAGAGGGCGATAGTCGTTTTCTTGCAAATGAAGTTTTACAGGAGAATTATACCCATCT
ACCAAAAGCAGATATTTTTGCGCTTGCCCTCACAGTGGTATGTGCTGCTGGTGTGAACCTCTTCCGAGAAATGG
AGATCAATGGCATGAAATCAGACAGGGTAGATTACCTCGGATACCACAAGTGCTTTCCCAAGAATTTACAGAGTT
GCTAAAAGTTATGATTTCATCCAGATCCAGAGAGAAGACCTTCAGCAATGGCACTGGTAAAGCATTACAGTATTGCT
GTCCGCTTCTAGAAAGAGTGCAGAACAAATTACGAATAGAATTGAATGCCGAAAAGTTCAAAAATTCATTTTACA
AAAAGAACTCAAGAAAGCACAGATGGCAAAAGCTGCAGCTGAGGAAAGAGCACTCTTCACTGACCGGATGGCCAC
TAGGTCCACCACCCAGAGTAATAGAACATCTCGACTTATTGGAAAGAAAATGAACCGCTCTGTACAGCTTACTAT
ATACTGAGCTACTCTTTCCACCTCCCCCTGAACACTGTGACAAGAGGAAGCTAGGTTGAAATCACTGATAGAA
TCCAGTTTGCAATTACTTTCTCGATTGGTGTGCTAGTGTCTTACTGATTAGGACTTTTATTGTGAATTACAGTTGA
AAGCTGTATTTTATGATTGCTATGTCAGGCTTTCATCTAATCTTACCAGTCTGTCTTCTGTAGGATGTGTCACT
GTTGGATGTTACACCAGCCTTTCCAGGGTTAACCCTGTGGTGGTGTGCTGCTTATAGTTTGCTGTTGCATTGTA
ATAAAAGGTGTCTTTCCCTGTAGTGACCTGTAAAAAGTACTCAAGGGCTTTATTACAGACATAACCTCCCTTTGA
AAAGGGACATGCTAAAAGACTCATTACTACTCAGCCTTCAATGTACCTGTGTGTCCATCTTATATTTCTTTTTT
TTTTTAATTGTGAATTAGACTTGTATATCCCACTGGGAGCACTTTGTAGGCATTGCATGAACCATGGGATGATGA

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FIGURE 935B

TTCTGTGGAGGTATTGCCTTGTGAATTTGCTGCTATTTTAGTTTTGTCTTTGCTGTAACTTGTAGCATTAAACA
ATCATTGTTGTTAATAGGTCTTCTTTTTGAAACAATTATGTGAAATGTATAGCTGCTTTTGATGAAAAGCAGCTA
TTTGCCTTTTTTTTTTTTTTCCTTTGAACCTTGAAGCTAGTGCATTGGAAAAATGCACCCTTTCCTCCTTTGGAAT
GCTGTATTAATGTAGTATAATAATTACTGGTTTTGTAACCTGTTCTGGTAATGTCCTTCCCGGACTCTTTTTAAA
TGTCTCCCCCTAAGTTTTATACTTGATTGTATTATTAGTCTGTTTTTAAATGTTTTGCCCGGTTTTCTCTTCAA
TATTTGTGTATATAAACCGATCTTCGTGATACTGTACATAGCTGTTTGAAATGCCAGAATGACTTCTGACATTCC
AAGTTTTTCACAAAATATATTTTATCTGTGATTAGCCATTTGACTAATAATACTGGCTAACAGATGTTGAAAAAA
ATTGCTGTTTGTTTTCTCATTAATTTGGTCTAAAACATGTTTGCACCTTGCTTTGACTTGTGTTTTATTAACA
TTGATTGGCATATTAAAAGTCACTCTGAGCTT

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FIGURE 936

MSFLSRQQPPPPRRAGAACTLRQKLIFSPCSDCEEEEEEEEEEGSGHSTGEDSAFQEPDSPLPPARSPTEPGPER
RRSPGPAPGSPGELEEDLLLPGACPGADEAGGGAEGDSWEEEGFGSSSPVKSPAAPYFLGSSFSPVRCGGPGDAS
PRGCGARRAGEGRRSPRPDHPGTPPHKTFRKLRLFDTPHTPKSLLSKARGIDSSSVKLRGSSLFMDTEKSGKREF
DVRQTPQVNINPFTPDSLLHSSGQCRRRKRTYWNDSCGEDMEASDYELEDETRPAKRITITESNMKSRYTTEFH
ELEKIGSGEFGSVFKCVKRLDGCIIYAIKRSKKPLAGSVDEQNALREVIYAHAVLGQHSVVRYSAWAEDDHMLIQ
NEYCNGGSLADAISENYRIMSYFKEAELKDLLLQVGRGLRYIHMSLVHMDIKPSNIFISRTSIPNAASEEGDED
DWASNKVMFKIGDLGHVTRISSPQVEEGDSRFLANEVLQENYTHLPKADIFALALTVVCAAGAEPLPRNGDQWHE
IRQGRLPRIQVLSQEFTELLKVMIHDPERRPSAMALVKHSVLLSASRKSAEQLRIELNAEKFKNSLLQKELKK
AQMAKAAAEERALFTDRMATRSTTQSNRTSRLIGKKMNRSVSLTIY

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FIGURE 937A

GAATTCGGCACGAGGTCACCCGGATAGGTAAAGGAAAACATGCCTGCCACACGGAAGCCAATGAGATATGGGCAT
ACAGAGGGACACACGGAGGTCTGTTTTGATGATTCTGGGAGTTTTATTGTGACTTGTGGAAGTGATGGTGATGTG
AGGATTTGGGAAGACTTGGATGATGATGATCCTAAGTTCATTAATGTTGGAGAAAAGGCATATTCATGTGCTTTG
AAGAGTGGAAAACCTGGTCACTGCAGTTTCTAATAATACTATTCAAGTCCACACATTTCTGAAGGAGTTCAGAT
GGTATATTGACTCGCTTCACTACAAATGCAAACCATGTGGTCTTTAATGGGGATGGTACTAAAATTGCTGCTGGA
TCTAGTGATTTTCTAGTCAAAATTGTGGATGTGATGGATAGCAGCCAACAGAAAACATTTTCGAGGACATGATGCC
CCTGTTTTAAGTCTTTCTTTGATCCTAAGGACATCTTTCTGGCATCAGCTAGTTGTGATGGATCTGTCAGAGTG
TGGCAAATTTTCAGATCAGACATGTGCTATTAGTTGGCCACTGCTACAAAATGCAACGATGTGATAAATGCAAAA
TCAATCTGCAGACTTGCTTGGCAGCCAAAAAGTGGGAAGTTACTGGCAATTCCTGTGGAAAAATCTGTTAAGCTA
TATAGAAGAGAATCTTGGAGTCATCAATTTGATCTTTTCAGATAATTTTCATCTCTCAGACCCCTCAATATAGTAACC
TGGTCTCCCTGTGGGCAATATTTAGCTGCAGGTAGTATTAATGGTCTAATCATAGTTTGAATGTGGAAACCAAA
GACTGCATGGAAAGGGTGAAACATGAGAAAAGGTTATGCAATTTGTGGTCTGGCATGGCATCCTACTTGTGGTCTGA
ATATCGTATACTGATGCGGAAGGAAATCTAGGGCTTCTAGAGAATGTTTGTGACCCAGTGGAAGACATCAAGC
AGTAAGGTATCTAGCAGAGTGGAAGGATTATAATGATCTTTTTGATGGAGATGATATGAGTAATGCTGGTGAT
TTTCTAAATGACAATGCAGTTGAGATCCCTTCTTTTCAAAGGGATTATAAATGATGATGAGGATGATGAAGAC
CTCATGATGGCTTCAGGTCGTCTAGACAGCGAAGTCACATCCTAGAAGATGATGAAAACCTCAGTTGATATTTCA
ATGCTAAAACTGGTTCTAGTCTTCTCAAAGAGGAGGAGGAAGATGGTCAAGAAGGCAGCATTACAAATCTACCA
CTTGTAACATCCCAAAGGCCATTTTATGATGGACCCATGCCAACTCCCCGGCAAAAGCCATTTTCAGTCAGGTTCT
ACACCGTTGCATCTCACTCACAGATTCATGGTGTGGAACCTATTGGAATTATTCGCTGCTATAATGATGAGCAA
GACAATGCCATAGATGTGGAGTTCCATGATACCTCCATACACCATGCAACACACTTATCAAACACTTTGAATTAT
ACAATAGCAGATCTTTCCACGAAGCTATTTTGTGGCATGTGAAAGCACTGATGAAGTAGCAAGCAAGCTTCAC
TGCTGCACTTTAGTTCTTGGGATTCAAGCAAAGAGTGGATAATAGACTTGCCTCAGAATGAGGATATTGAAGCC
ATATGTCTCGGTCAAGGATGGGCTGCTGCCGCTACTAGTGCCCTGCTTCTTCGATTGTTTACTATTGGAGGGGTT
CAAAAAGAGGTATTTCAGCCTTGCTGGACCTGTGGTGTCAATGGCAGGACATGGAGAACAGCTTTTCATTGTTTAT
CACAGAGGTACAGGATTTGATGGGGATCAGTGCCTTGGAGTTCAACTGCTAGAGCTGGGGAAAAAGAAAAACAA
ATTTTGCATGGTGACCCTCTTCTCTTACAAGGAAATCCTACCTTGCATGGATTGGGTTTTTCAGCTGAAGGTACC
CCTTGTTACGTGGATTTCAGAAGGAATTGTTTGAATGCTTAACAGAGGACTTGGTAATACGTGGACTCCTATATGT
AATACAAGAGAGCACTGCAAAGGAAATCTGATCACTACTGGGTGGTTGGTATCCATGAAATCCCAGCAACTA
AGGTGCATTCCTTGTAAGGTTCTCGGTTTCCCCCAACCCCTTCCACGCCCTGCTGTTGCTATATTATCCTTTAAG
CTTCTTACTGTGATTTGCAACAGAGAAAGGACAAATGGAGGAGCAATTTTGGCGTTCAGTTATATTTTACAAC
CACCTTGATTATTTAGCTAAAAATGGTTATGAATATGAAGAGAGCACTAAAAATCAAGCAACAAAGAGCAACAG
GAACTTTTAATGAAAATGCTTGCGCTTTCTTGTAAGTGGAGCGAGAATTCGTTGTGTGGAACCTTGCTGATCTA
ATGACTCAAAATGCTGTGAATTTAGCCATTAAATATGCTTCTCGCTCTCGGAAATTAATACTGGCTCAAAAATA
AGTGAACCTGGCTGTAGAGAAGGCAGCCGAATTGACAGCAACCCAGGTGGAAGAGGAAGAAGAAGAAGATTTT
AGAAAAAGCTGAATGCTGGTTACAGCAATACTGCTACAGAGTGGAGCCAACCAAGGTTTCAGAAATCAAGTTGAA
GAAGATGCTGAGGACAGTGGAGAAGCTGATGATGAAGAAAACAGAAATACATAAGCCTGGACAGAACCTCGTTT
TCCAAAAGTACAAATTCCTCTGATGTTTCAGCTAAGTCAGGTGCAGTTACCTTTAGCAGCCAAGGACGAGTAAAT
CCCTTTAAGGTATCAGCCAGTTCCAAAGAACCAGCCATGTCAATGAATTCAGCACGTTCAACTAATATTTTAGAC
AATATGGGCAAATCATCCAAGAAATCCACTGCATTTAGTCGAACTACAAATAATGAAAAGTCTCCCATTATAAAG
CCTCTGATTCCAAAGCCGAAGCCTAAGCAGGCATCTGCAGCATCTATTTCCAGAAAAGAAATTCCTCAAACATAAT
AAAACCTGAGGAAGTGAAAGAAGAAAATCTTAAAAATGTATTATCTGAAACCCAGCTATATGTCTCCTCAAAC
ACTGAAAACCAAAGGCCAAAGACCGGGTTCCAGATGTGGTTAGAAGAAAATAGAAGTAATATTTTGTCTGACAAT
CCTGACTTTTTTCAGATGAAGCAGACATAATAAAGAAGGAATGATTCGATTTAGAGTATTGTCAACTGAAGAAAGA
AAGGTGTGGGCTAACAAAGCCAAAGGAGAAACGGCAAGTGAAGGAACCTGAAGCAAGAAGCGAAAACGTGTGGTT
GATGAAAGTGATGAAACAGAAAACAGGAAGAAAAGCAAAAGAGAACCTGAATTTGTCTAAAAAGCAGAAACCT
TTAGATTTTTCTACAAATCAGAACTATCAGCTTTTGCATTTAAGCAGGAGTAAAGGAAGAAAGTGACCCTAGGG
AAGTAATGGATTTTTTTTTTACTCATCTTTGAATATAGACTCGAGTCTTTGGGAAACTCATTATATATATATTTTT
AAAGAGTTTGAAGCAACTGTTTGTCTTTATAAGATAATGTAGTAATTATATTGGTGTAGGTAACAGGACATATGT

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FIGURE 937B

AAAAACTATCATCTTTGCAGATTACTCTGCCTCCAAATGCAGGGCCTTTCAGAGATGCATTGTGATTGTAATTAC
TGAGTTGAAGCTCCAACCAATTTGAATTTGTTTCTTAACCTTGAAAAATCATTAAAGCCAAGGTATTAAAACCTT
TGTGCATTAATACCTTCTAGGGGTTTGGTTCATTTGGTTTTTGTGTCATGTGCAAGGAAGGACAATAGTCCTCTTTC
CAAGTGTGTTAGCATAGACTTCTCTATATGTTTCTACTAGACCTAGGGGATGACGTCTTTTAATAATACTGGCCC
TAAACATGTAAATAATCTTGTAGGTGAGACTTTTTCTTTTGTGTTTCGGAAATTCCTATGTGGCTTTCAGTTGT
CTGTTTGTATAGCCTGGATTTTTTTTGAGGTAAATGAAACTTCTCATTGTAAAAAAAAAAAAAAAAAACTCGAG

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FIGURE 938

MPATRKPMRYGHTEGHTEVCFDDSGSFIVTCGSDGDVRIWEDLDDDDPKFINVGEKAYSCALKSGKLVTAVSNN
IQVHTFPEGVPDGILTRFTTNANHVVFNFGDGTKIAAGSSDFLVKIVDVMDSQQKTFRGHDAVLSLSFDPKDIF
LASASCDGSVRVWQISDQTCAISWPLLQKCNDVINAKSICRLAWQPKSGKLLAIPVEKSVKLYRRESWSHQFDLS
DNFISQTLNIVTWSPCGQYLAAGSINGLIIVWNVETKDCMERVKHEKGYAICGLAWHPTCGRISYTD AEGNLGLL
ENVCDPSGKTSSSKVSSRVEKDYNLDFDGDDMSNAGDFLNDNAVEIPSFSGKIINDDDEDEDLMMASGRPRQRSH
ILEDDENSVDISMLKTGSSLLKEEEEDGQEGSIHNLPLVTSQRPFYDGPMPTPRQKPFQSGSTPLHLTHRFMVWN
SIGIIRCYNDEQDNAIDVEFHDTSIHHATHLSNTLNYTIADLSHEAILLACESTDELASKLHCLHFSSWDSSKEW
IIDLPQNEDIAICLGQGWAAAATSALLLRFTIGGVQKEVFSLAGPVVSMAGHGEQLFIVYHRGTGFDGDQCLG
VQLLELGKKKKQILHGDPLPLTRKSYLAWIGFSAEGTPCYVDSEGIVRMLNRGLGNTWTPICNTREHCKGKSDHY
WVVGIIHENPQQLRCIPCKGSRFPPTLPRPAVAILSFKLPYCQIATEKGQMEEQFWRSVIFHNHLDYLAKNGYEYE
ESTKNQATKEQQELLMKMLALSCKLEREFRCVELADLMTQNAVNLAIKYASRSRKLILAQKLSELAVEKAAELTA
TQVEEEEEEEEDFRKKLNAGYSNTATEWSQPRFRNQVEEDAEDSGEADDEEKPEIHKPGQNSFSKSTNSSDVSAKS
GAVTFSSQGRVNPFKVSASSKEPAMSMNSARSTNILDNMGKSSKKSTALSRTTNNEKSPIIKPLIPKPKPKQASA
ASYFQKRNSQTNKTEEVENLKNVLSETPAICPPQNTENQRPKTGFMWLEENRSNLSNPDFSDEADI IKEG
MIRFRVLSTEERKVVWANKAKGETASEGTEAKKRKRVD ESDTENQEEKAKENLNLSKKQKPLDFSTNQKLSAFA
FKQE

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FIGURE 939

CTTGTCTCCCCTGGTTTGTGAAGTGCGGAAAACCAGAGGCGCAGTCATGTCGGGATTTCGACGATCCTGGCATT
CTACAGCGACAGCTTCGGGGGCGACGCCAGGCCGACGAGGGGCGAGGCCCGCAAATCGCAGCTGCAGAGGCGCTT
CAAGGAGTTCTTGCAGGAGTACCGAGTGGGCACCGACCGCACGGGCTTCACCTTCAAATACAGGGATGAACTCAA
GCGGCATTACAACCTGGGGGAGTACTGGATTGAGGTGGAGATGGAGGATCTGGCCAGCTTTGATGAGGACCTGGC
CGACTACTTGTACAAGCAGCCAGCCGAGCACCTGCAGCTGCTGGAGGAAGCTGCCAAGGAGGTAGCTGATGAGGT
GACCCGGCCCCGGCCTTCTGGGGAGGAGGTGCTCCAGGACATCCAGGTCATGCTCAAGTCGGACGCCAGCCCTTC
CAGCATTTCGTAGCCTGAAGTCGGACATGATGTACACCTGGTGAAGATCCCTGGCATCATCATCGCGGCCCTCTGC
GGTCCGTGCCAAGGCCACCCGCATCTCTATCCAGTGCCGCGAGCTGCCGCAACACCCTCACCAACATTGCCATGCG
CCCTGGCCTCGAGGGCTATGCCCTGCCAGGAAGTGCAACACAGATCAGGCTGGGCGCCCCAAATGCCCATTTGGA
CCCGTACTTTCATCATGCCCCGACAAATGCAAATGCGTGGACTTCCAGACCCTGAAGCTGCAGGAGCTGCCTGATGC
AGTCCCCCACGGGGAGATGCCAGACACATGCAGCTCTACTGCGACAGGTACCTGTGTGACAAGGTCGTCCCTGG
GAACAGGGTTACCATCATGGGCATCTACTCCATCAAGAAGTTTGGCCTGACCACCAGCAGGGGCGGTGACAGGGT
GGGCGTGGGCATCCGAAGCTCCTACATCCGTGTCTGGGCATCCAGGTGGACACAGATGGCTCTGGCCGCAGCTT
TGCTGGGGCCGTGAGCCCCAGGAGGAGGAGGAGTTCCGTGCGCTGGCTGCCCTCCCAAATGTCTATGAGGTCAT
CTCCAAGAGCATCGCCCCCTCCATCTTTGGGGGCGACAGACATGAAGAAGGCCATTGCCTGCCTGCTCTTTGGGGG
CTCCCGAAAGAGGCTCCCTGATGGACTTACTCGCCGAGGAGACATCAACCTGCTGATGCTAGGGGACCCTGGGAC
AGCCAAGTCCCAGCTTCTGAAGTTTGTGGAGAAGTGTTCTCCCATTTGGGGTATACACGTCTGGGAAAGGCAGCAG
CGCAGCTGGACTGACAGCCTCGGTGATGAGGGACCCTTCGTCCCGGAATTTTCATCATGGAGGGCGGAGCCATGGT
CCTGGCCGATGGTGGGGTCTGTCTGTATTGACGAGTTTGACAAGATGCGAGAAGATGACCGTGTGGCAATCCACGA
AGCCATGGAGCAGCAGACCATCTCTATCGCCAAGGCTGGGATCACCACCACCCTGAACCTCCGCTGCTCCGTCT
GGCTGCTGCCAACTCAGTGTTTCGGCCGCTGGGATGAGACGAAGGGGGAGGACAACATTGACTTCATGCCCACCAT
CTTGTGCGCTTCGACATGATCTTCATCGTCAAGGATGAGCACAATGAGGAGAGGGATGTGATGCTGGCCAAGCA
TGTCATCACTCTGCACGTGAGCGCACTGACACAGACACAGGCTGTGGAGGGCGAGATTGACCTGGCCAAGCTGAA
GAAGTTTATTGCCTACTGCCGAGTGAAATGTGGCCCCCGGCTGTCAGCAGAGGCTGCAGAGAACTGAAGAACCG
CTACATCATCATGCGGAGCGGGGGCCGTCAGCACGAGAGGGACAGTGACCGCCGCTCCAGCATCCCCATCACTGT
GCGGCAGCTGGAGGCCATTGTGCGCATCGCGGAAGCCCTCAGCAAGATGAAGCTGCAGCCCTTCGCCACAGAGGC
AGATGTGGAGGAGGCCCTGCGGCTCTTCCAAGTGTCACGTTGGATGCTGCCTTGTCCGGTACCCTGTGAGGGGT
GGAGGGCTTCACCAGCCAGGAGGACCAGGAGATGCTGAGCCGCATCGAGAAGCAGCTCAAGCGCCGCTTTGCCAT
TGGCTCCCAGGTGTCTGAGCACAGCATCATCAAGGACTTCACCAAGCAGAAATACCCGGAGCACGCCATCCACAA
GGTGCTGCAGCTCATGCTGCGGCGCGGCGAGATCCAGCATCGCATGCAGCGCAAGGTTCTCTACCGCCTCAAGTG
AGTGCGCGCCGCTCACTGGACTCATGGACTCGCCACGCCTCGCCCCCTCTGCCGCTGCCTGCCATTGACAATGT
TGCTGGGACCTCTGCCTCCCCACTGCAGCCCTCGAACTTCCCAGGCACCCTCCTTTCTGCCCCAGAGGAAGGAGC
TGAGTGCTCCTGCTGCCTCTGGGCGCCCGCTCTAGCGCGGTTCTGGGAAGTGCTTTTGGCATCCGTTAATAA
TAAAGCCACGGTGTGTTTCAGGTAAAAAAAAAAAAAAAAA

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FIGURE 940

MSGFDDPGIFYSDSFGGDAQADEGQARKSQLQRRFKEFLRQYRVGTDRTGFTFKYRDELKRHYNLGEYWIEVEME
DLASFDEDLADYLYKQPAEHLQLLEEAKEVADEVTRPRPSGEEVLQDIQVMLKSDASPSSIRSLKSDMMSHLVK
IPGIIIAASAVRAKATRISIQCRCRNTLTNIAMRPGLEGYALPRKCNTDQAGRPKCLDPYFIMPDKCKCVDFQ
TLKLQELPDAVPHGEMPRHMQLYCDRYLCDKVVPGNRVTIMGIYSIKKFGLTTSRGRDRVGVGIRSSYIRVLGIQ
VDTDGSGRSFAGAVSPQEEEFRRLLAALPNVYEVISKSIAPSIFFGGTDMKKAIACLLFGGSRKRLPDGLTRRGI
NLLMLGDPGTAKSOLLKFVEKCSPIGVYTSKGSSAAGLTASVMRDPSSRNFIMEGGAMVLADGGVVCIDEFDKM
REDDRVAIHEAMEQQTISIAGITTTLNSRCSVLAAANSVFGRWDETKGEDNIDFMPTILSRFDMIFIVKDEHN
EERDVMLAKHVITLHVSALTQTQAVEGEIDLAKLKKFIAYCRVKCGPRLSAEAAEKLKNRYIIMRSGARQHERDS
DRRSSIPITVRQLEAIVRIAELSMMKLQPFATEADVEEALRLFQVSTLDAALSGTSLSGVEGFTSQEDQEMLSRI
EKQLKRRFAIGSQVSEHSIIKDFTKQKYPEHAHKKVLQMLLRGEIQHRMQRKVLYRLK

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FIGURE 941

GAATTCGGGCGTGGGCGCGGGGGCGCGGCGTGCGGCACGCTGCAGGGCTGAAGCGGCGGCGGGCGGTGGGGACTGC
ACGTAGCCCGGCGCTCGGCATGGCTCTCCTGGTGCTCGGTCTGGTGAGCTGTACCTTCTTTCTGGCAGTGAATGG
TCTGTATTCTCTAGTGATGATGTGATCGAATTAAGTCCATCAAATTTCAACCGAGAAGTTATTCAGAGTGATAG
TTTGTGGCTTGTAGAATTCTATGCTCCATGGTGTGGTCACTGTCAAAGATTAACACCAGAATGGAAGAAAGCAGC
AACTGCATTAAAAGATGTTGTCAAAGTTGGTGCAGTTGATGCAGATAAGCATCATTCCCTAGGAGGTCAGTATGG
TGTTCAAGGATTTCCTACCATTAAGATTTTTGGATCCAACAAAAACAGACCAGAAGATTACCAAGGTGGCAGAAC
TGGTGAAGCCATTGTAGATGCTGCGCTGAGTGCTCTGCGCCAGCTCGTGAAGGATCGCCTCGGGGGACGGAGCGG
AGGATACAGTTCTGGAAAACAAGGCAGAAGTGATAGTTCAAGTAAGAAGGATGTGATTGAGCTGACAGACGACAG
CTTTGATAAGAATGTTCTGGACAGTGAAGATGTTTGGATGGTTGAGTTCTATGCTCCTTGGTGTGGACACTGCAA
AAACCTAGAGCCAGAGTGGGCTGCCGCAGCTTCAGAAGTAAAAGAGCAGACGAAAGGAAAAGTGAACTGGCAGC
TGTGGATGCTACAGTCAATCAGGTTCTGGCCTCCCGATACGGGATTAGAGGATTTCTTACAATCAAGATATTTCA
GAAAGGCGAGTCTCCTGTGGATTATGACGGTGGGCGGACAAGATCCGACATCGTGTCCCGGGCCCTTGATTTGTT
TTCTGATAACGCCCCACCTCCTGAGCTGCTTGAGATTATCAACGAGGACATTGCCAAGAGGACGTGTGAGGAGCA
CCAGCTCTGTGTTGTGGCTGTGCTGCCCCATATCCTTGATACTGGAGCTGCAGGCAGAAATTCTTATCTGGAAGT
TCTTCTGAAGTTGGCAGACAAATACAAAAAGAAAATGTGGGGGTGGCTGTGGACAGAAGCTGGAGCCCAGTCTGA
ACTTGAGACCGCGTTGGGGATTGGAGGGTTTGGGTACCCCGCCATGGCCGCCATCAATGCACGCAAGATGAAATT
TGCTCTGCTAAAAGGCTCCTTCAGTGAGCAAGGCATCAACGAGTTTCTCAGGGAGCTCTCTTTTGGGCGTGGCTC
CACGGCACCTGTAGGAGGCGGGGCTTTCCCTACCATCGTTGAGAGAGAGCCTTGGGACGGCAGGGATGGCGAGCT
TCCCGTGGAGGATGACATTGACCTCAGTGATGTGGAGCTTGATGACTTAGGGAAAGATGAGTTGTGAGAGCCACA
ACAGAGGCTTCAGACCATTTTCTTTCTTGGGAGCCAGTGGATTTTCCAGCAGTGAAGGGACATTCTCTACTTT
CTTTTCTTGGGAGCCAGTGGATTTTCCAGCAGTGAAGGGACATTCTCTACACTCAGATGACTCTACCAGTGGCC
TTTTAACCAAGAAGTAGTACTTGATTGGTCATTTGAAAACACTGCAACAGTGAACTTTTGCATCTCAAGAAAACA
TTGAAAATTCTATGAATTGTTGTAGCCGGTGAATTGAGTCGTATTCTGTACATAATATTTTGAAGAAAACCTG
GCTGTGCAACATTTTCTCTCTGACTGCTGCTTGAATGTTCTTGGAGGCTGTTTCTTATGTATGGGTTTTTTTT
AATGTGATCCCTTCATTTGAATATTAATGGCTTTTCCATTAAAGAATAAATTGGAAAAAAGAAAAAAAAAAAAA
GGAATTC

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FIGURE 942

MALLVLGLVSCITFFLAVNGLYSSSDVIELTPSNFNREVIQSDSLWLVEFYAPWCGHCQRLTPEWKKAATALKDV
VKVGAVDADKHHS LGGQYGVQGFP TIKIFGSNKNRPEDYQGGRTGEAIVDAALSALRQLVKDRLGGRSGGYSSGK
QGRSDSSSKKDVIELTDDSF DKNVLDS EDVWMVEFYAPWCGHCKNLEPEWAAAASEVKEQTKGKV KLA AVDATVN
QVLASRYGIRGFPTIKIFQKGESPV DYGGRTRSDIVSRALDLFSDNAPPPELLEI INEDIAKRTCEEHQLCVVA
VLPHILDTGAAGRNSYLEVLLKLADKYKKKMWGWLWTEAGAQSELETALGIGGFGYPAMAAINARKMKFALLKGS
FSEQGINEFLRELSFGRGSTAPVGGGAFPTIVEREPWDGRDGELPVEDDIDLSDVELDDLKDEL

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FIGURE 943

GCGACCGCTCGTCCGCCCCGGCTTGAGGCCCGCGGGGAGCGCGCCGCAATTCGTGCGCCCCGCGGGGGGGCGGCCTC
CCGGCATCTTCGCGGCGACCAAGGACTACCAGGAAGGGGAGCGGCTGGGATGGCGCGTCCGCGGCCCCGCGAGTA
CAAAGCGGGCGACCTGGTCTTCGCCAAGATGAAGGGCTACCCGCACTGGCCGCGCCGGATTGATGAACTCCCAGA
GGCGCTGTGAAGCCTCCAGCAAACAAGTATCCTATCTTCTTTTTTGGCACCCATGAACTGCATTTCTAGGTCC
CAAAGACCTTTTTCCATATAAGGAGTACAAAGACAAGTTTGAAAGTCAAACAAACGGAAAGGATTTAACGAAGG
ATTGTGGGAAATAGAAAATAACCCAGGAGTAAAGTTTACTGGCTACCAGGCAATTCAGCAACAGAGCTCTTCAGA
AACTGAGGGAGAAGGTGGAATACTGCAGATGCAAGCAGTGAGGAAGAAGGTGATAGAGTAGAAGAAGATGGAAA
AGGCAAAAGAAAAGATGAAAAAGCAGGCTCAAAACGGAAAAAGTCATATACTTCAAAGAAATCCTCTAAACAGTC
CCGAAATCTCCAGGAGATGAAGATGACAAAGACTGCAAAGAAGAGGAAAAACAAAGCAGCTCTGAGGGTGGAGA
TGCGGGCAACGACACAAGAAACACAACCTTCAGACTTGAGAAAACAGTGAAGGGACCTTAACTACCATAATGAAT
GCTGCATATTAAGAGAAACCACAAGAAGGTTATATGTTTGGTTGTCTAATATTCTTGGATTTGATATGAACCAAC
ACATAGTCCTTGTGTGTCATTGACAGAACCCAGTTTGTATGTACATTATTCATATTCCTCTCTGTTGTGTTTCGG
GGGAAAAAGACATTTTAGCCTTTTTTAAAAGTTACTGATTTAATTTTCATGTTATTTGGTTGCATGAAGTTGCCCT
TAACCACTAAGGATTATCAAGATTTTTGCGCAGACTTATACATGTCTAGGATCCTTTTATCAAGGCAGTTATGAT
CATCGTTTTCTGCTTGCCTTGACCCCAACCATCATCAAAACACTCAGTTAAATATAAATTAACATTTTTTAGATGACCAC
TCAACATAATGCTTAAGAATGGAATTTCTCTCTGTGACAGAACCCAGGAATTAATTCCTAAATACATAACGTTG
GTATATTGAAGACGAAATTAATAATTGGTCCTTCAGTTTTGAGGCCATGTGTAAAGTTTAACCATATTGTAATAA
TCTATTCCGTATTAGAAATAGCTAGTTGACAGCTTATACTTCTCAACATTCATATTGTTATGTACACAACTAAG
TTTCTATATGTGAAGTTAGTGAGTCTTTTTGTGTTACTCCAAAATAAAGGCAATGATTTATTTTTTTCCAGTGC
CAATACAATTTTGAGCTAAGCACTCAAGGTGGATACTTTACATTTTAAAGCTGGAATCAGCAACAGCCCTATGGG
AAACCAGACAAAGCATTGACTTTTAAATGTAGACTTTTAAATAAACTGTTTTCTTTTGGAACTACAATTAGAAT
AGTTAATATTCATCCTTAAACCATTATTATGTGTACATTATTGTTGCTATTGTGATAATAGAGAATTTTATTTAT
TTTTATGCCAGCTTATATTGTGAGAACACATTTAGTCAGTTTGGGTTTTATCAATCCTGTTAATGCTTGTCTTG
GAACATCTTTCGCGTATTCACGGTTTGTAGTTGAAAAGTTTACTGTAAAAAATCAAAAACAAAAAATGTATTG
TTTTTACAGAATAAATTTATTGGAATGTGA

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FIGURE 944

MARPRPREYKAGDLVFAKMKGYPHWPARIDELPEGAVKPPANKYPIFFFFGTHETAFLGPKDLFPYKEYKDKFGKS
NKRKGFNEGLWEIENNPVGKFTGYQAIQQSSSETEGEGGNTADASSEEEGDRVEEDGKGKRKNEKAGSKRKKS
TSKKSSKQSRKSPGDEDDKDCKEENKSSSEGGDAGNDTRNTTSDLQKTSEGT

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FIGURE 945A

AATTCTCGAGCTCGTTCGACCGGTCGACGAGCTCGAGGGTCGACGAGCTCGAGGGCGCGCGCCCGGCCCCACCCC
TCGACGACACCCCGCGCCCCGCGCCCTCCCAGCCGGGTCCAGCCGGAGCCATGGGGCCGGAGCCGAGTGCAGCACC
ATGGAGCTGGCGGCCTTGTGCCGCTGGGGGCTCCTCCTCGCCCTCTTGCCCCCGGAGCCGCGAGCACCACCAAGTG
TGCACCGGCACAGACATGAAGCTGCGGCTCCCTGCCAGTCCCGAGACCCACCTGGACATGCTCCGCCACCTCTAC
CAGGGCTGCCAGGTGGTGCAGGGAAACCTGGAACCTACCTACCTGCCCCACCAATGCCAGCCTGCTCTTCTGCAG
GATATCCAGGAGGTGCAGGGCTACGTGCTCATCGCTCACAACCAAGTGAGGCAGGTCCCACTGCAGAGGCTGCGG
ATTGTGCGAGGCACCCAGCTCTTTGAGGACAATATGCCCTGGCCGTGCTAGACAATGGAGACCCGCTGAACAAT
ACCACCCCTGTACAGGGGCTCCCCAGGAGGCTGCGGGAGCTGCAGCTTCGAAGCCTCACAGAGATCTTGAAA
GGAGGGGTCTTGATCCAGCGGAACCCCCAGCTCTGCTACCAGGACACGATTTTGTGGAAGGACATCTTCCACAAG
AACAACCAGCTGGCTCTCACACTGATAGACACCAACCGCTCTCGGGCCTGCCACCCCTGTTCTCCGATGTGTAAG
GGCTCCCGCTGCTGGGGAGAGAGTTCTGAGGATTGTGAGAGCCTGACGCGCACTGTCTGTGCCGGTGGCTGTGCC
CGCTGCAAGGGGCCACTGCCCACTGACTGCTGCCATGAGCAGTGTGCTGCCGGCTGCACGGGGCCCCAAGCACTCT
GACTGCCTGGCCTGCCCTCCACTTCAACCACAGTGGCATCTGTGAGCTGCACTGCCAGCCCTGGTCACCTACAAC
ACAGACACGTTTGAGTCCATGCCCAATCCCGAGGGCCGGTATACATTGGCGCCAGCTGTGTGACTGCCTGTCCC
TACAACCTACCTTTTCTACGGACGTGGGATCCTGCACCCTCGTCTGCCCCCTGCACAACCAAGAGGTGACAGCAGAG
GATGGAACACAGCGGTGTGAGAAGTGCAGCAAGCCCTGTGCCCCAGTGTGCTATGGTCTGGGCATGGAGCACTTG
CGAGAGGTGAGGGCAGTTACCACTGCCAATATCCAGGAGTTTGCTGGCTGCAAGAAGATCTTTGGGAGCCTGGCA
TTCTGCCCGAGAGCTTTGATGGGGACCCAGCCTCCAACACTGCCCCGCTCCAGCCAGAGCAGCTCCAAGTGTTC
GAGACTCTGGAAGAGATCACAGGTTACCTATACATCTCAGCATGGCCGGACAGCCTGCCTGACCTCAGCGTCTTC
CAGAACCTGCAAGTAATCCGGGGACGAATTCTGCACAATGGCGCCTACTCGCTGACCCTGCAAGGGCTGGGCATC
AGCTGGCTGGGGCTGCGCTCACTGAGGGAACCTGGGCAGTGGACTGGCCCTCATCCACCATAACACCCACCTCTGC
TTCGTGCACACGGTGGCCTGGGACCACTCTTTTCGGAACCCGCACCAAGCTCTGCTCCACACTGCCAACGGGCCA
GAGGACGAGTGTGTGGGCGAGGGCCTGGCCTGCCACCAGCTGTGCGCCCCAGGGCACTGCTGGGGTCCAGGGCCC
ACCCAGTGTGTCAACTGCAGCCAGTTCCTTCGGGGCCAGGAGTGCCTGGAGGAATGCCGAGTACTGCAGGGGCTC
CCCAGGGAGTATGTGAATGCCAGGCACTGTTTGCCGTGCCACCCTGAGTGTGAGCCCCAGAATGGCTCAGTGACC
TGTTTTGGACCGGAGGCTGACCAGTGTGTGGCCTGTGCCCCACTATAAGGACCCCTCCCTTCTGCGTGGCCCCGCTGC
CCCAGCGGTGTGAAACCTGACCTCTCCTACATGCCCATCTGGAAGTTTCCAGATGAGGAGGGCGCATGCCAGCCT
TGCCCCATCAACTGCACCCACTCCTGTGTGGACCTGGATGACAAGGGCTGCCCGCCGAGCAGAGAGCCAGCCCT
CTGACGTCCATCGTCTCTGCGGTGGTTGGCATTCTGCTGGTCTGCTGGTCTTGGGGGTGGTCTTTGGGATCCTCATC
AAGCGACGGCAGCAGAAGATCCGGAAGTACACGATGCGGAGACTGCTGCAGGAAACGGAGCTGGTGGAGCCGCTG
ACACCTAGCGGAGCGATGCCCAACCAGGCGCAGATGCGGATCCTGAAAGAGACGGAGCTGAGGAAGGTGAAGGTG
CTTGGATCTGGCGCTTTTGGCACAGTCTACAAGGGCATCTGGATCCCTGATGGGGAGAATGTGAAAATTCCAGTG
GCCATCAAAGTGTGAGGGAAAACACATCCCCCAAAGCCAAACAAAGAAATCTTAGACGAAGCATACGTGATGGCT
GGTGTGGGCTCCCCATATGTCTCCCGCCTTCTGGGCATCTGCCCTGACATCCACGGTGCAGCTGGTGACACAGCTT
ATGCCCTATGGCTGCCTCTTAGACCATGTCCGGGAAAACCGCGGACGCCTGGGCTCCCAGGACCTGCTGAACTGG
TGTATGCAGATTGCCAAGGGGATGAGCTACCTGGAGGATGTGCGGCTCGTACACAGGGACTTGGCCGCTCGGAAC
GTGCTGGTCAAGAGTCCCAACCATGTCAAAATTACAGACTTCGGGCTGGCTCGGCTGCTGGACATTGACGAGACA
GAGTACCATGCAGATGGGGGCAAGGTGCCCATCAAGTGGATGGCGCTGGAGTCCATTCTCCGCCGGCGGTTCCACC
CACCAGAGTGATGTGTGGAGTTATGGTGTGACTGTGTGGGAGCTGATGACTTTTGGGGCCAAACCTTACGATGGG
ATCCCAGCCCGGGAGATCCCTGACCTGCTGGAAGGGGGAGCGGCTGCCCCAGCCCCCATCTGCACCATTGAT
GTCTACATGATCATGGTCAAATGTTGGATGATTGACTCTGAATGTGCGCCAAGATTCCGGGAGTTGGTGTCTGAA
TTCTCCCGCATGGCCAGGGACCCCCAGCGCTTGTGGTTCATCCAGAATGAGGACTTGGGCCAGCCAGTCCCTTG
GACAGCACCTTCTACCGCTCACTGCTGGAGGACGATGACATGGGGGACCTGGTGGATGCTGAGGAGTATCTGGTA
CCCCAGCAGGGCTTCTTCTGTCCAGACCCTGCCCGGGCGCTGGGGGCATGGTCCACCACAGGCACCGCAGCTCA
TCTACCAGGAGTGGCGGTGGGGACCTGACACTAGGGCTGGAGCCCTCTGAAGAGGAGGCCCCAGGTCTCCACTG
GCACCTCCGAAGGGGCTGGCTCCGATGTATTTGATGGTGACCTGGGAATGGGGGCAGCCAAGGGGCTGCAAAGC
CTCCCCACACATGACCCAGCCCTCTACAGCGGTACAGTGAGGACCCACAGTACCCCTGCCCTCTGAGACTGAT
GGCTACGTTGCCCCCTGACCTGCAGCCCCCAGCCTGAATATGTGAACCAGCCAGATGTTCCGGCCCCAGCCCCCT

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FIGURE 945B

TCGCCCCGAGAGGGCCCTCTGCCTGCTGCCCCGACCTGCTGGTGCCACTCTGGAAAGGGCCAAGACTCTCTCCCCA
GGGAAGAATGGGGTCGTCAAAGACGTTTTTGCCTTTGGGGGTGCCGTGGAGAACCCCGAGTACTTGACACCCAG
GGAGGAGCTGCCCCCTCAGCCCCACCTCCTCCTGCCTTCAGCCCAGCCTTCGACAACCTCTATTACTGGGACCAG
GACCCACCAGAGCGGGGGCTCCACCCAGCACCTTCAAAGGGACACCTACGGCAGAGAACCCAGAGTACCTGGGT
CTGGACGTGCCAGTGTGAACCAGAAGGCCAAGTCCGCAGAAGCCCTGATGTGTCTCAGGGAGCAGGGAAGGCCT
GACTTCTGCTGGCATCAAGAGGTGGGAGGGCCCTCCGACCACTTCCAGGGGAACCTGCCATGCCAGGAACCTGTC
CTAAGGAACCTTCCTTCCTGCTTGAGTTCCCAGATGGCTGGAAGGGGTCCAGCCTCGTTGGAAGAGGAACAGCAC
TGGGGAGTCTTTGTGGATTCTGAGGCCCTGCCCAATGAGACTCTAGGGTCCAGTGGATGCCACAGCCCAGCTTGG
CCCTTTCCTTCCAGATCCTGGGTACTGAAAGCCTTAGGGAAGCTGGCCTGAGAGGGGAAGCGGCCCTAAGGGAGT
GTCTAAGAACAAAAGCGACCCATTTCAGAGACTGTCCCTGAAACCTAGTACTGCCCCCATGAGGAAGGAACAGCA
ATGGTGTCTAGTATCCAGGCTTTGTACAGAGTGCTTTTCTGTTTAGTTTTTACTTTTTTTGTTTTGTTTTTTAAA
GACGAAATAAAGACCCAGGGGAGAATGGGTGTTGTATGGGGAGGCAAGTGTGGGGGTCCTTCTCCACACCCACT
TTGTCCATTTGCAAATATATTTTGGAAAAC

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FIGURE 946

MELAALCRWGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYPNALSFLQ
DIQEVQGYVLIAHNQVRQVPLQRLRIVRGTLQFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQLRSLTEILK
GGVLIQRNPQLCYQDTILWKDIFHKNNQLALTIDTNRSRACHPCSPMCKGSRGWGESSEDCQSLTRTVCAAGCA
RCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACP
YNYLSTDVGSCITLVCPLHNQEVTAEDGTQRCCKSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSLA
FLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPLDSVFQNLQVIRGRILHNGAYSLTLQGLGI
SWLGLRSLRELGSGLALIHNNHLCFVHTVPWDQLFRNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGP
TQCVNCSQFLRGQECVEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPFFCVARC
PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSIVSAVVGILLVVVLGVVFGILI
KRRQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRIKETELRKVKVLGSGAFGTVYKGIWIPDGENVKIPV
AIKVLRENTSPKANKEILDEAYVMAGVGSPYVSRLLGICLTSTVQLVTQLMPYGCLLDHVRENRRGLGSQDLLNW
CMQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEHADGGKVPKWMALESI LRRRFT
HQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWMIDSECRPRFREL VSE
FSRMARDPQRFVVIQNE DLGPASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPDPAPGAGGMVHHRHRS
STRSGGDLTLGLEPSEEEAPRSPLAPSEGAGSDVFDGDLGMGAAGLQSLPTHDPSPQLQRYSEDPTVPLPSETD
GYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPAGATLERAKT LSPGKNGVVKDVFAFGGAVENPEYLTPQ
GGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV

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FIGURE 947

GGCAGCAGAGGCGCGCGCGGAGGCTCCCGTGGCCTCGGACGCTCCTCCTAGCTAGCGGCCGCCGCCGCCGCCGCCCT
GCGCCTCCAGCTCCTTCGCCCGCGCGGCCGCCGCTTCCGGCAGCTCACCTGGGAAGCGCTCACCTGGGA
CGCGCTCACCTGGGACGCGCTACCTGCCTCCGGGCGCCTGGGCTTCAGGATGAAGGACCGTCTGGAGCAGCTGAA
GGCCAAGCAGCTGACACAGGATGATGATACTGATGCGGTTGAGATTGCTATCGACAACACGGCTTTTATGGACGA
GTTCTTTTCTGAGATTGAGGAACTCGGCTTAACATTGACAAGATCTCAGAACATGTAGAGGAGGCTAAGAACT
CTACAGTATCATTCTCTCTGCACCGATTCCAGAGCCAAAACCAAGGATGACCTAGAGCAGCTCACGACTGAGAT
TAAGAAAAAGGGCCAACAACGTCCGGAACAACTGAAGAGCATGGAGAAGCATATTGAAGAAGATGAGGTCAGGTC
ATCGGCAGACCTTCGGATTTCGGAATCCCAGCACTCTGTCTTTCTCGGAAGTTTGTTGGAGGTGATGACCAAATA
CAATGAAGCTCAAGTGACTTCCGAGAACGCAGCAAAGGGCGAATCCAGCGGCAGCTCGAAATTACTGGCAAAAA
GACAACCGATGAGGAGCTGGAGGAGATGTTGGAGAGTGCGCAACCCGGCCATCTTCACCTTCTGGGATCATTGACTC
ACAGATTTCCAAGCAAGCCCTCAGTGAGATTGAGGGACGACACAAGGACATTGTGAGGCTGGAGAGCAGCATCAA
GGAGCTTCACGACATGTTTATGGACATCGCCATGCTGGTGGAGAATCAGGGTGAGATGTTAGATAACATAGAGTT
GAATGTCATGCACACAGTGACCACGTGGAGAAGGCACGAGATGAAACGAAAAAAGCTGTGAAATACCAGAGTCA
GGCCCGGAAGAAATTGATAATTATCATTGTGCTAGTAGTTGTGTTGCTGGGCATTTTAGCATTGATTATTGGACT
TTCCGTTGGGCTGAATTAAAGAGTGGCCTAAGAGGCTGCTGCACTGAAATAAACTGATTTCACTCCAGACTGGTGT
GGCCACCCTTGTCTTCAGATGAGAATGGAGTCTGAATGGCCTTCCTGAGAGCGAGTGCACCCGTTCCCTTTGTTT
CCTTGCAACCACCCTTGGACCTGACTCAGCTAACAACTAGCCCTGGGGGAATGTGATCTACCTGATGCGACCCCT
GAGTTCTCCCCAGAGCCTCCTCCTGCCCCACCAGCTCTCAAGTACCTTTTCTCCTGGACTGTGTGGACCCACCCA
GCTTTCTTCTCCTCCTGTTGTGTGTCAGATTATGCCTTGCCTTGGGAAAGCTCTTGAGACTCTCCCAAGGTGC
TGATTTTTTCTACCTCATGGAGTATTCTCCCAGAACTGCAATGTATTTTTTTAGGGGAGTATCTTTAACAAGC
AGAATGATTCTTCTAAGTTTGGCAACAAGAAGGCTTGGATCTGAGTCTTCTACCTGGCAGGATGCCAATCCTGTT
TGTTGTCCGTATGTCCTGAAAACATGAGGGACTGGCAGATGTCATTTTGGTCTAAAGAGCTGACTTGTTTGAAAT
TCAGCCTTAAATTAAGCTCTTAGTTGTTTTCAGCTTGGGGGGCAACTTTGATTTTTCTCTGTGTTGTAGTCTCTCAT
ATTTACTCAAGGAGGGACCAGGATGATACAGTCACTGAGGTTATGCTTTGCAAAGGCTGACGGTATGGAATAT
GTTTCCATGTCTGAGTCTTAGAACTGGCTGCTCATTGTTAGAAAGTGATGCTTTGTGAGACTATTGTCTTGGGG
CCAAAAATAATCAGGGATTTTTAAATTGGGCAAGGGACAAGGTGCTAGAATCCTAAGCTCTGGAAATATTTTCATGA
CACTGGTGTATTCACTCATGTGTTCCAGATGTATTCTAATTGTGTATGAAATGTATGTACACATAAGTGTGTGTG
TCTCAGGAAGTAGGAAATAAAATGGAAGCTATTATGACCTCAAAAAAAAAAAGCCAACCTTGAGCTAGGATAAA
AATTGGGTAAAGGACATTTGCTTACCTGCAAATGAATCACTGTGGAATGTGATCTTCCCATATCATCAAGAAAC
TTGTTTTCTGGATGAATACTGGGAGAATAAAATGAGAATCTGGAGTGAGCTAAATTGATCCCAATTAAGTTTTT
CTGCTTAGCAGACAGAAGGTATAATTTTTTGACACCTTTCCACCTGGTGCCTATGCTAGGCTTGTCTGAGAA
CATCCCTCAGTAACTTGATATTACATGACCTACAGGATGTCCCATCTGCAGGGCTGAGTCAGTTGGGGAACACC
AGAGGCTACACAGTAGCTCTTCTGCTACTCGGTTAATGAGCTTGGCAGGTTCTTTGTCTCACTGAATTCTTATC
ATGGAAACAGCAGCAGCAGCCGCTAGGAAATCTTCAAGTGATGTCTGTGCTAACCCAGTGGTAAATCCCTTAG
ATCCCTGCTGGTCTCTGGCAGTCTCCTTGATTTTGGGTACCATGTATATTTTCCGCTTTGACTTTAACGCTTTC
TAGGATAGGGTAAGCACCTTAATTACAGGCACTGTCCATTAGCTTCCCTTGCAAAGGCTACTTATGGCCGGTCAC
AATCCAGCACTCAGACAGAGCCAAGGCAATATCCTCTTGCCCATGGCTATGATGTGACACAGTGGATGGGCTCCA
GCAACAAGAGACAAAATAACTAAAGGCCTTTGCTCTCCTCTGACATTGAGGCCTGGGGCTTACAGTTTGGAAATAC
AACATGTGAAGTTTTTGTGTTGTTTGTATTTTTTAGATGTAACTTGATTATTTTATTGCTAATTTAAAAATA
AAAATGACTTTGTATTGATTGTGAAAAA

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FIGURE 948

MKDRLEQLKAKQLTQDDDDTDAVEIAIDNTAFMDEFFSEIEETRLNIDKISEHVVEAKKLYSIILSAPIPEPKTKD
DLEQLTTEIKKRANNVRNKLKSMEKHIEEDEVRSSADLRIRKSQHSVLSRKFFVEVMKYNEAQVDFRERSKGRIQ
RQLEITGKKTDEELEEMLESGNPAIFTSGIIDSQISKQALSEIEGRHKDIVRLESSIKELHDMFMDIAMLVENQ
GEMLDNIELNVMHTVDHVEKARDETKKAVKYQSQARKKLIIIIVLVVVLLGILALIIGLSVGLN

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FIGURE 949

CGGCACGAGGCAAGTGACGCCGAGGGCCTGAGTGCTCCAGTAGCCACCGCATCTGGAGAACCAGCGGTTACCATG

GAGGGGATCAGTATATACACTTCAGATAACTACACCGAGGAAATGGGCTCAGGGGACTATGACTCCATGAAGGAA
CCCTGTTTTCCGTGAAGAAAATGCTAATTTCAATAAAATCTTCCTGCCCACCATCTACTCCATCATCTTCTTAACT
GGCATTGTGGGCAATGGATTGGTCATCCTGGTCATGGGTTACCAGAAGAAACTGAGAAGCATGACGGACAAGTAC
AGGCTGCACCTGTCAAGTGGCCGACCTCCTCTTTGTATCATCAGCTTCCCTTCTGGGCAGTTGATGCCGTGGCAAAC
TGGTACTTTGGGAACTTCCTATGCAAGGCAGTCCATGTATCTACACAGTCAACCTCTACAGCAGTGTCTCATC
CTGGCCTTCATCAGTCTGGACCGCTACCTGGCCATCGTCCACGCCACCAACAGTCAGAGGCCAAGGAAGCTGTTG
GCTGAAAAGGTGGTCTATGTTGGCGTCTGGATCCCTGCCCTCCTGCTGACTATTCCCGACTTCATCTTTGCCAAC
GTCAGTGAGGCAGATGACAGATATATCTGTGACCGCTTCTACCCCAATGACTTGTGGGTGGTTGTGTTCCAGTTT
CAGCACATCATGGTTGGCCTTATCCTGCCTGGTATTGTATCCTGTCTGCTATTGCATTATCATCTCCAAGCTG
TCACACTCCAAGGGCCACCAGAAGCGCAAGGCCCTCAAGACCACAGTCATCCTCATCCTGGCTTTCTTCGCCTGT
TGGCTGCCTTACTACATTGGGATCAGCATCGACTCCTTCATCCTCCTGGAATCATCAAGCAAGGGTGTGAGTTT
GAGAACACTGTGCACAAGTGGATTTCATCACCGAGGCCCTAGCTTTCTTCCACTGTTGTCTGAACCCCATCCTC
TATGCTTTTCTTGGAGCCAAATTTAAAACCTCTGCCAGCACGCACTCACCTCTGTGAGCAGAGGGTCCAGCCTC
AAGATCCTCTCCAAAGGAAAGCGAGGTGGACATTATCTGTTTCCACTGAGTCTGAGTCTTCAAGTTTTCACTCC
AGCTAAACACAGATGTAAGAGACTTTTTTTTTATACGATAAATAACTTTTTTTAAGTTACACATTTTTTCAGATATA
AAAGACTGACCAATATTGTACAGTTTTTTATTGCTTGTGGATTTTTGCTCTTGTGTTTCTTTAGTTTTTTCGTGAA
GGTTTAATTGACTTATTTATATAAATTTTTTTTGTTCATATTGATGTGTCTAGGCAGGACCTGTGGCCAAGT
TCTTAGTTGCTGTATGTCTCGTGGTAGGACTGTAGAAAAGGGAAGTGAACATTCCAGAGCGTGTAGTGAATCACG
TAAAGCTAGAAATGATCCCCAGCTGTTTATGCATAGATAATCTCTCCATTCCCGTGGAACGTTTTTCCTGTTCTT
AAGACGTGATTTTGCTGTAGAAGATGGCACTTATAACCAAAGCCCAAAGTGGTATAGAAATGCTGGTTTTTTCAGT
TTTCAGGAGTGGGTGATTTTCAGCACCTACAGTGTACAGTCTTGTATTAAAGTTGTTAATAAAAAGTACATGTTAAA
CTTAAAAAAAAAAAAAAAAAAAA

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FIGURE 950

MEGISIYTSDNYTEEMGSGDYDSMKEPCFREENANFNKIFLPTIYSIIFLTGIVGNGLVILVMGYQKKLRSM TDK
YRLHLSVADLLEFVITLPPFWAVDAVANWYFGNFLCKAVHVIYTVNLYSSVLILAFISLD RYLAIVHATNSQRPRKL
LAEKVVYVGWVWIPALLLTIPDFIFANVSEADDRYICDRFY PNDLWVVVFQFQHIMVGLILPGIVILSCYCIISK
LSHSGKHQKRKALKTTVILILAFFACWLPYYIGISIDSFILLEIKQGCEFENTVHKWISITEALAFFHCCLNPI
LYAFLGAKEFKTSAQHALTSVSRGSSLKILSKGKRGHSSVSTESESSSFHSS

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FIGURE 951A

AAGATGGCTGCCCACGGGGGCTCCGCGGCTCCTCGGCGCTGAAGGGTTAATTCAACAGTTCACCACCATTACC
GGTGCAAGTGAAAGTGTAGGAAAACATATGCTTGAAGCGTGCAACAATAATCTGGAAATGGCAGTCACTATGTTT
TTGGATGGTGGAGGAATCGCTGAAGAGCCCAGTACCAGTTCAGCAAGTGTCTCTACTGTGACACCACACACAGAA
GAAGAAGTTCGTGCCCCAATTCTCCTCAAAAGCAGGAAATACTGGTGAACAGAACCATTAATTTGGTGCTCCTAAA
AGACGACGGCCTGCACGTTCAATTTTTGATGGTTTTCCGGGATTTTCAGACTGAAACTATTCGGCAAGAACAAGAA
TTAAGAAATGGAGGAGCTATCGATAAGAAATTAACCTACCCTGCAGATCTATTCCGGCCACCCATTGATTTGATG
CATAAAGGCAGCTTTGAAACAGCCAAAAGAGTGTGGCCAGATGCAAAATAAGTGGCTGATGATAAACATTCAAAAT
GTTCAAGACTTTGCATGTCAGTGCCTCAACCGCGATGTGTGGAGCAACGAAGCTGTGAAGAATATTATCCGGGAA
CATTTTCATTTTCTGGCAGGTTTATCATGACAGTGAGGAAGGTGAGAGATACATACAGTTTTTATAAGTTAGGGGAT
TTCCCTATGTTTCCATATTGGACCCACGGACAGGTGAGAAGCTAGTAGAATGGCACCAGTTAGATGTATCTTCT
TTCTTGGACCAAGTGACGGGATTTCTGGGTGAACATGGACAACCTGGATGGACTTTCTAGCAGTCCCCCAAAAAA
TGTGCCCCGTTGAGAGAGCCTTATAGATGCAAGTGAAGACAGCCAGCTAGAAGCTGCCATCAGAGCCTCCTTACAA
GAAACACATTTTGATTCAACACAGACAAAACAGGATAGCCGCTCAGATGAAGAATCTGAATCTGAACTTTTTCT
GGCAGTGAGGAGTTCATATCCGTTTGTGGCTCTGATGAAGAAGAAGAGGTAGAGAATCTTGCCAAGTCCAGAAAG
TCTCCCCACAAAGATTTGGGGCATAGAAAAGAGGAGAATAGAAGGCCGCTGACTGAGCCACCAGTCAGAACTGAT
CCTGGAACAGCCACAAACCACCAAGGATTGCCAGCTGTGGATTTCAGAGATACTGGAGATGCCACCTGAAAAAGCA
GATGGAGTAGTGGAGGGGATAGATGTAAATGGACCAAAAGCACAGCTGATGTTGCGGTATCCAGATGGAAGAAAGG
GAACAGATCACTCTCCAGAGCAAGCTAAACTGCTAGCTTTGGTGAAGCACGTGCAGTCTAAAGGATACCCAAAT
GAACGTTTTGAACCTCTCACCAACTTTCCCTCGAAGGAAATTATCTCATCTGGACTATGATATTACATTGCAAGAG
GCAGGCCCTTTGTCTCAAGAGACTGTCTTTGTACAGGAAAGAAATTAACACCATGGCTTGACCTCTCTCAGCTTA
CCCCTTTTTTCCCTTTTCTGTGAGATACATGTCACCTAAGTATGCATTTTGGCTCATAGGACCACAGAGCCAAAG
TTGGGCAAGCAAGTCACCTTCCTTCTCTTATTTCTTGATCTCTCTCTATAATCAGTCTCTTTCTCCCCCTTTGTTT
CTTTCTCTCTTCTGTTTTCTCGCTCCCCACTCCGTACCCTTCTGCCTCCCCCTCCCCCACACTTTTCTTTCTT
ACCTAATCTGGTGACCAAACTGAAGTGAAGGATAAGACCTCTCCTAGTACTAGCAGCAGGAATTGTGTGTTCCA
GTAAGTGGTCTCTTGACGGCACCTTTTTTGGGATCAAATGTTAACGTTACTCCCCAGACTCTTCGGGCAAAGGAA
TGGCTAGATTGAGAGTAAGAACAACCTCCCTTTTTTGTAAAGTCCCCGTGTTTAGCAGGGAGAAGAAATCTCTA
ACATGGGTTTGGTTTTGTTGTGTTCTTCATGTGGAAATGTGCTTAACAAAATATCCAGGCTTTTGTGTACGTGG
AAAAAGCATCCCTTGTAATGATTGCTCATCTACTTAAAAACCTTTTTTCAAAGGATTTTCATGTTCCAGCTATA
AGGACTATTTCCATGACGTGTTATTGGCAGAATGAGTGTTAAATATGGAGCATATAGCATGGGGTGACTTTTCATT
GTCCTAACCTGAGACAGTTTTTCCTTATTACTCTGTATTGATCCTGCTAGTCCAAGAAATGGACATGAAGTGAACCT
ATCGTGGTGACTGGGATAGGAAGGTGCTTGCTATTTTTTGCCAGCACAGCATATTAGTTCCTTTGGAGCCCTCCAT
TGTCTGAGTCTGCAGTGATCTGTAGGAAGGCAGCTGGTCAATAATCATGTAGTACAATGGCTTGAATTGTAACC
ACTATGGTTATTGATTGTCTGTGTTGTTTCAGGCATACTTAGGTATGTCCCTGGGGAAAAAGAAAACCATTCAG
CTGAGAGTTGCTAACCATGTTCTTTTGGTTAGAAATAATGGTTCATTTTTTGGCCCTGGTTGGAATAGTCTCTAA
AAGGCTCTGGTGACTGAATTGAACATGAGTCCGCATGCTGTTTTCTTTCAAAGGTATCAAACGGAAAGCCTCT
CTAAGGGGAAGACCTTTCAACTCCATTGAGAAGACAACATTTAGTAAGGAGGATGGCGGAGGTTACTAGTAATTT
TCAGATGTCTTGGGCTTTTTCTGCCAACAAAACCCAAAATCAAATTAGAGTTGGTGAAAGCTTTCTTCAGTGTTT
TTAGAAGAGGCCATCTTGAATCTGTAGAATACCATTTACACATCAACTTCACCCTATGCTCATTTTCGTATTTTGA
GCTTAAATGGAGTCTCTGAAGGGGGGGTAGTCGTGATTCTGGTGGCAAACTAGAACTTTTAACTTGTAAGATG
AAAAATATTAATGGACCTTTTTGTGAGTTGAGGATTTAGATTGATTCTTTTATCTGAGGAGCGTATGTTCTCTCA
GATGTTGCGTAGAGACCTTTAGGTTTTCTACTACTTTAAGATTGCTCTCTTGGCAATTAGGGGATTTGGGAAAAG
AAGAAAAAAGATGCCATGTGTTGCTAGTACACAGTTATAGGATATGGTTTCTAATGGTTGAATTTTGAGGAAC
CTCCCTAAAGAAATGAGTTTTATATCTCCTCAAGGAAATCATGGAAAAATCTGTTTATTCTTCAGTGAGTCTTTT
GAATTAATGTTCTTAAATTTTTTTCTAAGTCTGTGTAAGTGCTTATGTATAAGTATATAATTGTATAAATATTTA
TAAATATATTTATATAATTACGGTTTTCTTTCTACCTTGAGTCAAAGTTCTGTCTTTAGATTGGTGACTGAGTAA
TACTTACACTTTGGTGTTTTTTCTTAGGTTCTTGAGGCTTACTTAACTAGCAGCTTCTGATTTATTGAGTGAAAG
ATGGTTTTTCATGTTAATTCCTCAGTTGCATCTCTGAACCTGGATAACATACTTGCCGTTTGAAAAATAGAGCTGT
ATACTGTCAAAGGTGCACTGGAGGGTAAAACATTTGTTGGTAGTAGACAAGCTCAGAAATCCAAAATTCAGGGA

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FIGURE 952

KMAAHGGSAAASSALKGLIQOFTTITGASESVGKHMLEACNNNLEMAVTMFLDGGGIAEEPSTSSASVSTVRPHT
EEVRAPIPQKQEILVEPEPLFGAPKRRRPARSIFDGFRDFQTETIRQEQELRNNGAIDKKLTTLADLFRPPIDLM
HKGSFETAKECGOMQNKWLMINIQNVQDFACQCLNRDVWSNEAVKNIIREHFIFWQVYHDSEEGQRYIQFYKLGD
FPYVSILDPRTGQKLVEWHQLDVSSFLDQVTGFLGEHGQLDGLSSSPKKCARSESLIDASEDSQLEAAIRASLQ
ETHFDSTQTKQDSRSDEESESELFSGSEEFISVCGSDEEEVENLAKSRKSPHKDLGHRKEENRRPLTEPPVRTD
PGTATNHQGLPAVDSEILEMPPEKADGVVEGIDVNGPKAQLMLRYPDGKREQITLPEQAKLLALVKHVQSKGYPN
ERFELLTNFPRRKLSHLDYDITLQEAGLCPQETVFEVQERN

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FIGURE 953

GGAGGGCCCCGGCGGCGACAGCGGAGGCAGAGAGGAAGGCGGTTCTGAGAGCTTCAGAGAGCGATGGAAAGCAAAA
TGGGTGAATTGCCTTTAGACATCAACATCCAGGAACCTCGCTGGGACCAAAGTACTTTCTGGGCAGAGCCCCGGC
ACTTTTTCACTGTTACTGATCCTCGAAATCTGCTGCTGTCCGGGGCACAGCTGGAAGCTTCTCGGAACATCGTGC
AGAACTACAGGGCCGGCGTGGTGACCCAGGGATCACCGAGGACCAGCTGTGGAGGGCCAAGTATGTGTATGACT
CCGCCTTCCATCCGGACACAGGGGAGAAGGTGGTCCTGATTGGCCGCATGTCAGCCCAGGTGCCCATGAACATGA
CCATCACTGGCTGCATGCTCACATTCTACAGGAAGACCCCAACCGTGGTGTCTGGCAGTGGGTGAATCAGTCCT
TCAATGCCATTGTAACTACTCCAACCGCAGTGGTGACACTCCCATCACTGTGAGGCAGCTGGGGACAGCCTATG
TGAGTGCCACCACTGGAGCTGTGGCCACGGCCCTGGGACTCAAATCCCTCACCAAGCACCTGCCCCCTTGGTCG
GCAGATTTGTGCCCTTTGCAGCAGTGGCAGCTGCCAACTGCATCAACATCCCCCTGATGAGGCAGAGAGAGCTGC
AGGTGGGCATCCCGGTGGCTGATGAGGCAGGTGAGAGGCTTGGCTACTCGGTGACTGCAGCCAAGCAGGGAATCT
TCCAGGTGGTGATTTCAAGAATCTGCATGGCGATTCTGCCATGGCCATCCCACCCTGATCATGGACACTCTGG
AGAAGAAAGACTTCCTGAAGCGCCGCCCTGGCTGGGGGACCCCTGCAGGTGGGACTGGTGGGCTTCTGCCTGG
TATTTGCAACCCCCCTGTGCTGTGCCCTATTCCCCCAGAAGAGCTCCATACACATAAGCAACCTGGAACCAGAGC
TGAGAGCTCAGATCCATGAGCAAAACCCACGCTTGAAGTGGTCTACTACAACAAGGGGCTTTTGAGGAGGGTCAG
CCTCTGTCCCCTCCCTCACTTCCTTGGGCTGCTGCTTTAGTGGAGTCATGTCACCCCTACCACTTGGCTATCTGC
CTAGCACTGGGCAGGGGCTTGGTGGGCAGATGGCAATTGAGGGTAGCAACCTATTAGGGTGGGGGAGGGACCTC
CATAAGGCTTTTCTCCCTTCTCTGTTTTCAAAGATCAGAGCACATAACCCCTCCTGTGCTTGAGTGTCCATGCA
TATACATACATGATACACATGTGTATGTGTACATTGGGTCTTGAAAGCTAGAAGCAGGCATGCTAGCCTAGTATG
TTCTGACATCTGGCTTCCCTTCTCAGCCTCATGTCCACCTGCCTGCCAGCCAGGCTACAGGTGTGACTTCCTTCT
CTAAACTGTTACACCAGCCAAGTTATTTTTGATGGCACCTCATCCCTTCTAGAAATAGGAGGAGCCCCAGGATCT
CAGGACAGAGACTTATAGACACTAGTAGGACAAAGCGGGCTGAATCCTTCAGGTTTCTGATACCTAGCTCCCCAA
GCTGACTGGGCTGGCAGAGGAGAACATGTTGAGACAAGGGAGGCAGGGGACTTATGCATCCCTCAGTGCCATCCC
TTGTATCCTGGAATAGCTCCATTTCCCCTCCTCCTCTCTACCAGACAAAGGAGTGCTGTGCTGTACTGCCCT
CGCTGTCTCCCCCACCACCTACTTGACAGCGTGGGCATCTTCAGGCACAGCCTTGGGAGTTTCTGGTGTGCTCT
GACATCATGACCTCAAATCTAAATCCTCCAATCCCAACTCCCTTTCCCAAACAAAAAGCCACAGAGGCAGAGCAA
GCATTCCCCTTTAAGAGCTTCCACTGCACCCCTCCCAAGGGACACAGCGGTAGGAATGGTGCTTAAACTCCACA
GGTATCAGAGAGGGTGTAAGTACAGACATCCTCAAGGGCAGCTAGGCCCCGAATGTACAATGTTAAGACAGGGAAT
TTTGTGTTCCATTGACTTTTTTTTTTTTTTTTAAATGGAGTTTCACTATTTTGGCCAGGCTGGAGTGCGATGGTGC
GATCTTGGCTCACTGCAACCTCTGCCTCCTGGGTTCAAGTGATTCTCTTGCCTCAGTCTCCCGAGTAGTGGAAT
TACAGGTGTGTGCTACCACATCTTGCTAGTTTTGTATTTTGTAGCAGAGATGGGGGTTTACCATGTTGGCCAGGC
TAGTCTCGAACTCCTGACCTCAGGTGATCCACCTGCCTTGGCCTCCCAAAGCACTGGGATTACAAGCATGAGCCA
CTGTGCCAGCCTGTTCCACTGACATTTCTTAGACATTGAGCAAAACCCCACTTAACCTCTTTTCTTTCTTGA
GGGTTGGTCTGTCCCCACCTCCACCTCCCAACCCCTGGAAGAGGAAGGGCCCGGCATCAGTGGCTAGTCCAA
ATAAAATATGGGCTTGGGGATGGAATGGGTGGTGAAGTTCACAGAGTGTAGTTAGATCCCAACTCCCATGACC
TCTGGCTTCAGTGGTGGGTGGGGCAGGGCAGATGAAAGGGCTTCAGTGGGAACCTCTGAGAGCATTTTCTGTTC
CCCCTATCAACCGCCCCCAGTGATAACATCTGTGAAGCCAGCCATTACTCAATAAACTGCAAACTGTCTAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 954

MGELPLDINIQEPRWDQSTFLGRARHFFTVIDPRNLLLSGAQLEASRNIVQNYRAGVVTPGITEDQLWRAKYVYD
SAFHPDTGEKVVLIGRMSAQVPMNMTITGCMLTFYRKTPTVVFWQWVNSFNAINYSNRSGDTPITVRQLGTAY
VSATTGAVATALGLKSLTKHLPPLVGRFVFPFAAVAAAANCINIPLMRQRELQVGIPVADEAGQRLGYSVTAAKQGI
FQVISRICMAIPAMAIPPLIMDTLEKKDFLKRRPWLGAFLQVGLVGFCLVFATPLCCALFPQKSSIHISNLEPE
LRAQIHEQNPSVEVYYNKGL

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FIGURE 955

TGCAGGAGTTTCATGATCCTCCCAGTCGGTGCAGCAAACCTTCAGGGAAGCCATGCGCATTGGAGCAGAGGTTTACC
ACAACCTGAAGAATGTCATCAAGGAGAAATATGGGAAAGATGCCACCAATGTGGGGGATGAAGGCGGGTTTGCTC
CCAACATCCTGGAGAATAAAGAAGGCCTGGAGCTGCTGAAGACTGCTATTGGGAAAGCTGGCTACACTGATAAGG
TGGTCATCGGCATGGACGTAGCGGCCTCCGAGTTCTTCAGGTCTGGGAAGTATGACCTGGACTTCAAGTCTCCCG
ATGACCCCAGCAGGTACATCTCGCCTGACCAGCTGGCTGACCTGTACAAGTCCTTCATCAAGGACTACCCAGTGG
TGTCTATCGAAGATCCCTTTGACCAGGATGACTGGGGAGCTTGGCAGAAGTTCACAGCCAGTGCAGGAATCCAGG
TAGTGGGGGATGATCTCACAGTGACCAACCCAAAGAGGATCGCCAAGGCCGTGAACGAGAAGTCCTGCAACTGCC
TCCTGCTCAAAGTCAACCAGATTGGCTCCGTGACCGAGTCTCTTCAGGCGTGCAAGCTGGCCCAGGCCAATGGTT
GGGGCGTCATGGTGTCTCATCGTTCGGGGGAGACTGAAGATACCTTCATCGCTGACCTGGTTGTGGGGCTGTGCA
CTGGGCAGATCAAGACTGGTGCCCTTGCCGATCTGAGCGCTTGGCCAAGTACAACCAGCTCCTCAGAATTGAAG
AGGAGCTGGGCAGCAAGGCTAAGTTTGCCGGCAGGAACCTTCAGAAACCCCTTGGCCAAGTAAGCTGTGGGCAGGC
AAGCCTTCGGTCACCTGTTGGCTACACAGACCCCTCCCTCGTGTGACCTCAGGCAGCTCGAGGCCCCCGACCAA
CACTTGACAGGGGTCCCTGCTAGTTAGCGCCCCACCGCCGTGGAGTTTCGTACCGCTTCCTTAGAACTTCTACAGAA
GCCAAGCTCCCTGGAGCCCTGTTGGCAGCTCTAGCTTTTGCAGTCGTGTAATGGGCCCAAGTCATTGTTTTTCTC
GCCTCACTTTCCACCAAGTGTCTAGAGTCATGTGAGCCTCGTGTGATCTCCGGGGTGGCCACAGGCTAGATCCCC
GGTGGTTTTGTGCTCAAAAATAAAAAGCCTCAGTGACCCATGAGACGGAGATCTCGCCGGCTTTACGTTACCTCG
GTGTCTGCAGCACCTCCGCTTCCTCTCCTAGGCGACGAGACCCAGTGGCTAGAAGTTCACCATGTCTATTCTCA
AGATCCATGCCAGGGAGATCTTTGACTCTCGCGGAATCCCACTGTTGAGGTTGATCTCTTCACCTCAAAAATAAA
AAGCCTCAGTGACCTGCATTTGAGGGTTTCAGCAGCATATACCTTCACACTAGGTTTCAGAGCCTGGGAAGAGGA
ATATTAAGACATCTTAACAACAAACCACAACATTGCCTGCATGTCTAAAAGAAAATATGGGCCTGGTGTGGTGGC
TCACACCTGTAATCCCAACACTTTGGGAGCCCGAGXCAG

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FIGURE 956

CCAGGGCCTGACTAAACCTGGAGACTCGGGTGGCCGAGGGGCTTCATACCAGCTGAAGAGCGACAAGCCGCTGGC
AGCCGCGGATCTCACCGCCGCTCAGGGTTTTTAGAACTTCAGCCATAAAAATGGGCAGAATTTTCCTTGATCATA
TCGGTGGTACCCGTCTGTTTTCTTGTCAAACTGTGATACGATCCTGACCAACCGCTCAGAAGTCACTCCACTC
GTTTCACAGGCGCCACTGGCAGAGCATTCTTTTTAACAAGGTAGTTAACCTGCAGTACAGCGAAGTCAAGATC
GGGTCATGCTCACTGGCCGCCACATGGTTCGAGATGTGAGCTGCAAAACTGCAATAGCAAACTGGGATGGATCT
ATGAGTTTGCCACTGAAGACAGCCAGCGATATAAGGAAGGCCGCTGATCCTGGAACGTGCTCTAGTTCGAGAGA
GTGAGGGCTTTGAGGAGCATGTACCATCTGATAACTCTTGAAGATACAGAGAGAAATCCATCTTTTCCCAGGTCT
CCTTCACTGAAAACAAAATCTACTTACATACACTGTCACCTTAGCATCAGAGTCGGATTAATGAACTGCGGAAC
AAGAGGTTGTGAGAATCTAAGATGGAACCTTTCTTTCTTTCTTTCTTTTTTTTTTAAATTTTGTATTTTCCATCCA
ACAGCAGTGTGTAGAGAGAATATTATGCAGATGCCGTTAATTTTTTACCCTATGTTTACATCTTGAGGCAGCAGA
GTCTGTCTGCAGCTATGTGGTGAGCTATGTAAGGAAAAAATCTGGGCTGTTAGAGTGAAAAAGTGTGTTTTATG
TCAATTGTGAAAGGAAAAATGTTAGGAGTATGGTTTTTAACTTGGGCTTCATTTTTAACTTTTTTTTTTAAACCC
AGTTATTTCACTTGATTTGCTAGCTTCAGAGAAGAGATCCGAATCTGTGCCAGCGCTAAAGGCTCAGTGTTAGC
ATGGCTTGCTGGCCGGTGTGCCATATTCTTGTTGGAGATGAACCGTAGCACCAGAGCCCATTCTTCCTTGTC
GTCTTGGCCCAAAGATGTCACCATTCCTAGTTATTTGTCACCACATAATTGGTGTGATTGGAAAATTTTTCTGA
GATGGGACAGAAGTCTGGGTTGTCTTTTTCCATGTAACCTAAGCATAGTAATATAAAATAAAGTAATAGTTGGAT
GCTTTTGGTCTGTGTTGCTTTTTAAAAACACCTTATAAAAGAGGAGAGTATTTGATAAGCAATTTTCATAGTAGT
AAAGTTTTTTTTTCATCTCTTAACTAAATTGACCATGCATATAATATTCTTTGTTTAAATGAAAGCATACTGTTG
AAACCCGCAGTGTTCATTTAGAAAACAGTTGAACAGAATGTCAATGTGCATTTCATGCAAAAAACATTTAATCT
GCATCTGTTTTAGAAAAGGGGAAATGAAGCAACTTGTCTAAAAATACTGCTTTACAAGCATTTCAGCCTTTCC
CCCTCAGTTTTGCATTGATTTTTTGACAAGTCTGTAGAGCCTAATAGTTTCCATCAAAGGCCTAGATCTCTTATT
TAGCATTTTTTTCAGCTCTTCTCTCAGAAGTTCAGCTGTTGAAACGAAAACGTACTTTGTACCCTCACATACAA
AGGGATCAAATTTGACCTGGTGTATTATTAGCCCCAAATTTATGACATTACACAATATTAATAATGTAATGTTTC
TTTACCCAACTACTTCTAGATATTCTAGTATTTGCTTCTGGTGGAATTAAATGACGGTAAATTTGGCTAATTAT
TTGAATGAATGAATGGATGGATGTTTTGCATGCTCAATTTCTAGGTCCTTTGTCTAGAAAGGAAATTTGCCTCAG
TTGAATTAGTGAAATATTTCTGTCGTTGATATTAAGTGACTTCTGAGTACAGTTAAGTTCCTCCTATTTGCCA
CTGGGCTGTTGGTTAGAAGCATAGGTAAGTATGATACTGCATTTGAAATAAGTGGACACAAAC
TATCCTTTCTCCACCATGGACTCAATCTGAGAACAACAGCATTTCATTTCCATTCATTTCCATACTGGCTTTTGAT
TATATGCAGATTCTAGTAGCATGCCTTACCTACAGCACTATGTGCATTTGCTGTCAATAAAGTATATTTGT
CTTGCAA

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FIGURE 957

MGRIFLDHIGGTRLFSCANCDTILTNRSELISTRFTGATGRAFLFNKVVNLYSEVQDRVMLTGRHMVRDVCKN
CNSKLGWIYEFATEDSQRYKEGRVILERALVRESEGFEHVPSDNS

[illegible]

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FIGURE 959

MAAGGSGVGGKRSSKSDADSGFLGLRPTSDPALRRRRRGPRNKKRGWRRLAQEPLGLEVDQFLEDVRLQERTSG
GLLSEAPNEKLFFVDTGSKEKGLTKKRTKVQKKSLLLKKPLRVDLILENTSKVPAPKDVLAHQVPNAKKLRKEQ
LWEKLAKQGELPREVRRARLLNPSATRAKPGPQDTVERPFYDLWASDNPLDRPLVGQDEFFLEQTKKKGVKRP
ARLHTKPSQAPAVEVAPAGASYNPSFEDHQTLSSAAHEVELQRQKEAEKLERQLALPATEQAATQESTFQELCEG
LLEESDGE GEPGQEGEPEAGDAEVCPTPARLATTEKKTEQQRREKAVHRLRVQQAALRAARLRHQELFRLRGIK
AQVALRLAELARRRRRRQARREAEADKPRRLGRLKYQAPDIDVQLSSELTDSLRTLKPEGNILRDRFKSFQRRNM
IEPRERAKFKRKYKVKLVEKRAFREIQL

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FIGURE 960

GGGCTCTCTCCTTGTCAGTCGGCGCCGCGTGCGGGCTGGTGGCTCTGTGGCAGCGGGCGGGCAGGACTCCGGCA
CTATGAGCGGCTTCAGCACCGAGGAGCGCGCCGCGCCCTTCTCCCTGGAGTACCGAGTCTTCTCAAAAATGAGA
AAGGACAATATATATCTCCATTTTCATGATATTCCAATTTATGCAGATAAGGATGTGTTTTACATGGTAGTTGAAG
TACCACGCTGGTCTAATGCAAAAATGGAGATTGCTACAAAGGACCCTTTAAACCCTATTAAACAAGATGTGAAAA
AAGGAAAACCTTCGCTATGTTGCGAATTTGTTCCCGTATAAAGGATATATCTGGAACCTATGGTGCCATCCCTCAGA
CTTGGAAGACCCAGGGCACAAATGATAAACATACTGGCTGTTGTGGTGACAATGACCCAATTGATGTGTGTGAAA
TTGGAAGCAAGGTATGTGCAAGAGGTGAAATAATTGGCGTGAAAGTTCTAGGCATATTGGCTATGATTGACGAAG
GGGAAACCGACTGGAAAGTCATTGCCATTAATGTGGATGATCCTGATGCAGCCAATTATAATGATATCAATGATG
TCAAACGGCTGAAACCTGGCTACTTAGAAGCTACTGTGGACTGGTTTAGAAGGTATAAGGTTCCCTGATGGAAAAC
CAGAAAATGAGTTTGCGTTTAAATGCAGAATTTAAAGATAAGGACTTTGCCATTGATATTATTTAAAGCACTCATG
ACCATTTGGAAGCATTAGTGACTAAGAAAACGAATGGAAAAGGAATCAGTTGCATGAATACAACCTTTGTCTGAGA
GCCCCTTCAAGTGTGATCCTGATGCTGCCAGAGCCATTGTGGATGCTTTACCACCACCCTGTGAATCTGCCTGCA
CAGTACCAACAGACGTGGATAAGTGGTTCCATCACCAGAAAACTTAATGAGATTTCTCTGGAATACAAGCTGATA
TTGCTACATCGTGTTTCATCTGGATGTATTAGAAGTAAAAGTAGTAGCTTTTCAAAGCTTTAAATTTGTAGAACTC
ATCTAACTAAAGTAAATTCTGCTGTGACTAATCCAATATACTCAGAATGTTATCCATCTAAAGCATTTCATAT
CTCAACTAAGATAACTTTTAGCACATGCTTAAATATCAAAGCAGTTGTCATTTGGAAGTCACTTGTGAATAGATG
TGCAAGGGGAGCACATATTGGATGTATATGTTACCATATGTTAGGAAATAAAATTATTTTGCTGAAAAAAAAAA
AAAAAA

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FIGURE 961

MSGFSTEERAAPFSLEYRVFLKNEKGQYISPFHDIPIYADKDVFMVVEVPRWSNAKMEIATKDPLNPIKQDVKK
GKLRYVANLFPYKGYIWNYGAIPQWEDPGHNDKHTGCCGDNDPIDVCEIGSKVCARGEIIGVKVLGILAMIDEG
ETDWKVIAINVDDPDAANYNDINDVKRLKPGYLEATVDWFRRYKVPDGKPENEFAFNAEFKDKDFAIDIIKSTHD
HWKALVTKKTNGKGISCMNTTLESSEPFKCDPDAARAIVDALPPCESACTVPTDVKWFHHQKN

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FIGURE 962

AGACGGGCTGCAAGAGGGAGCCGGCCCCGACGCGGACCGCTTCCCTGCAGTGCCCCGAGTCCCGGGCCCCGCGCCGC
CGCCGCCCCGGCTCCGCTCGCGGGCCCCCTCTGTCTGCAGGCGTGCCCCGGCGGGCGGCGGAGAGCCGTCCCTCGGCCGA
GGAGGCTGGGAAACGCGAGCGCAGGCGGCAGAGAGGCCTCAACGCCGTCCCTTTTCGCCACCGCCTTTTTCCTTGCC
TCGCGCCGCTGTGCATTTCTCTCCTTTTTCCTTTGTTTTTTTGGCCCCCTCGCGGGGTGTGGGCATTGTTGGTTAGCA
AAAGTGCAGCCTCAAGATGGCTGATGGCAACGAGGATCTGCGGGCTGACGACTTGCCCTGGGCCAGCCTTCGAGAG
CTATGAGTCCATGGAGCTTGCCCTGCCCCGCTGAGCGCAGCGGCCACGTAGCCGTCAGCGACGGGCGCCACATGTT
CGTCTGGGGCGGCTACAAGAGTAATCAAGTCAGAGGATTATATGACTTTTATCTGCCTAGAGAAGAACTATGGAT
CTACAACATGGAGACTGGAAGATGGAAAAAATCAACACTGAAGGTGATGTTCCCTCCTTCTATGTCAGGAAGCTG
TGCTGTGTGTGTAGACAGGGTGCTGTACTTGTGTTGGAGGACACCATTCAAGAGGCAATACCAATAAGTTCTACAT
GCTGGATTCAAGGTCTACAGACAGAGTGTTACAGTGGGAAAGAATTGATTGCCAAGGAATTCCTCCATCATCAAA
GGACAAACTTGGTGTCTGGGTATATAAAAAACAAGTTAATATTTTTTGGAGGGTATGGATATTTGCCTGAAGATAA
AGTATTGGGAACTTTTGAATTCGATGAAACATCTTTTTTGAATTCAAGTCATCCAAGAGGATGGAATGATCATGT
ACATATTTTAGATACTGAAACATTTACCTGGAGCCAGCCTATAACTACTGGTAAAGCACCTTCACCTCGTGCTGC
CCATGCCTGTGCAACTGTGCGAAATAGAGGCTTCGTGTTTGGAGGCAGGTATCGAGATGCTAGAATGAATGATCT
TCACTATCTTAATCTGGATACATGGGAGTGGAATGAATTAATTCACAAGGCATATGCCCAGTTGGTCGATCTTG
GCACTCACTAACACCAGTTTCTTCAGATCATCTTTTTCTCTTTGGAGGATTTACCACTGATAAACAGCCACTAAG
TGATGCCTGGACTTACTGCATCAGTAAAAATGAATGGATACAATTTAATCATCCATATAACGAAAAACCAAGGTT
ATGGCACACAGCTTGTGCCAGCGATGAAGGAGAAGTAATTGTTTTTGGTGGATGTGCCAACAACCTTGCTTGTCCA
TCACAGAGCTGCACACAGTAATGAAATACTAATATTTTTCAGTTCAACCAAAATCTCTTGACGGCTAAGCTTAGA
AGCAGTCATTTGCTTTAAAGAAATGTTAGCCAACCTCATGGAAGTGCCTTCCAAAACACTTACTTCACAGTGTTAA
TCAGAGGTTTGGTAGTAACAACACTTCTGGATCTTAAAGGCTTCATAAATAATGCCTATGATCACCTTGATGGAC
AGCAATCCTGTAAACATCACAGAGTGGCATCATTTGTATAATTATATGCATTGTTGTAGTTTGACCTGTTGGTT
TTAATGTGCATGTGAATGGCCTAGAGAACCTATTTTTGTGTCTAAAGTTTACAATAAATGTATTTAACACC

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FIGURE 963

MADGNEDLRADDLPGPAFESYESMELACPAERSGHVAVSDGRHMFVWGGYKSNQVRGLYDFYLPREELWIYNMET
GRWKKINTEGDVPPSMSGSCAVCVDRVLYLFGGHHSRGNTNKFYMLDSRSTDRVLQWERIDCQGIPPSSKDKLGV
WVYKNKLIFFGGYGYLPEDKVLGTFEFDETSFWNSSHPRGWNDHVVHILDTETFTWSQPITTGKAPSPRAAHACAT
VGNRGFVFGGRYRDARMNDLHYLNLDTWEWNELIPQGICPVGRSWHSLTPVSSDHLFLFGGFTTDKQPLSDAWTY
CISKNEWIQFNHPYTEKPRLWHTACASDEGEVIVFGGCANNLLVHHRAAHSNEILIFSVQPKSLVRLSLEAVICF
KEMLANSWNCCLPKHLLHSVNQRFGSNNTSGS

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FIGURE 964

CGGCGACTGACCGTGGTCGTGGGCGGACGGCGGCTTGCAGCGTGGAGGAGCTGGGGTCGCTGTGGGTGCGGAAGC
AGAGCCCCGGGACGTGCGCGCTTGGTGCACGATCCTGAAGGGGAGCTCCGAGGGGGCCCGGGTCGCCAGGGCTGCTG
CGGCCATTCCCGGAGCCCGGCGCGGGGCCCCGCGAGATACTGGTTTAGGCCGTCCAGGGCTCCGGGCGCACCCGG
TGGCCGCTGCTGCAGCGGAGGGAGCGCGGGCGGCGGGGGCTCGGAGACAGCGTTTCTCCCGGAAGTCTTCCTCG
GGCAGCAGGTGGGAAGTGGGAGCCGGAGCGGCAGCTGGCAGCGTTCTCTCCGAGGTGCGCACCATGCGCCCTGC
AGCCCTGCGCGGGGCCCTGCTGGGCTGCCTCTGCCTGGCGTTGCTTTGCCCTGGGCGGTGCGGACAAGCGCCTGCG
TGACAACCATGAGTGGAAAACTAATTATGGTTCAGCACTGGCCTGAGACAGTATGCGAGAAAATTCAAACGA
CTGTAGAGACCCTCCGGATTACTGGACAATACATGGACTATGGCCCGATAAAAGTGAAGGATGTAATAGATCGTG
GCCCTTCAATTTAGAAGAGATTAAGGATCTTTTGCCAGAAATGAGGGCATACTGGCCTGACGTAATTCACCTCGTT
TCCCAATCGCAGCCGCTTCTGGAAGCATGAGTGGGAAAAGCATGGGACCTGCGCCGCCAGGTGGATGCGCTCAA
CTCCCAGAAGAAGTACTTTGGCAGAAGCCTGGAACCTACAGGGAGCTGGACCTCAACAGTGTGCTTCTAAAATT
GGGGATAAAACCATCCATCAATTACTACCAAGTTGCAGATTTTAAAGATGCCCTTGCCAGAGTATATGGAGTGAT
ACCCAAAATCCAGTGCCTTCCACCAAGCCAGGATGAGGAAGTACAGACAATTGGTCAGATAGAACTGTGCCTCAC
TAAGCAAGACCAGCAGCTGCAAACTGCACCGAGCCGGGGGAGCAGCCGTCCCCAAGCAGGAAGTCTGGCTGGC
AAATGGGGCCGCCGAGAGCCGGGGTCTGAGAGTCTGTGAAGATGGCCCAGTCTTCTATCCCCACCTAAAAAGAC
CAAGCATTGATGCCCAAGTTTTTGAAATATTCTGTTTTAAAAAGCAAGAGAAATTCACAACTGCAG

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FIGURE 965

MRPAALRGALLGCLCLALLCLGGADKRLRDNHEWKKLIMVQHWPETVCEKIQNDCRDPPDYWTIHGLWPKSEGC
NRSWPFNLEEIKDLLPEMRAYWPDVIHSFPNRSRFBKHEWEKHGTCAAQVDALNSQKKYFGRSLELYRELDLSV
LLKLGIKPSINYYQVADFKDALARVYGVIPKIQCLPPSQDEEVQTIGQIELCLTKQDQQLQNCTEPGEQSPKQE
VWLANGAAESRGLRVCEGPFVYPPPKTKH

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FIGURE 966

CGGCGACTGACCGTGGTTCGTGGGCGGACGGCGGCTTGCAGCGTGGAGGAGCTGGGGTCGCTGTGGGTTCGCGAAGC
AGAGCCCGGGACGTGCGCGCTTGGTGCACGATCCTGAAGGGGAGCTCCGAGGGGCCCGGTTCGCCAGGGCTGCTG
CGGCCATTCCCGGAGCCCCGGCGCGGGGGCCCGCGAGATACTGGTTTAGGCCGTCCCAGGGCTCCGGGCGCACCCGG
TGGCCGCTGCTGCAGCGGAGGGAGCGCGGGCGGCGGGGGCTCGGAGACAGCGTTTCTCCCGGAAGTCTTCCTCG
GGCAGCAGGTGGGAAGTGGGAGCCGGAGCGGCAGCTGGCAGCGTTCTCTCCGCAGGTGGGCACCATGCGCCCTGC
AGCCCTGCGCGGGGGCCCTGCTGGGCTGCCTCTGCCTGGCGTTGCTTTGCCTGGGCGGTGCGGACAAGCGCCTGCG
TGACAACCATGAGTGGAAAACTAATTATGGTTCAGCACTGGCCTGAGACAGTATGCGAGAAAATTCAAACGA
CTGTAGAGACCCCTCCGGATTACTGGACAATACATGGACTATGGCCCGATAAAAGTGAAGGATGTAATAGATCGTG
GCCCTTCAATTTAGAAGAGATTAAGGATCTTTTGCCAGAAATGAGGGCATACTGGCCTGACGTAATCACTCGTT
TCCCAATCGCAGCCGCTTCTGGAAGCATGAGTGGGAAAAGCATGGGACCTGCGCCGCCCAGGTGGATGCGCTCAA
CTCCAGAGAAGAAGTACTTTGGCAGAAGCCTGGAACCTCTACAGGGAGCTGGACCTCAACAGTGTGCTTCTAAAATT
GGGGATAAAACCATCCATCAATTACTACCAAGTTGCAGATTTTAAAGATGCCCTTGCCAGAGTATATGGAGTGAT
ACCCAAAATCCAGTGCCTTCCACCAAGCCAGGATGAGGAAGTACAGACAATTGGTCAGATAGAAGTGTGCCTCAC
TAAGCAAGACCAGCAGCTGCAAACTGCACCGAGCCGGGGGAGCAGCCGTCCCCCAAGCAGGAAGTCTGGCTGGC
AAATGGGGCCCGGAGAGCCGGGGTCTGAGAGTCTGTGAAGATGGCCAGTCTTCTATCCCCACCTAAAAAGAC
CAAGCATTGATGCCCAAGTTTGGAAATATTCTGTTTTAAAAGCAAGAGAAATTCACAACTGCAG

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FIGURE 967

MRPAALRGALLGCLCLALLCLGGADKRLRDNHEWKKLIMVQHWPETVCEKIQNDCRDPPDYWTIHGLWPKSEGC
NRSWPFNLEEIKDLLPEMRAYWPDVIHSFPNRSRFWKHEWEKHGTCAAQVDALNSQKKYFGRSLELYRELDLNSV
LLKLGIKPSINYYQVADFKDALARVYGVIPKIQCLPPSQDEEVQTIGQIELCLTKQDQQLQNCTEPGEQPSPKQE
VWLANGAAESRGLRVCEGPFVFPKPKTKH

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FIGURE 968

GAATTC CGAGCTTTTTATTCCCTAAGAGGAGAAAAATCAGTAACGGGAGAAGCAGGAGGATGTCCAGAAGAAATTC
ATCCCTTGCTCTCGCCCCCTACTCTTTCTGGTGTTAGATCGAGCTACCCCTCTAAAAGCAGTTTAGAGTGGTAAAAA
AAAAAAAAACACACCAAACGCTCGCAGCCACAAAAGGGATGAAATTTCTTCTGGACATCCTCCTGCTTCTCCCGT
TACTGATCGTCTGCTCCCTAGAGTCCTTCGTGAAGCTTTTTATTCCCTAAGAGGAGAAAAATCAGTCACCGGCGGAAA
TCGTGCTGATTACAGGAGCTGGGCATGGAATTGGGAGACTGACTGCCTATGAATTTGCTAAACTTAAAAGCAAGC
TGGTTCTCTGGGATATAAATAAGCATGGACTGGAGGAAACAGCTGCCAAATGCAAGGGACTGGGTGCCAAGGTTC
ATACCTTTGTGGTAGACTGCAGCAACCGAGAAGATATTTACAGCTCTGCAAAGAAGGTGAAGGCAGAAATTGGAG
ATGTTAGTATTTTAGTAAATAATGCTGGTGTAGTCTATACATCAGATTTGTTTGCTACACAAGATCCTCAGATTG
AAAAGACTTTTGAAGTTAATGTACTTGCACATTTCTGGACTACAAAGGCATTTCTTCCTGCAATGACGAAGAATA
ACCATGGCCATATTGTCACTGTGGCTTCGGCAGCTGGACATGTCTCGGTCCCCTTCTTACTGGCTTACTGTTCAA
GCAAGTTTGCTGCTGTTGGATTTTATAAACTTTGACAGATGAACTGGCTGCCTTACAAATAACTGGAGTCAAAA
CAACATGCTCTGTCTCCTAATTTTCGTAAACACTGGCTTCATCAAAAATCCAAGTACAAGTTTGGGACCCACTCTGG
AACCCGAGGAAGTGGTAAACAGGCTGATGCATGGGATTCTGACTGAGCAGAAGATGATTTTTATTCCATCTTCTA
TAGCTTTTTTAACAACATTGGAAAGGATCCTTCCTGAGCGTTTCCTGGCAGTTTTAAAACGAAAAATCAGTGTTA
AGTTTGATGCAGTTATTGGATATAAAATGAAAGCGCAATTAAGCACCTAGTTTTCTGAAAACCTGATTTACCAGGTT
TAGGTTGATGTCATCTAATAGTGCCAGAATTTTAATGTTTGAACCTCTGTTTTTTCTAATTATCCCCATTTCTTC
AATATCATTTTTGAGGCTTTGGCAGTCTTCATTTACTACCACTTGTTCTTTAGCCAAAAGCTGATTACATATGAT
ATAAACAGAGAAATACCTTTAGAGGTGACTTTAAGGAAAATGAAGAAAAAGAACC AAAATGACTTTATTAATA
ATTTCCAAGATTATTTGTGGCTCACCTGAAGGCTTTGCAAAATTTGTACCATAACCGTTTATTTAACATATATTT
TTATTTTTGATTGCACTTAAATTTTGTATAATTTGTGTTTCTTTTTCTGTTCTACATAAAATCAGAACTTCAAG
CTCTCTAAATAAAATGAAGGACTATATCTAGTGGTATTTACAAATGAATATCATGAACCTCTCAATGGGTAGGTTT
CATCTACCCATTGCCACTCTGTTTCCTGAGAGATACCTCACATTCCAATGCCAAACATTTCTGCACAGGGAAGC
TAGAGGTGGATACACGTGTTGCAAGTATAAAGCATCACTGGGGGATTTAAGGAGAATTGAGAGAATGTACCCAC
AAATGGCAGCAATAATAAATGGATCACACTTAACG

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FIGURE 969

MKFLLDI L L L L L P L L I V C S L E S F V K L F I P K R R K S V T G E I V L I T G A G H G I G R L T A Y E F A K L K S K L V L W D I N K H G L E E
T A A K C K G L G A K V H T F V V D C S N R E D I Y S S A K K V K A E I G D V S I L V N N A G V V Y T S D L F A T Q D P Q I E K T F E V N V L A H F W
T T K A F L P A M T K N N H G H I V T V A S A A G H V S V P F L L A Y C S S K F A A V G F H K T L T D E L A A L Q I T G V K T T C L C P N F V N T G F
I K N P S T S L G P T L E P E E V V N R L M H G I L T E Q K M I F I P S S I A F L T T L E R I L P E R F L A V L K R K I S V K F D A V I G Y K M K A Q

[illegible]

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FIGURE 971

MLESSGCKALKEGVLEKRS DGL LQLWKKKCCILTEEG LLLLIPPKQLQHQQQQQQQQQQQQQQQPGQGAEP SQPSG
PAVASLEPPVKLKLHFSNMKTVDCVERKGKYMFTV VMAEGKEIDFRCPQDQGWNAEITLQMVQYKNRQAILAV
KSTRQKQOHLVQQQPPSQPQPQPLQPPQPPQPPQPSQPQPQPQPKPQPQQLHPYPHPHPHPHSHPHSHPH
PHPHPHPHQIPHPHPQPHSQPHGHRLLRSTNSA

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FIGURE 972

CCCGTATCCGCATCCACATCCACATCCACACTCTCATCCTCACTCGCACCCACACCCTCACCCGCACCCGCATCC
GCACCAAAATACCGCACCCACACCCACAGCCGCACTCGCAGCCGCACGGGCACCGGCTTCTCCGCAGCACCTCCAA
CTCTGCCTGAAAAGGGGACAGCTCCCGGGCAAGACAAGGTTTTGAGGACTTGAGGAAGTGGGACGAGCACATTTCTA
TTGTCTTCACTTGGATCAAAAGCAAAACAGTCTCTCCGCCCCGCACCAGATCAAGTAGTTTGGACATCACCCCTAC
TGAACAACTTGGCGATTCTTCTTAGTTTTCTGCATACTTTTCATCACCGATGCAGGAAACGATTTTCGAGTCAAGA
AGACTTTTATTTATGAACCTTTGAAAGGATCGTCTTGTATGGTGAATTTTCTAGGAGCGATGATGTACTGTAATT
TTATTTTAATGTATTTTGATTTATGATTATTTATTAGTTTTTTTTTAAATGCTTGTTCTAAGACATTTCTGAATGT
AGACCATTTTCCAAAAAGGAACTTTATTTTCAAAAACCTAATCCGTAGTAATTCCTAATCTGGAGAATAAAAA
AGGGCGGTGGAGGGGAAAACATTAAAGAATTTATTCATTATTTCTCGAGTACTTTCAGAAAGTCTGACACTTTTCAT
TGTTGTGCCAGCTGGTTGAAATTA AAACTCTGATATTACTTTTTTTGAGGATTTTTATTTTTGTTTTTGCTTAAA
CACTATAGTTTGTCTAGAAGTTTAAAAAGCTAAAAGTTAAAAATGGTGTAAATTATGAAAATCTAACACTCAAGAT
AGTTTCTAAAAGGAAATCAGTAGTTAAGGATACCTGATTTCAAAAATATTTAAAGCATAACCTAAGTATGGTAGG
ATGATTGTATCTTGAATATGTGGTAGGGCCACATCTATTGTAGGAAAAACCTTGCTTTTATCATCTGTGTGTAAAG
GGCTTAATAAGGAGAAGAGGCCTTTTGACTGATTTGTGAGTATAAATGCATTTGCTGTTTCATTTCAAAAATGTT
GTGGAGGAAAAGAGTACATTTAACTTGATAAGAGAATATTTGTACTCCTGTCCAGGCTGCAGGACCTTTCTTCG
AGAGCTTTGCACACTTGACTTGAACCACATTTTCTGATCCCTTTACTTTGTTTTAGAAGCACACTGAAAAATCTC
GTTGTTTTAAAGTACAATTTGTAAATATTTCAAAGGTCTAGGAGTCATAACTTTTGTTTTCATACTGAAAATGATG
TTGATCAGAGAAACCAACTGTTTTGCTTTTCATTGCTCTGTGAGAAATTGAGGATTCTGTTTTGCTGTTAGGTAA
GCTAACTCAGAAATTGAAAGGAAAGACTGGATAAACACCGGATTTTCAGTAAGAAAACAACCCAGTCTTGTCTT
AGAAGCCACTTGTGTGAGGAGTCTGTTGGGGGAAAAAAGAGGATATGCTTTTAAAGGTAGAACAACCTTCTTCTG
TGTTAAATCAAAAAGGATGTTCAAAATCCACCAGGACAGATGCTACTTGGGTTTAAATGGAGCCATAGATGATACA
AAGTCTCTTGGGGCTGAAAATCACTTCTATTTGCGATGGCTTTACTAAGTGGTTTCTGTTTTCCATTATCTTTT
TCACAGAAAGTCTTGGTCAGTATTTTTCCAGCATTTAAATTGAAACGGTCAGTATTAGACCACTGCTAGGTTATG
TAGTCAAGAAATAAAAAATAGAATTACATGCTACAGATGTCTTTATTCTCCTTCCATCTAGAAAGGAGTTCCAAGG
TCAAATTACTTTTTTAGTGCAATAGTTAAATGACATTTTGAGATCATAACTCATATCCAAAAAGTTGCAGGGAAAA
TTAAATAGCTTTCCCTATTAAGCTAATGGCAAACAAAACCTTAAGTGGACCCCACTTCCAGTGGTTGTTTAGG
TTGCAGTTGTGAAAATATGCTGCCAACATTTAAAACTTGTTTCATATGTATATATGTATACACATATATGAATA
TGATATATATATATACATATATGAGAACATGTGTGTACACATATATGAATATGTATATATGTGTATGTATATAT
ATGTATATGAAATGAGAGCCACATCTAAAGATTTCTTAAATCAAGTTTGGTTCAGCTTCCCTAGAAGTGTGGCTG
TACTTTTTGAGGAGTACCTCATAGTACTATATTTTTAATGCATGCAAATCATAATAGCTCCAAATGAACCACAGT
TTTTTCCCAATGGAGGATTTTTTTTTTAATCTTGTACTAAAAAATCCATACCAAAATATTTTTACAAATT
AAGATTGATGTAGGTTTTAAAAAAGGCATTTGTATGTTGTAGCTTACATATGGGGCTAGGTAATTTTATTGCTT
AAAAAGATGCGCCTAGGCTCCCTCTTGGTGGCTGGATTTCTTTTCTTCGCCCCGTGGTGGCCATGGTTTTTAATA
GGGCCACCGGAATCATGTTTCTTTTTTTTTTTTTTTTTTGGAGATGGAGTCTCGCCCTGTGACCCAGGCTGGAG
TGCAGTGGCACGATCTCGGCTCACTGCAACCTCTGCCTCTTGGGTTACAGCCATTCTCCTGTGTGACCTCCTGA
GTAGCTGGGACTACAGGTGAATGCCACCACGCCCCGGCTGATTTTTGTATTTTTTAGTAGAGATGGGGTTTACCAT
AGTGGTCAGGCTGTTCTCGAACTCCTGACCTCAGGTGATCCACCTGCCTTGGCCTCCCAAAGTGCTAGGATTACA
GGTGTGAGCCACCACACCCGGCCCCAGAGTAATGGTTTCTTGACTTTCTGTAGCCCTTGTTCCTTAGTCTGCTGT
GATATTTATGTTGACCTTTATCATTTTCTATTCTGAACCCCTCTTAGCATTTAATGTGAAATCTAAGAAATTAGA
AGTAGAATGGCTTTTATTGTTTTGACACCTTTGAAATTATTATTAATAATTTTTCCAGAGCAAAAAAGCAAACAC
GCTCAATAAGACTAAACAAAACAAAATATAAATGTACATCATTTAATGTCCAGTGGCTCTATTCTACCTGTAAG
AAAATGATACAAAACCACTAAGATATTTTGAAGCCTGACAAATCAGCTTCATGGAAAAAGGTAAAAATGCATT
TTTCAACCGAAAGGGCAGATCCAATAGAAGACCCGCTCCTTAAATAAACATAAAATGTAAAAAGTTGGAAAAAA
AA

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FIGURE 973

GTTTGC GGGTGGTTGTTGCTCTCGGGGCCGTGTGGAGTAGGTCTGGACCTGGACTCACGGCTGCTTGGAGCGTCC
GCCATGAGGAGAAGTGAGGTGCTGGCGGAGGAGTCCATAGTATGTCTGCAGAAAGCCCTAAATCACCTTCGGGAA
ATATGGGAGCTAATTGGGATTCCAGAGGACCAGCGTTACAAAGAACTGAGGTGGTAAAGAAGCATATCAAGGAA
CTCCTGGATATGATGATTGCTGAAGAGGAAAGCCTGAAGGAAAGACTCATCAAAGCATATCCGTCTGTCAGAAA
GAGCTGAACACTCTGTGCAGCGAGTTACATGTTGAGCCATTTTCAGGAAGAAGGAGAGACGACCATCTTGCAACTA
GAAAAAGATTTGCGCACCCAAGTGAATTGATGCGAAAACAGAAAAAGGAGAGAAAAACAGGAAGTGAAGCTACTT
CAAGAGCAAGATCAAGAAGTGTGCGAAATTCTTTGTATGCCCCACTATGATATTGACAGTGCCTCAGTGCCGAGC
TTAGAAGAGCTGAACCAGTTCAGGCAACATGTGACAACTTTGAGGGAAACAAAGGCTTCTAGGCGTGAGGAGTTT
GTCAGTATAAAGAGACAGATCATACTGTGTATGGAAGAATTAGACCACACCCAGACACAAGCTTTGAAAGAGAT
GTGGTGTGTGAAGACGAAGATGCCTTTTGTGTTGCTTTGGAGAATATTGCAACACTACAAAAGTTGCTACGGCAG
CTGGAAATGCAGAAATCACAAAATGAAGCAGTGTGTGAGGGGCTGCGTACTCAAATCCGAGAGCTCTGGGACAGG
TTGCAATACCTGAAGAAGAAAGAGAAGCTGTGGCCACCATTATGTCTGGGTCAAAGGCCAAGGTCCGGAAAAGCG
CTGCAATTAGAAGTGGATCGGTTGGAAGAACTGAAAATGCAAAACATGAAGAAAGTGATTGAGGCAATTCGAGTG
GAGCTGGTTTCAGTACTGGGACCAGTGCTTTTATAGCCAGGAGCAGAGACAAGCTTTTGCCCCTTTCTGTGCTGAG
GACTACACAGAAAGTCTGCTCCAGCTCCACGATGCTGAGATTGTGCGGTTAAAAAACTACTATGAAGTTTCACAAG
GAACTCTTTGAAGGTGTCCAGAAGTGGGAAGAAACCTGGAGGCTTTTCTTAGAGTTTGAGAGAAAAAGCTTCAGAT
CCAAATCGATTTACAAACCGAGGAGGAAATCTTCTAAAAGAAGAAAAACAACGAGCCAAGCTCCAGAAAATGCTG
CCCAAGCTGGAAGAAGAGTTGAAGGCACGAATTGAATTGTGGGAACAGGAACATTCAAAGGCATTTATGGTGAAT
GGGCAGAAATTCATGGAGTATGTGGCAGAACAATGGGAGATGCATCGATTGGAGAAAGAGAGAGCCAAGCAGGAA
AGACAACCTGAAGAACAAAAACAGACAGAGACAGAGATGCTGTATGGCAGCGCTCCTCGAACACCTAGCAAGCGG
CGAGGACTGGCTCCCAATACACCGGGCAAAGCACGTAAGCTGAACACTACCACCATGTCCAATGCTACGGCCAAT
AGTAGCATTTCGGCCTATCTTTGGAGGGACAGTCTACCACCTCCCCGTGTCTCGACTTCCTCCTTCTGGCAGCAAG
CCAGTCGCTGCTTCCACCTGTTTCAGGGAAGAAAAACACCCCGTACTGGCAGGCATGGAGCCAACAAGGAGAACCTG
GAGCTCAACGGCAGCATCCTGAGTGGTGGGTACCCTGGCTCGGCCCCCTCCAGCGCAACTTCAGCATTAATTCT
GTTGCCAGCACCTATTCTGAGTTTGCGAAGGATCCGTCCTCTCTGACAGTTCCACTGTTGGGCTTCAGCGAGAA
CTTTCAAAGGCTTCCAAATCTGATGCTACTTCTGGAATCCTCAATTCAACCAACATCCAGTCCCTGAGAAAGCCCTG
ATCAGTCAACCAGCTGTGGCTTCCGTGTGCCTAGACTGGACCTAATTATATGGGGGTGACTTTAGTTTTTCTTCAG
CTTAGGAGTGCTTGAAACCTTGCCAGGTCCATGACCATGGGCCTAACTTAAAGATGTGAATGAGTGTTACAGT
TGAAAGCCCATCATAGGTTTAGTGGTCCTAGGAGACTTGGTTTTGACTTATATACATGAAAAGTTTATGGCAAGA
AGTGCAAATTTTAGCATATGGGGCCTGACTTCTTACCACATAATTCTACTTGCTGAAGCATGATCAAAGCTTGT
TTTATTTACCACTGTAGGAAAATGATTGACTATGCCCATCCCTGGGGTAATTTTGGCATGTATACCTGTAACCT
AGTAATTAACATCTTTTTTGTGTTAGGCATGTTCAATTAATGCTGTAGCTATCATAGCTTTGCTCTTACCTGAAGC
CTTGTCCCCACCACACAGGACAGCCTTCCCTCCTGAAGAGAAATGCTTTTGTGTGTCCGAAGTTGAGATGGCCTGCC
CTACTGGCAAAGAGGTGACAGGAAGGCTGGGAGCAGCTTTGTAAATTGTGTTTCAGTTCTGTTACACAGTGCATT
GCCCTTTGTTGGGGGTATGCATGTATGAACACACATGCTTGTGCGAACGCTTTCTCGGCGTTTGTCCCTTGGCTC
TCATCTCCCCCATTCCTGTGCCTACTTTGCCTGAGTTCTTCTACCCCGCAGTTGCCAGCCAGATTGGGAGTCTG
TTTGTTCATGGGTTGAGCTGTCTTTGTGCTGGAGATCTGGAACCTTGCACATGTCACTACTCTTCTTGAAGCACTATTATT
TATTCTTCGCTGTCTGCCTGCAGCAGTACTACTGTCAACATAGTGTAATGGTTCTCAAAGCTTACCAGTGTG
GACTTGGTGTAGCCACGCTGTTTACCTCATACAGTACGTGTCCTGTTTTTAAATATACAATTATTCTTAAAAA
TAAATTAAATCGTATACTTACATTTCAAAAAAAAAAAAAAAAAA

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FIGURE 974

MRRSEVLAEESIVCLQKALNHLREIWELIGIPEDQRLQORTEVVKKHIKELLDMMIAEEESLKERLIKSISVCQKE
LNTLCSELHVEPFQEEGETTILQLEKDLRTQVELMRKQKKERKQELKLLQEODQELCEILCMPHYDIDSASVPSL
EELNQFRQHVTTLRETKASRREEFVSIKRQIILCMEELDHTPDTSFERDVVCEDEDAFCLSLENIATLQKLLRQL
EMQKSQNEAVCEGLRTQIRELWDRLQIPEEEREAVATIMSGSKAKVRKALQLEVDRLEELKMQNMKKVIEAIRVE
LVQYWDQCFYSQEQRQAFAPFCAEDYTESLLQLHDAEIVRLKNYYEVHKELFEGVQKWEETWRLFLEFERKASDP
NRFTNRGGNLLKEEKQRAKLQKMLPKLEEELKARIELWEQEHKAFMVNGQKFMHEYVAEQWEMHRLEKERAKQER
QLKNKKQTETEMLYGSAPRTPSKRRGLAPNTPGKARKLNTTTMSNATANSSIRPIFGGTVYHSPVSRLPSPGSKP
VAASTCSGKKTPRTGRHGANKENLELNGSILSGGYPGSAPLQRNFSINSVASTYSEFAKDPSLSDSSTVGLQREL
SKASKSDATSGILNSTNIQS

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FIGURE 975

GCGGATCATCCGCTTCCGGAGTCGAGGTTTTTCGGGCTTGTACCGCTTGGCGGTGCGGCCTGGTGTTCGGCTTGCAG
GTTCTTTTCTGTGTTTGTTCCTCTGCCCTGCCAAGGCCGTAGAGCTGGTGCGTGCGGGTAGCGGGGCTCTCCGAGGA
GCGCGGCACGCCGCGCACCATGGTCCACCTCACTACTCTCCTCTGCAAGGCCTACCGTGGGGGCCACTTAACCAT
CCGCCTTGCCCTGGGTGGCTGCACCAATCGGCCGTTCTACCGCATTGTGGCTGCTCACAACAAGTGTCCCAGGGA
TGGCCGTTTCGTAGAGCAGCTGGGCTCCTATGATCCATTGCCCAACAGTCATGGAGAAAACTCGTTGCCCTCAA
CCTAGACAGGATCCGTCATTGGATTGGCTGCGGGGCCCCACCTCTCTAAGCCTATGGAAAAGCTTCTGGGTCTTGC
TGGCTTTTCCCTCTGCATCCTATGATGATCACAAATGCTGAGAGACTGCGAAGGAAACGGGCACGTGAAGTCCT
GTTAGCTTCTCAGAAAACAGATGCAGAAGCTACAGATACAGAGGCTACAGAAACATAAATGAGCTGACTTTAGTG
AGCATAGCAGTGGGAACAAGGTCAAGGTCCTTTTGAAACACTGCAGCGATCTTAATTTTGTAGATTGGAGTTC
AATAAATGGAGTATCCTGAAAAAAAAA

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FIGURE 976

MVHLTTLLCKAYRGGHLTIRLALGGCTNRPFYRIVAAHNKCPRDGRFVEQLGSYDPLPNSHGEKLVALNLDRIH
WIGCGAHLSPMEKLLGLAGFFPLHPMMITNAERLRRKRAREVLLASQKTDAEATDTEATET

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FIGURE 977

GGAGCTCTGGAGGCGGGGCTTCGAGCGTGGCTCGTGGGTTTTCCGTGAAAGTCGCGGTGCAGCGGTGGGCGGCATG

TCTGTGGCCGGTGGGGAGATTCTGTGGGGACACGGGGGGAGAGGACACTGCTGCTCCCGGCCGGTTTCTAGCTTCAGC
CCGGAGCCCACGCTCGAGGACATCCGCCGCTCCATGCTGAGTTTTGCTGCGGAACGAGACTGGGAACAGTTCCAT
CAGCCTCGGAATCTCCTCCTGGCCTTGTTGGGGAAGTGGGGGAGCTGGCAGAACTCTTTCAGTGGAAAACCGAT
GGGGAACCTGGCCCCCAAGGCTGGTCCCCAGGGAACGGGCAGCCCTTCAAGAGGAGCTTAGTGACGTCCTCATC
TACCTGGTGGCATTAGCAGCCCGCTGCCGTGTGGATCTGCCGCTAGCAGTGCTCTCCAAAATGGACATCAACCGG
CGACGCTACCCAGCCCATCTGGCCCGCAGCTCTTCCCGCAAGTATACAGAATTGCCCCATGGGGCCATCTCTGAA
GACCAGGCTGTGGGGCCTGCGGACATTCCCTGTGACTCCACAGGCCAGACCTCAACCTAGAAAGATGGCCACAGG
ACTTGCAACTCAGGGTGGTGTCTGAAGAGCAGAGAGTGGCCTGGCCCTGGAGCCTTTTTCTAGTCTTTTCAGAAT
AGATCATGGGCCTGAGGCCTCCACTTCTTGAGGTCTGAGGCCCAGCAGCCTCTAGAAGGTAGCCTCCTGGTGTTT
GTTCTCCAGTAAATGGTTTTGGGCGATAACTTCTAGATTATTCCTGGATGGCCAGGGAGGCTCTCTGTCTCAG
CAGGTGATGACGGGGGTACCAGGGGTGCCTCTGAGACCCATTCTCGTGTTTCCCTGTTGTACCTTTTGCTGCAG
GGCAGAGAGATCTGGTTTCTAGCAAATCCCAGTAGGATGTCATGTAAGTTCCTTCCCCCTCTTAGAGATTGAAG
GCTGTAAGAGTCCAGATGGTGGAGCCAGGCTGTCTGGGTTCAAATGCCATCTTTGACACTTGCAAGCTAAATGAC
ATTACTCAAATTAATCGTTCTGCACTTCAGCTTCTTGTCTATCAAATAAAAAGAATAGTACCTGCCCAAAAAA
AAAAAAAAAAAAAAAAAAAA

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FIGURE 978

MSVAGGEIRGDTGGEDTAAPGRFSFSPEPTLEDIRRLHAEFAAERDWEQFHQPRNLLLALVGEVGE LAELFQWKT
DGEFGPQGWSPRERAALQEELSDVLIYLVALAARCRVDLPLAVLSKMDINRRRYP AHLARSSSRKYTELPHGAIS
EDQAVGPADIPCDSTGQTST

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FIGURE 979

GAAGGTCAGCGTGTGAAGTAGGCGCTGGCAACGCGGGGTTACCCTGXTXTATTGAGGAGTAACGGCCCAGCGGAC
CACCCAGGCTTGAGGCAGCGGCGGGAACCACTCGGTTTGCTGCGATACCAATGGAAAGGAGGCGGGGGAAGCGGCAA
CAAAACCACAGGGGGATTGGCCGGCTTTTTTCGGAGCCGGCGGAGCAGGTTACTCGCACGCGGATTGGCTGGCGT
CCCGCTAACTGGTATGAACCTCTGTCTCCTTATTTAAATGTGGATCCACGATACCTCGTGCAGGATACAGATGA
GTTTATTTTACCTACCGGAGCTAATAAAACCCGGGGCAGATTTGAGCTGGCCTTCTTTACGATTGGAGGATGTTG
CATGACAGGGGCTGCGTTTGGTGCAATGAATGGTCTTCGGCTAGGATTGAAGGAAACCCAGAACATGGCCTGGTC
CAAACCAAGAAATGTACAGATTTTGAATATGGTGACTAGGCAAGGGGCACCTTTGGGCTAATACTCTAGGTTCTCT
GGCTTTGCTCTATAGTGCATTTGGTGTCTCATTGAGAAAACACGAGGTGCAGAAGATGACCTTAACACAGTAGC
AGCTGGAACCATGACAGGCATGTTGTATAAATGTACAGGTGGTCTTCGAGGGATAGCACGAGGTGGTCTGACAGG
ACTAACACTTACCAGCCTCTATGCACTATATAATAACTGGGAGCACATGAAAGGCTCCTTGCTCCAACAGTCACT
CTGAAGATTTTGCCAACTCATGAATGGAGGACACTTCAGTAGTTCATCTAGGATCCTTTTATTAAGGACAGTTTG
GGAGTTATTTCTCTCT

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FIGURE 980

MEGGGSGNKTGGLAGFFGAGGAGYSHADLAGVPLTGMNPLSPYLNVDPRYLVQDTDEFILPTGANKTRGRFEL
AFFTIGGCCMTGAAFGAMNGLRLGLKETQNMASKPRNVQILNMVTRQGALWANTLGSLALLYSAFGVIEKTRG
AEDDLNTVAAGTMTGMLYKCTGGLRGIARGGLTGLTLTSLYALYNNWEHMKGSLLQQSL

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FIGURE 981

GGCGAAGGAGATCAGCAGGACGCTGCGCACAACATGGGCAACCACCTGCCGCTCCTGCCTGCAGAGAGTGAGGAA
GAAGATGAAATGGAAGTTGAAGACCAGGATAGTAAAGAAGCCAAAAAACCAACATCATAAATTTTGACACCAGT
CTGCCGACATCACATACATACCTAGGTGCTGATATGGAAGAATTTTCATGGCAGGACTTTGCACGATGACGACAGC
TGTCAGGTGATTCCAGTTCTTCCACAAGTGATGATGATCCTGATTTCCCGACAGACATTACCTCTTCAGCTTTTT
CACCTCAAGAAGTCAGTATGGTGCGGAATTTAATTCAGAAAGATAGAACCTTTGCTGTTCTTGCATACAGCAAT
GTACAGGAAAGGGAAGCACAGTTTGGAAACAACAGCAGAGATATATGCCTATCGAGAAGAACAGGATTTTGGAATT
GAGATAGTGAAAGTGAAAGCAATTGGAAGACAAAGTTCAAAGTCCTTGAGCTAAGAACACAGTCAGATGGAATC
CAGCAAGCTAAAGTGCAAATTCCTCCGAATGTGTGTTGCCTTCAACCATGTCTGCAGTTCAATTAGAATCCCTC
AATAAGTGCCAGATATTTCTTCAAACCTGTCTCAAGAGAAGACCAATGTTTCATATAAATGGTGGCAGAAATAC
CAGAAGAGAAAGTTTCATTGTGCAAATCTAACTTCATGGCCTCGCTGGCTGTATTCTTATATGATGCTGAGACC
TTAATGGACAGAATCAAGAAACAGCTACGTGAATGGGATGAAAATCTAAAAGATGATTCTCTTCTTCAAATCCA
ATAGATTTTTCTTACAGAGTAGCTGCTTGTCTTCTTATTGATGATGTATTGAGAATTCAGCTCCTTAAATTTGGC
AGTGCTATCCAGCGACTTCGCTGTGAATTAGACATTATGAATAAATGTACTTCCCTTTGCTGTAAACAATGTCAA
GAAACAGAAATAACAACCAAAAATGAAATATTCAGTTTATCCTTATGTGGGCCGATGGAGCTTATGTGAATCCTC
ATGGATATGTGCATGAGACACTTACTGTGTATAAGGCTTGCAACTTGAATCTGATAGGCCGGCCTTCTACAGAAC
ACAGCTGGTTTTCTGGGTATGCCTGGACTGTTGCCCAGTGTAAGATCTGTGCAAGCCCATATTGGATGGGAAGTT
TACGGCCACCAAAAAAGACATGTCACCTCAAAAATTTGGGGCTTAACGCGATCTGCTCTGTTGCCACGATCCC
AGACACTGAAGATGAAATAAGTCCAGACAAAGTAATACTTTGCTTGTAACAGATGTGATAGAGATAAAGTTATC
TAACAAATTGGTTATATTCTAAGATCTGCTTTGGAAATTATTGCCTCTGATACATACCTAAGTAAACATAACATT
AATACCTAAGTAAACATAACATTACTTGGAGGGTTGCAGTTTCTAAGTGAACTGTATTTGAACTTTTAAGTAT
ACTTTAGGAAACAAGCATGAACGGCAGTCTAGAATACCAGAAACATCTACTTGGGTAGCTTTGGTGCCATTATCCT
GTGGAATCTGATATGTCTGGTAGCATGTCATTGATGGGACATGAAGACATCTTTGGAAATGATGAGATTATTTCC
TGTTGTTAAAAA

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FIGURE 982

MGNHLPLLPAESEEEDEMEVEDQDSKEAKKPNIINFDTSLPTSHTYL GADMEEFHGRTLHDDSDSCQVIPVLPQVM
MILIPGQTLPLQLFHPQEVSMVRNLIQKDRTFAVLAYS NVQEREAQFGTTAEIYAYREEQDFGIEIVKVKAIGRQ
RFKVLELRTQSDGIQQAKVQILPECVLPSTMSAVQLES LNKCQIFPSKPVSREDQCSYKWWQKYQKRKFHCANLT
SWPRWLYSLYDAETLMDRIKKQLREWDENLKDDSLPSNP IDFSYRVAACLPIDDLVRIQLLKIGSAIQRLRCELD
IMNKCTSLCCKQCQETEITTKNEIFSLSLCGPMELM

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FIGURE 983

CCCGCGTG CATACGGTTGCCGGCATGGCACATTACAACCTTCAAGAAAATTACGGTGGTGCCGTCCGCCAAGGACT
TCATAGACCTCACGTTGTGCGAAGACTCAACGAAAGACTCCAACCGTTATTTCATAAACATTACCAAATACATCGCA
TTAGACATTTTTTACATGAGAAAAAGTCAAATTTACTCAACAGAATTACCATGATAGACTTTCACAAATTCCTAACAG
ATTTCCCCAAATTGGATGATATTTCATCCGTTCTATGCTGATTTGATGAATATTCTCTACGACAAGGATCATTACA
AGTTGGCTCTGGGGCAAATAAATATTGCCAAAAATTTAGTGGACAATGTTGCTAAAGATTATGTGCGACTGATGA
AGTATGGCGACTCTCTCTACCGCTGCAAACAGCTGAAGCGTGCGGCCCTGGGACGGATGTGCACAGTGATCAAGA
GGCAGAAGCAGAGTTTGGAGTATTTGGAGCAAGTGCCTCAGCATTTATCCCCTTTGCCAACCATTGATCCGAATA
CCAGGACCCTGCTTTTGTGTGGGTACCCAAATGTTGGGAAGTCCAGCTTCATCAACAAGGTGACGAGAGCAGACG
TGGATGTCCAGCCCTATGCGTTCACAACCAAGTCTCTGTTTGTGGGCACATGGATTATAAGTATCTACGTTGGC
AGTTGTAGACACTCCTGGGATCCTGGACCACCCTCTGGAGGATAGGAACACCATCGAGATGCAGGCCATCACTG
CCCTGGCCACCTCCGTGCTGCGGTCTGTATGTGATGGATTTGTCTGAGCAGTGTTGGGCATGGGCTGAGGGAGC
AGCTAGAACTCTTCCAGAACATCAGACCTCTCTTCATCAACAAGCCTCTCATAAGTTGTAGCCAACAAATGTGATG
TGAAGAGAATAGCTGAACCTTCTGAAGATGATCAGAAAATATTTACAGATTTGCAGTCTGAAGGATTCCCTGTAA
TAGAGACCAGCACCTGACTGAGGAAGGTGTTATTAAAGTTAAACAGAGGCTTGCGATAGGCTTTTGGCTCATC
GAGTGGAAACCAAATGAAGGGAAATAAAGTGAATGAGGTGCTGAATAGACTGCACCTGGCTATCCCAACCAGGA
GGGACGATAAGGAGAGGCCCTTTTCATCCCTGAAGGAGTGGTGGCTCGCAGGAAGAGGATGGAAACTGAGGAGT
CCAGGAAGAAGAGGGAACGAGATCTTGAGCTGGAAATGGGAGATGATTATATTTTGGATCTTCAGAAGTACTGGG
ATTTAATGAATTTGTCTGAAAAACATGATAAGATACCAGAAATCTGGGAAGGCCATAATATAGCTGATTATATTG
ATCCAGCCATCATGAAGAAATTGGAAGAATTAGAAAAAGAAGAAGAGCTGAGAACAGCTGCTGGAGAGTATGACA
GTGTATCTGAGAGTGAAGACGAAGAGATGCTGGAAATCCGACAGCTGGCAAAGCAAATTCGAGAGAAAAAGAAGT
TGAAATTTCTGGAGTCCAAAGAAAAGAATACACAGGGACCCAGGATGCCCGGAAGCTGCTAAGAAGGTTAGAGGA
CAGTTTTGGAGAAGGAGATGCGTAGTCTTGGTGTGACATGGACGATAAAGACGATGCCCCATTACGCAGTCCAGG
CAAGAAGATCCCGGAGCATCACTAGGAAAAGAAAGCGGGAAGACTCTGCTCCCCCGTCTCTGTGGCCCGGAGTG
GGAGTTGCTCTCGAACTCCACGTGACGTTTCTGGTCTTAGGGATGTCAAGATGGTGAAGAAAGCCAAGACTATGA
AGAATGCTCAGAAGAAGATGAATCGGTTGGGGAAGAAAGGGGAGGCGGATAGACACGTGTTTGATATGAAGCCCA
AGCACTTGCTGTCTGGGAAGAGGAAAGCTGGTAAAAAGGACAGGAGATTAGTATCCGTTTGGTTGGCGTGGCTTCG
CTAGAGTGTGCTGTTTATTTCTGCTTGGTACAGTATGGTTTCATGAAATTGGAGCTCTGTACAACTGAAAA
AGACAAAATAAGTAAAGCACTTGTTGCTTTGCTGAAAACTATGGTTAACCTATATAGGTGTGGGAAATTTTGT
CACTGCATAATATTACAAATATTTTGTAGTAGACAGTGTTCACATTTAATGGAGTATCAGTTGCTTCAGATTTT
CAGAACTGGGAAGATTTACTGGTGTAAGTGGGTTGTTTTGATGGAGAAAAACCTTATTTTCTTTTGTAAAGAGCT
GGGAGCAAACACGTTTATGAGTGTGTCGGAATCCCGTGCTTAAATACGCTCTTAAATTATTTCTAGTCTTATT
TTACAATGTCTCATTTGAGTCTGTCTCAACTATTTTATCCAAATAAACCTCCAGAAGAACTAAAAAAAAAAAA
AAAAAAAAAAAAAA

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FIGURE 984

MAHYNFKKITVVPSAKDFIDLTLSTQRTPTVIHKHYQIHRIRHFYMRKVFTQQNYHDRLSQILTDFFPKLDDI
HPFYADLMNILEYDKDHYKLALGQINIKNLVDNVAKDYVRLMKYGDSLYRCKQLKRAALGRMCTVIKRQKQSLEY
LEQVRQHLSRLPTIDPNTRTLLLCGYPNVGKSSFINKVTRADVDPYAFITTKSLFVGHMDYKYLRWQVVDTPGI
LDHPLEDRNTIEMQAITALAHRAAVLYVMDLSEQCGHGLREQLFQNIIRPLFINKPLIVVANKCDVKRIAELS
EDDQKIFTDLQSEGFPVIETSTLTEEGVIKVKTEACDRLLAHRVETKMKGNKVNEVLNRLHLAIPTRDDKERPP
FIEGCVARRKRMETEESSRKKRERDLELEMGGDYILDQKYWDLNMLSEKHDKIPEIWEIGHNIADYIDPAIMKKL
EELEKEEELRTAAGEYDSVSESEDEEMLEIRQLAKQIREKKKLKILESKEKNTQGPRMPRTAKKVQRTVLEKEMR
SLGVDMDDKDDAHYAVQARRSRISITRKRKREDSAPPSSVARSGSCSRTPRDVSGLRDVKMVKKAKTMKNAQKKMN
RLGKKGEADRHVFDMPKPKHLLSGKRKAGKKDRR

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FIGURE 985

GGCTGCGAGAAGACGACAGAAAGGGGGAAGGGGCTGATGCGAACTGGGGCCACGGTAGCCATCGCGCTTTGCAGTT
CGGTCTCCTGGTGTACGGCCAACGCCAAGTAGGGGATTGCGTTCCCTCCAGTCGCAGACCCTATCAGATTTGGAT
ATGTCTTCATATTTGATTGGATTACAGTGGTTTTCAGCAGTGTGCTACAGTTTTTAGGATTATATAAGAAAAC
GGTAAACTGGTATTTCTTGGATTGGATAATGCAGGAAAAACAACATTGCTACACATGCTAAAAGATGACAGACTT
GGACAACATGTCCCAACATTACATCCCACTTCCGAAGAAGTACCATTGCTGGCATGACGTTTACAACTTTTGAT
CTGGGTGGACATGTTCAAGCTCGAAGAGTGTGGA AAAACTACCTTCTGCTATCAATGGCATTGTATTTCTGGTG
GATTGTGCAGACCACGAAAGGCTGTTAGAGTCAAAGAAGAAGTTCATTCACTAATGACAGATGAAACCATTGCT
AATGTGCCTATACTGATTCTTGGGAATAAGATCGACAGACCTGAAGCCATCAGTGAAGAGAGGTTGCGAGAGATG
TTTGGTTTTATATGGTCAGACAACAGGAAAGGGGAGTATATCTCTGAAAGAACTGAATGCCCGACCCTTAGAAGTT
TTCATGTGTAGTGTGCTCAAAAGACAAGGTTACGGAGAAGGCTTCCGCTGGATGGCACAGTACATTGATTAACAC
AACTCACATTGGTTCCAGGTCTCAACGTTACGGCTTACTCAGAGATTTGATTGCTCAACATGCATAAAGTGAAT
TCAATAGACTTTTGCTGGTTATAAAACAGATGTTTTTTAGATTATTAATATTAAATCAACTTAATTTGAATGAGA
ATTGAAAAGTGAATCAAGTAAGTTTGAGTATCACAATGTTAGCTTTCTAATTCCATAAAAGTACTTGGTTTTTAC
AGTTTATAATCTGACATCACCCAGCGCCATTTGTAAAGAGCAACTTTCCAGCAGTACATTTGAAGCACTTTTTA
ACAACATGAAACTATAAACCATATTTAAAAGCTCATCATGTTAAATTTTTTATGTACTTTTCTGGAACTAGTTTT
TAAATTTTAGATTATATGTCCACCTATCTTAAGTGTACAGTTAATAATTAGCTTATTCAATGATTGCATGATGCC
TTACAGTTTTCAATAACTTTTTTCTTATGCAAACGTCATGCAATAAAACAAACTCTAATGTTTGGCAAAAAAA
AAAAA

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FIGURE 986

MSFIFDWIYSGFSSVLQFLGLYKKTGKLVFLGLDNAGKTLLHMLKDDRLGQHVPTLHPTSEELTIAGMTFTTFD
LGGHVQARRVWKNYLPAINGIVFLVDCADHERLLESKEELDSLMTDETIANVPILILGNKIDRPEAISEERLREM
FGLYGQTTGKGSISLKELNARPLEVFMCSVLKRQGYGEGFRWMAQYID

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FIGURE 987A

CCGGCCCCGGCCCCGGCCCCAGCCGCTCCTGCTGGGCGCCCCAACCGGGTCCGGCCCCGGGGGGCGGGGGCCGC
GGCCCCCGAGGATGCGGGGAAATCCAACAGCAAGTTGAAGCCCCGAAGTTGTGGAGGAGCTGACCAGGAAGACCTACT
TTACCGAGAAGGAGGTCCAGCAGTGGTACAAAGGCTTCATCAAGGACTGCCCCAGTGGGCAGCTGGATGCGGCAG
GCTTCCAGAAGATCTACAAGCAATTCTTCCCGTTTCGGAGACCCACCAAGTTTGCCACATTTGTTTTCAACGTCT
TTGATGAAAACAAGGACGGGCGAATTGAGTTCTCCGAGTTTCATCCAGGCGCTGTCGGTGACCTCACGGGGAACCC
TGGATGAGAAGCTACGGTGGGCCCTTCAAGCTCTACGACTTGACAATGATGGCTACATCACCAGGAATGAGATGC
TGGACATTGTGGATGCCATTTACCAGATGGTGGGGAATACCGTGGAGCTCCCAGAGGAGGAGAACACTCCTGAGA
AGAGGGTGGACCGGATCTTTGCCATGATGGATAAGAATGCCGACGGGAAGCTGACCCTGCAGGAGTTCCAGGAGG
GGTCCAAGGCAGACCCGTCCATTGTGCAGGCGCTGTCCCTCTACGACGGGCTGGTATAGTCCCAGGCTGGAGCTG
GATGCTGGGAACCACTCACCTCCTTCTGTGCCATGAGGCCACCTCAGCCCTGACACCAACCCCGTGCCTCCACC
CAGCCTTCTTCCGCATCCACACACAGCCGGCTGCCCTTGACCCGGGAGGCCCCGGCTCTCCTCTCCCTGTCTCTG
CACCATCCCCCGCTGAAGCCACCGGCTCCAATTGCCAGCAACCTCTGCTTGTCCGAAAACGACAACACGAAA
TGGAAAAGGCTACAGCCCTCTGCATAAACCAAGGACTTGCTGCTCGCAGGCAGCCTCCGTTCTCCCGCTCTC
TTGCGCGTGTGCTTTTGTTTTTTATTTTGAACAGACGTTTTTAAAGAAAAAACAACACTACCTTCTGTCTCTAGA
AGACACAGACTGACAGATGGGGTGAAGGCCTGGGGACCTCAGAGAACTCTGCCTTGCCCTCGTCCCTCGTCTCTC
GGCAGCCGGAGAGGCTGTGGGTGGGCGGAGGGTGTCTAGGGGTCTGCCTAGTCAACGTTATTTGTCGTCCCATC
TTTTGGCAGCAAAACCACCTGCGTGGCTAGGATGATTAATTATGAGGATGATGATTTTTTTTTGTGATAACAGTAT
TGTGCTTTTTGTGGGGAAAGTGAGGTTTTTTTTTATATACATATATAATTGATATCTTTAATTTATTGGTTGTT
AACTGTTGCTGCTGCCTGGTGTGCTCTCAGCTCCCAGGGCTGCGGGCCACCCTTTACATGTGCACGCCCTGACC
CACCTGCCCCACGCCACTTGGGAGGATGGTGGCCTGCAGCGGCCAAGAAGCCAAAAAAATTTTTTTTTTTTCAG
ATACTGTGCTTGATTTTTGGAGAGGGGAGAGGTGGAAATTCCTAAATGGCTAATGCACTGTTCCCTCCAGCCGA
ATGCTCCTGCCAAACCCCTTTTCCCTGCTGCCTCTGTCCCCGCATCCTGTTCTCCCTGGGTCCGTAACATTT
TTCCGAGGATGAACAGGGGACATCTTTAGGTTTCTCAACTCTTGCTTTGGTGTTCGCCGAGCATGGAACAG
GGCGCTAAGGCTGGGAGCTGGAAGAAGGGGCATTGGGTACCCAGGCAGAGTCAGGAGAGGTGGTCTTTGAAGTA
AGTTAGCAGAAATCAAGGGGACCCCGCCTCCTTGGGCTGGGGAGGGGATTTCAGATAGTTTCATAACTCTCTCC
CGCTCTGCCTTCCCTCCTTCTATCTGCTTTTTCCAGTAACTGCATGGTGTCTTCCCTGGCCTTCTCTTGGCT
CAAAGGCTGGGAGGGAGGGAAGGAGAGAAGATTCCAGGCAATCCCATCAATATAGTCCCTACACCTGGGGCTGC
GGCCACATGTCTTACGGAGGCTTCCAGCGGTGCCTGCCACTGAGGCAGGTGCGGCCCCAGGACCATCACCAGG
AATGCGAGGCCACCCTGGACAGAGGTAGGAGCCCCAAGGTCCGGCCCTTGCTCTTTGATTGTGGGCAGCCTCCTG
CCCTCTCTGGGTCTCAGTTGCCCCATCTGCAGAGCGAGGAGGCCCGGGCTGGTTGGTCTTGAAGGCCCTTTTCCA
TGCCGACATCATGTCACTCTAGGCCTGGGGTTTCACTTCTGTGGCTGGTGATGCTGTGGTTAAGTTTGCTTGAC
CCCAGCAGCCCCGAGGACTGTCTGAGTCACAGCACAGCCCCATTGCGTGGCTGCTGGTGTGTGGGGTCACTTCC
AGCAGATGAATGTGTATGTGGCACACCTTGTCCCTTCCCGCAGCATTCTCTGGTTCCCCCAGACCCTTGAGCG
CTCTTTGGGACCCAGAAGGAGTCCTTGACAGGGGAAGGCTTGAGGTGAGAAGCCGCTTCCAGACTGTCTAGGGCC
AGGCCTGGGTCTAGAATTCTTGCTGCTGCTTTGACAGTCAACAGCCCATCAGCCCATGTTTTAGAGGGGACACT
TTGGTCTCGGTTCCACCCTCAGCAAGCAGGCCTCCAGCCCCGAGGAAGGCCTCTGCCGTAGTGACGTTGCCGTG
TGGGGCTGCGTGGCTGTTCCCTTGGCTGGAGCATTACAGCAACCCAGCGTCCCCCTGAGGCGTTTATTGGCA
GCCCCCTAGGACTGCACGCTGGCCCCACGGTAACCCCCCTCCCCACCAACATCCTGCAGGGATGGGGTCACTG
GTTCCACCTTACAGGCCACTTTGAAGGGTGGATTCTTTGAGGCCCTGCCAGTCGGCTCCCTGCTCAGCTGCTG
GCCCCGGCGACCTGGGACTCAGCACCAACGGCTGAAGTTTCTCAGCTGGGCTCTGACCTGGGGTCTGGGGCAGGG
AACGAACATGGTGGCTTTGGGCTGAGAGGATGAGGGAGGTCTTTCCAGGTCAAATTACTTTCTTTGGCCTCTG
CCTGAGGCTCGATTTGCCTCTCTGGTCCAATGGGACTGACACTGTTGTACAACCTGACCTGTGGCTGAGGGTGTG
TGGGCTTAAGCATGTGGACCCCTTCGGTGTGTCTGGCCTTCTCCATCGTCTGCTTGTGGCTTTTGGCTTTGA
AGCCACAGGTGTGGCTTCTGGCCTTAGCAGATGGTATGCTTGGCGACCGCAGCCAGCATGCCGGTGGGCCACA
GCCCCAGCCAGCCAGAGCTGCCGGAAGGGCCGCCCTTCCCGGCCCTGGCGGGGTGCTGGACACTGGCCATTTTC
ACTAGAGTTTGCCTGGCAGGGACCGATCTCTGCCCCCTCCTCTCCCCAGGCCTCTGGCTGCAGTGATGCCGAGA
ATCCTGAGCCAGGTGCCTCCTGAGCAGCCCGTGCCTCTCCACAGCGCGTTTGCCACCCAATGCGGCTCGCTT
CAGATGCTCTGATGCAGAGGGCACGCCCATAGTCCCTCTGCAGAGCCTCGCACTGGGGCCAGGGCAGGCACCAGC

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FIGURE 987B

CCCAGGCGGCCAGTCGGCCACGGCCTGTCCCTCTTCCTCGTAGCGTCTGCTCCTCACTTTGTGTTGATGGTGACTT
AGGAGAATGTTCCGATTTTCCATGATCTAAGCAGGCCACGTTTAAAATAACATCAAGGCAAGCGTACGTGTCACC
CTCTGTACTGACATCTCCTCCCCTGAAATGCTTTTCAGTTTGACAGCCCGTTTCCTAGACAAGTGCACCTGGGGT
TTCAGGAACCTTTGTGTTTTTTCGGAGGGGGTTGGTGAGGAGGTGCGGATGCCTGGGATCCCTTCCTGGAGAGGCA
GGCTGTCTCTGGAAAAAGCCTCCATTGCCCACCCGCCAGGCGGAAAGTCACCCTGTTCCCAGCGCGGTTTCAGCA
TTTAATTTTAAGGGAGCTAAGGAAGCGCGGCGCGCCCCCTGGTGTTGGTAAGCCGCCAACGCACCTGGGGGCTGC
AACCCACCGGACGGGTGGTCCGGAGGGAGGCTGGAGCGGGGAGGCGAGGAGGGGGCTGTGAGTCCTCAGAGGCC
CTGGGCCACCACATTTCTGGCAGCGTTTCCCAGACACCCCTCTGCTAGGCCATCCCTGGATAGCAAGTGAATTAA
CTTAAGGGCACTGTGATGGGAAGCCTTGCCCCCTCTTTTTTTTTTTTTTTTTTAATATCTGCGGAATAAACCCAA
TGTTAATTTTTGAATGAATAAAAGGCTTTTGTTGAATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 988

MGKSNSKLP EVVEELTRKTYFTEKEVQQWYKGF IKDCPSGQLDAAGFQKIYKQFFPF GDPTKFATFVFNVDEN
KDGRIEFSEFIQALSVTSRGTLD EKLRFKLYDLNDGYITRNEMLDIVDAIYQMGNTVELPEEENTPEKRVD
RIFAMMDKNADGKLT LQEFQEGSKADPSIVQALSLYDGLV

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FIGURE 989

AGAGCTCGCGGTGGACTCCGACCCGGCGCAACATGGCCGCAGCCTCGCCTCTGCGCGACTGCCAGGCCTGGAAGG
ATGCGAGGCTCCCGCTCTCCACCACAAGCAACGAAGCCTGCAAGCTGTTTCGATGCCACGCTGACCCAGTATGTAA
AATGGACCAATGACAAGAGTCTCGGTGGCATCGAGGGCTGCCTGTCAAAGCTCAAAGCAGCAGATCCAACCTTTG
TGATGGGCCACGCCATGGCTACTGGCCTTGTGCTGATTGGCACTGGAAGCTCCGTGAAGCTGGACAAAGAGCTGG
ACCTGGCTGTGAAGACAATGGTGGAGATTTCAAGAACCCAGCCGCTGACAAGGCGGGAGCAGCTGCACGTGTCTG
CAGTAGAGACATTTGCCAATGGGAACCTTTCCGAAAGCCTGTGAACATATGGGAACAGATTCTCCAGGACCACCCGA
CAGACATGTTGGCCCTGAAATTTTCCCATGATGCTTATTTTACCTGGGCTATCAGGAACAGATGAGAGATTCTG
TTGCTCGAATTTACCCCTTCTGGACACCTGACATCCCCCTAAGCAGCTATGTGAAAGGCATCTACTCTTTTGGCT
TGATGGAAACCAACTTCTACGACCAGGCAGAAAACTCGCCAAAGAGGCTTTATCTATTAACCCGACAGACGCAT
GGTCGGTGCACACCGTCGCTCACATCCACGAGATGAAAGCAGAGATCAAGGATGGGTGGAATTCATGCAGCACT
CAGAGACCTCTGGAAGGACTCTGATATGTTGGCTTGTCTATAACTATTGGCACTGGGCTTTATATCTGATTGAGA
AGGGCGAATATGAGGCCGCGCTGACCATCTACGATACCCACATCCTTCCCAGCCTGCAGGCCAACGATGCAATGC
TGGACGTGGTGGACAGCTGCTCCATGCTCTACCGCCTGCAGATGGAAGGAGTGTCTGTGGGCCACGGTGGCAGGA
TGCTCTGCCTGTGGCCCCGAAGCACAGCCGAGACCACATCCTGCTGTTCAATGACGCACACTTCTTCGATGGCATC
CCTGGGTGCACACGACCCCCAGACCACACAGGAGCTGCTGACCACCTGCGGGACGCCAGCGAATCCCCAGGGGA
GAACTGCCAGCACCTCCTGGCCCCGAGACGTGGGGCTGCCCTGTGCCAGGCCCTGGTGGAGGCTGAGGACGGGAA
CCCTGACCGCGTCCCTGGAGCTGCTCCTGCCCATCCGCTACCGGATCGTCCAGCTCGGTGGGAGCAATGCCAGAG
AGACGTCTTCAACCAGCTGCTGATTCACGCGGCCTTAAACTGCACCTCCAGCGTCCATAAGAACGTAGCCCGGAG
CCTTCTGATGGAGCGTGATGCCTTGAAGCCCCAATCGCCCCCTGACCGAGCGGCTCATCCGCAAGGCAGCTACCGT
CCACCTCATGCAGTGAGCCAGCCTGGCCGCTCCACCCTGCAGAACCTCAGTGGTGGCGTCACTGCGTCCAGTCAG
CTGCTCCACCGGGTTAGGGTCAGGAGACGGCCAGAGCCTGTTTGTAGGGCTGTTAGAGGGTGATCTTCAGTTTT
ACAGGAAGTGGGTACCGGGTTAATTTTAAATGTGATTCCGAATCTCCTTTCAGTCCTCGAGAAGGGCCAATGAGC
ATTTTTCAGCAGTCACAGCCAGTGTGAGTGCTGCTCTTTCCACCTGCCTTGCAAATCTGTTTCCCAGGGGAATG
TGTCTACTGCCTGGTGGTTCAAAGGTTGGAAGGCAGTGCAGAGGTGGGGGCTGATTCTGCTGGGACAGGTCTTCC
AGAGGCAGCCTCCCCCCTGCTGTCCCCGTCCCCACCAGGCTGCCCTTGGGATGGACCTTTTCATTCTTTTCT
TTATATTCTAGACAGTCTCTGTTGTCTCATTGTGTTGCTGTCCATTTTTCAGGTGAGGGTACCGGGGTAGGGGA
GTGGCCTGCCCAGGGTCACACTATGAGAGGCCCCACCTGCTGCCTTTGGACGCAGCCCCCTGCTGCTGCATCCA
CCACCCTTCTTACAGATCAGCGCGCACATGGGGTCTTCTGCTGTCTCTGGGGCGAGTCTTGGAGCCCCCTGGGG
GGCTCTGTTGGTGTGATTGACCCGTTTCTCTTTTAAACTGCACATCATAACAGGGCTTCATGTGAGCATG
ATTTTAATCATAAATGCACTTCTGAGGTGCAAGGATTGAGCTCAGAGCTGCTCTGTTGTGGCAAACCCAAAGTG
CTGTGATGTGTGGCTGTGACAAGCCTGGAGCGGGTCTGTGAGCGCCGCTCTGTCTCCTGCTTCTCACTGAAC
GCCTGCTGAATGTGCCGCTGACTCAGCTGTGCTGCTTTCAGCCCTCCTGTGAGGGGCGGTCCCAGTGCACAGATG
TTTTTCAAGTTCCTCAGTTTGTACTGAAATTAGGGATTATCAGGGCAGGAAGCAGGCAGGCCTCTCAGAAGGGA
GAGGAGGCCTCCAAATCTATTGAGTCCCCACAGTTTGCTCAAGCCCAGGCAAAATTTCTGTGATTAAATGAATTC
ATCAGTTCCTCCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 990

MAAASPLRDCQAWKDARLPLSTTSNEACKLFDATLTQYVKWTNDKSLGGIEGCLSKLKAADPTFVMGHAMATGLV
LIGTGSSVKLDKELDLAVKTMVEISRTQPLTRREQLHVS AVETFANGNFPKACELWEQILQDHPTDMLALKFSD
AYFYLG YQEOMRDSVARIYPFWTPDIPLSSYVKGIYSFGLMETNFYDQAEKLAKEALSINPTDAWSVHTVAHIHE
MKAEIKDGLEFMQHSETLWKDSDMLACHNYWHWALY LIEKGEYEAALTIYDTHILPSLQANDAMLDVVDSCSMY
RLQMEGVSVGHGGRMSCLWPGSTAETTSCCSMTHTS

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FIGURE 991

CGGACGCGTGGGCGAGGTGGCAATTGGGGAAGGGGTTCTGGGCTGCCGAGGCACACAGGCCAGAGCTTCGTGGA
TACCTGCAGGGCCCAAAGGTCCCTCCCTGTTTTGAAGAGTGAGTGATGGCTATGAGGTAGCGGCCAGGCTGATCA
CCCCTGCGTTGGCTGGAGGCAGAATTCTGTAAATCCTCGCCAAGTCTTTCTCCAGGCCACTGGTTAGCTCATCTC
AGCCTCCTCTGGGAGCATCAACACCAACATGGCACAGGGGACTGCAGTGGTGTGCTTTGGACCTGTGTACCCACC
CAAGGCTAAAGGCAGAGCCAGATGGAGAAGGAAAGGCAAGTGACTTGTCCAGAGCCACTCTGTCAAAAGGGGACT
TGAGTCCTCAGGGCTGTTGACTCCAAAGCTGACAAGCAGGAGCCAAGTTACACCCTGTTTAACCCTGCCTTCAAA
GGGACGACTCTGTAAAGATTCTCTGCTACTTATTCAAGTTGACACGATGCCCTTCACACTCCACCTGAGGTCCCGC
CTTCCCTCTGCCATAAGGAGTTTGATTCTACAAAAGAAACCAACATCAGAAATACATCCAGCATGGCTGGAGAG
CTCCGACCAGCCAGCCTGGTGGTCCTGCCCAGGTCCCTTGCTCCAGCTTTTGAAAGATTCTGCCAGGTCAACACT
GGTCCTCTACCCCTGCTGGGCCAGAGTGAGCCAGAAAAGTGGATGCTGCCCCCTCAAGGTGCTATCTCAGAGACC
AGGATGGGCCATCCCCAGTTCTGGAAATACGAGTTCCGGTGCCTGCACCGGTAGCCTGGCTTCGCTGGAGCAGTAC
TCGGAGCAGCTGAAGGACATGGTGGCCTTCTTCTGGGCTGCAGCTTCTCCCTGGAGGAGGCCCTTGAGAGAAAGCG
GGGCTCCCCAGAAGAGACCCAGCAGGTACAGCCAGACAACAGTGCCTTGTGTTACCCATGCTGGCTTCTGCTGC
CCTCTGGTGGTCACGATGAGGCCATTCCCAAGGACAAGCTGGAAGGGCTGGTGCGGGCCTGCTGCTCCCTCGGA
GGTGAGCAGGGGCAACCTGTTACATGGGCGACCCAGAAGCTGTTGGGAATCAAAGAGCTTTCCAAACCTGCCTAC
GGGGATGCCATGGTGTGTCCCCAGGGGAGGTTCCAGTGTTCTGGCCTTCTCCGCTGACCAGTCTCGGAGCTGTC
AGCAGCTGTGAGACCCACTGGCTTTTGCCAGCATCCCAGGCTGCACAGTTATGACTGACCTGAAGGATGCAAAG
GCTCCACCTGGTTGTCTACCCAGAGAGAATTCCAGAGGTCCATCACATTTCCCAAGATCCTCTGCACTACAGC
ATCGCGTCAGTCTCTGCTTCTCAGAAGATCAGAGAAGTAGAGTCTATGATCGGCATAGACCCAGGGAACCGGGGG
ATTGGGCACCTGCTCTGTAAAGATGAGCTGCTGAAGGCCTCTCTCTCGCTGTCCATGCCCGCTCAGTGCTCATC
ACCCTGGGTTCCCCACACATTTCAATCATGAGCCTCCAGAAGAGACAGATGGCCCACCAGGAGCTGTTGCTCTG
GTTGCCCTTCTGCAGGCCTTGAGAGAAGGAGGTCGCCATAATCGTTGACCAGAGAGCCTGGAACCTGCACCAGAAG
ATTGTTGAAGATGCTGTTGAGCAAGGTGTTCTGAAGACGCAGATCCCGATATTAACTTACCAAGGTGGATCAGTG
GAAGCTGCTCAGGCATTCTGTGCAAAAATGGGGACCCGACACCTAGATTTGACCACCTGGTGGCCATAGAG
CGTGCCGGAAGAGCTGCTGATGGCAATTACTACAATGCAAGGAAGATGAACATCAAGCACTTGGTTGACCCCAT
GACGATCTTTTTCTTGCTGCGAAGAAGATTCTGGAATCTCATCAACTGGAGTCGGTGATGGAGGCAACGAGCTT
GGGATGGGTAAAGTCAAGGAGGCTGTGAGGAGGCACATACGGCACGGGGATGTCATCGCCTGCGACGTGGAGGCT
GACTTTGCCGTCATTGCTGGTGTCTTAAGTGGGGAGGCTATGCCCTGGCCTGCGCACTCTACATCCTGTACTCA
TGTGCTGTCCACAGTCAGTACCTGAGGAAAGCAGTCGGACCTCCAGGGCACCTGGAGATCAGGCCTGGACTCAG
GCCCTCCCGTCGGTCATTAAAGGAAGAAAAATGCTGGGCATCTTGGTGCAGCACAAAGTCCGGAGTGGCGTCTCG
GGCATCGTGGGCATGGAGGTGGATGGGCTGCCCTTCCACAACACCCACGCCGAGATGATCCAGAAGCTGGTGGAC
GTCACCACGGCACAGGTGTAAACCGTCCATGTTCCGTGTGAGCAGAGTCCCTACCAACGGGCAGGTCTGCATCCGG
GGAGAATGCAGCTGCTTCTGGCGACAATCCTGCTAGTAAACACTGGTCTTCCGGTGAGCAACGAACACTCGCCTGG
CCTGGGAAACTGCATGCCCCTTTCTGGGAGGGGTTAGTGCAGGTGCCGTGGACAAAGGACAACATTTCTCTGGG
GCTTTTTAACTTTTATTCTTAAGACTCTAAAGGCGTTGATTTCAACCCTCCTTCACTCTGGCTTCTTCAGGCAAC
CCACGTGGTCTCCTGTGAGAATCTTCTCGACAGTTACTTATGGGGACACTTGTGAACAATTAAGTCCAGGCAGA
GCATGAGAACAAACATTCCCAGGCCATGTAGGATAGGATACTCCAGACTCCAGTCATCTCCCCCATCCATGGTT
TCTGTTACTCATGGTTTCAGTTACTCATAGCCAAGTGCAGACCGAAAATACTAAATGAAAATTTTCAGAAATAAA
CAACTCTTAAGTTTTAAAAA

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FIGURE 992

MPFTLHLRSRLPSAIRSLILQKKPNIRNTSSMAGELRPASLVVLPRSLAPAFERFCQVNTGPLPLLQSEPEKWM
LPPQGAISETRMGHPQFWKYEFGACTGSLASLEQYSEQLKDMVAFFLGCSFSLEEALAKAGLPRRDPAGHSQTTV
PCVTHAGFCCPLVVTMRPIPKDKLEGLVRACCSLGGEQGQPVHMGDPPELLGIKELSKPAYGDAMVCPPEVPVFW
PSPLTSLGAVSSCETPLAFASIPGCTVMTDLKDAKAPPGCLTPERIPEVHHISQDPLHYSIASVSASQKIRELES
MIGIDPGNRGIGHLLCKDELLKASLSLSHARSVLITTFPTFNHEPPEETDGPPGAVALVAFLQALEKEVAIIV
DQRAWNLHQKIVEDAVEQGVLKTQIPILTYQGSVEAAQAFCKNGDPQTPRFDHLVAIERAGRAADGNYYNARK
MNIKHLVDPIDDLFLAAKKIPGISSTGVGDGGNELGMGKVKEAVRRHIRHGDVIACDVEADFAVIAGVSNWGGYA
LACALYILYSCAVHSQYLRKAVGPSRAPGDQAWTQALPSVIKEEKMLGILVQHKVRSGVSGIVGMEVDGLPFHNT
HAEMIQKLVDVTTAQV

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FIGURE 993

GGGCAAACCCTTTGAAAAATATTCTAAATGAAAATGACATAGTATTTCATAGTGGAAAAAGTGCCTTTAGAAAAGG
AAGAAACAAGTCATATTGAAGAACTTCAATCTGAAGAACTGCCATATCTGATTTCTCTACTGGCGAAAAATGTTG
GACCACCTTGCTTTACCAGTTGGGAAGGCAAGGCAGTTAATTGGACTTTACACCATGGCTCACAAATCCTAATATGA
CCCATTGGAAGATTAATCTGCCTGTTACTGCCCTTCCCCCCTTTGGGTAAAGATGTGACAGTTTCAGATCCTGAAG
GTACTTGTGGCTAGGAGCTGAGCTTATCACAACAAACAACAGCATTACAGGAATTGTCTTATATGTGGTCAGTT
GTAAAGCTGATAAAAAATTATTCTGTAAATCTTGAAAACCTAAAAAATTTACACAAGAAAAGACATCACTTGTCTA
CTGTAAACATCCAAAGGCTTTGCCAGTATGAGCTCTTTAAGTCCTCTGCCTTGGATGATACAATCACAGCATCAC
AAACTGCGATCGCTTTGGATATTTCTGGAGTCTGTGGATGAGATTCTTCAAATCCCTCCACTCTCTTCAACTG
CAATCTGAATATTAAAGTGAATCAGGAGAGCCCAGAGGTCTTTGAATCATCTCTACAGAGAAGTGAATTTCT
TCTTGTTTTGGCTGATGGTTTGGAGACTGGTGTCACTGAATGGCTCGAGCCCCTGGAAGCAAAATCTGCTGTTGA
ACTTGTTCAGGAATTTCTGAATGACTTAAATAAGCTGGATGGATTGGTGATTCTACAAAAAAGACACTGAGGT
TGAGACCTTGAAGCATGACACTGCTGCAGTCGATCGTTCCGTCAAGCGTCTTTTCAAAGTTCGGAGTGATCTTGA
TTTTGCTGAGCAACTGTGGTGCAAAATGAGCAGTAGTGTGATTTTCATACCAAGACTAGGTGAAGTGTTTCACATT
GATCATCCAGAGTCTACAACGTGGTGATATACAGCCATGGCTCCATAGTGGAAGTAACAGTTTACTAAGTAAGCT
CATTCATCAGTCTTATCATGGAACCATGGACACAGTTTCTCTCAGTGGGACTATTCCAGTTCAAATGCTTTTGG
AATTGGTTTGGACAACTAAAGAAAGATTATATCAGTTTTTTTCATAGGTCAGGAACCTGCATCTTGAATCATT
GGAATACTTCATTGCTCCATCAGTAGATATACAAGAACAGGTTTATCGTGTCCAAAACTCCACCATATTCTAGA
AATATTAGTCAGTTGCATGCCTTTTATTAAATCTCAACATGAACCTCCTCTTTTCTTAAACACAGATCTGCATAAA
GTATTACAAACAAAAATCCTCTTGATGAGCAACACATTTTTTCAGCTGCCAGTCAGACCAACTGCTGTAAAGAACTT
ATATCAAAGTGAGAAGCCACAGAAATGGAGAGTGGAATATATAGTGGTCAAAAGAAGATTAAGACAGTTTGGCA
ACTGAGTGACAGCTCACCCATAGGCCATCTGAATTTTACAAACCTGATTTTTCGGAATTAACACTAAGCGGTAG
CCTGGAAGAAAGGATATTCTTTACTAACATGGTTACCTGCAGCCAGGTGCATTTCAGTGAAGTGTGCTGATGAA
GTCTCTATAAGCACAAAGCC

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FIGURE 994

MAHNPNMTHLKINLPVTALPPLWVRCDSSDPEGTCWLGAELITTNNSITGIVLYVVSCKADKNYSVNLENLKNLH
KKRHHLSTVTSKGFAQYELFKSSALDDTITASQTAIALDISWSPVDEILQIPPLSSTAI

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FIGURE 995

GTTTCGGAGCGGGCGAGCGGAGTTAGCAGGGCTTTACTGCAGAGCGCGCCGGGCACTCCAGCGACCGTG GGGGATCA
GCGTAGGTGAGCTGTGGCCTTTTGGCAGGTGCTGCAGCCATAGCTACGTGCGTTTCGCTACGAGGATTGAGCGTCT
CCACCCAGTAAGTGGGCAAGAGGCGGCAGGAAGTGGGTACGCAGGGGCGCAAGGCGCACAGCCTCTAGACGACTC
GCTTTCCCTCCGGCCAACCTCTGAAGCCGCGTCCCTACTTTGACAGCTGCAGGGCCGCGGCCCTGGTCTTCTGTGCT
TCACCATCTACATAATGAATCCCAGTATGAAGCAGAAACAAGAAGAAATCAAAGAGAATATAAAGAATAGTTCTG
TCCAAGAAGAACTCTGAAGATGATTTCAGCCTTCTGCATCTGGATCTCTTGTGGAAGAGAAAAATGAGCTGTCCG
CAGGCTTGTCCAAAAGGAAACATCGGAATGACCACTTAACATCTACAACCTCCAGCCCTGGGGTTATTGTCCAG
AATCTAGTGAAAATAAAAAATCTTGGAGGAGTCACCCAGGAGTCATTTGATCTTATGATTAAAGAAAAATCCATCCT
CTCAGTATTGGAAGGAAGTGGCAGAAAAACGGAGAAAGGCGCTGTATGAAGCACTTAAGGAAAAATGAGAACTTC
ATAAAGAAATTGAACAAAAGGACAATGAAATTGCCCGCCTGAAAAAGGAGAATAAAGAACTGGCAGAAGTAGCAG
AACATGTACAGTATATGGCAGAGCTAATAGAGAGACTGAATGGTGAACCTCTGGATAATTTGAATCACTGGATA
ATCAGGAATTTGATTCTGAAGAAGAACTGTTGAGGATTCTCTAGTGAAGACTCAGAAATTGGCACGTGTGCTG
AAGGAACTGTATCTTCTCTACGGATGCAAAGCCATGTATATGAATGCATTAATATTTGACTGTTGAGAATTTT
ACTGCCGAAGTTTACCTCCACTAGTTCTTTGTAGCAGAGTACATAACTACATAATGCCAACTCTGGAATCAAATT
TCCTTGTTTGAATCCTGGGACCCTATTGCATTAAAGTACAAATACTATGTATTTTAAATCTATGATGGTTTATGT
GAATAGGATTTTCTCAGTTGTCAGCCATGACTTATGTTTATTACTAAATAAACTTCAAACCTCCTGTGGAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 996

MNPSMKQKQEEIKENIKNSSVPRRTLKMIQPSASGSLVGRENELSAGLSKRKHRNDHLTSTTSSPGVIVPESSEN
KNLGGVTQESFDLMIKENPSSQYWKEVAEKRRKALYEALKENEKLHKEIEQKDNEIARLKKENKELAEVAEHVQY
MAELIERLNGEPLDNFESLDNQEFDSEETVEDSLVEDSEIGTCAEGTVSSSTDAPCI

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FIGURE 997

ACGAGGGGAGCTCCGGCTGCGTCTTCCCGCAGCGCTACCCGCCATGCGCCTGCCGCGCCGGGCCGCGCTGGGGCT
CCTGCCGCTTCTGCTGCTGCTGCCGCCCGCGCCGAGGCCGCCAAGAAGCCGACGCCCTGCCACCGGTGCCGGGG
GCTGGTGGACAAGTTTAAACCAGGGGATGGTGGACACCGCAAAGAAGAAGCTTTGGCGGCGGGAAACACGGCTTGGGA
GGAAAAGACGCTGTCCAAGTACGAGTCCAGCGAGATTGCGCTGCTGGAGATCCTGGAGGGGCTGTGCGAGAGCAG
CGACTTCGAATGCAATCAGATGCTAGAGGCGCAGGAGGAGCACCTGGAGGCCTGGTGGCTGCAGCTGAAGAGCGA
ATATCCTGACTTATTCGAGTGGTTTTGTGTGAAGACACTGAAAGTGTGCTGCTCTCCAGGAACCTACGGTCCCGA
CTGTCTCGCATGCCAGGGCGGATCCCAGAGGCCCTGCAGCGGGAATGGCCACTGCAGCGGAGATGGGAGCAGACA
GGGCGACGGGTCCTGCCGGTGCCACATGGGGTACCAGGGCCCGCTGTGCACTGACTGCATGGACGGCTACTTCAG
CTCGCTCCGGAACGAGACCCACAGCATCTGCACAGCCTGTGACGAGTCCTGCAAGACGTGCTCGGGCCTGACCAA
CAGAGACTGCGGCGAGTGTGAAGTGGGCTGGGTGCTGGACGAGGGCGCCTGTGTGGATGTGGACGAGTGTGCGGC
CGAGCCGCTCCCTGCAGCGCTGCGCAGTTCTGTAAGAACGCCAACGGCTCCTACACGTGCCAAGATGTGGACGA
GTGCTCACTAGCAGAAAAAACCTGTGTGAGGAAAAACGAAAATGCTACAATACTCCAGGGAGCTACGTCTGTGT
GTGTCCTGACGGCTTCGAAGAAACGGAAGATGCCTGTGTGCCGCCGCGCAGAGGCTGAAGCCACAGAAGGAGAAAG
CCCGACACAGCTGCCCTCCCGCGAAGACCTGTAATGTGCCGGACTTACCCTTTAAATTATTCAGAAGGATGTCCC
GTGGAAAATGTGGCCCTGAGGATGCCGTCTCCTGCAGTGGACAGCGGCGGGGAGAGGCTGCCTGCTCTCTAACGG
TTGATTCTCATTGTCCCTTAAACAGCTGCATTTCTTGTTGTTCTTAAACAGACTTGTATATTTTGATACAGTT
CTTTGTAATAAAATTGACCATTGTAGGTAATCAGGAAAAAAAAAAAAAAAAAAAAA

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FIGURE 998

MRLPRRAALGLLPLLLLLPPAPEAAKKPTPCHRCRGLVDKFNQGMVDTAKKNFGGGNTAWEEKTL SKYESSEIRL
LEILEGLCESSDFECNQMLEAQEEHLEAWWLQLKSEYPDLFEWFCVKTLKVCCSPGTYPDCIACQGGSGRPCSG
NGHCSGDGSRQGDGSCRCHMGYQGPLCTDCMDGYFSSLRNETHS ICTACDESCKTC SGLTNRDCGECEVGWVLDE
GACVDVDECAAEPFPCSAAQFCKNANGSYTCEDVDECSLAEKTCVRKNENCYNTPGSYVCVCPDGFEE TEDACVP
PAEAEATEGESPTQLPSREDL

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FIGURE 999

[illegible]

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FIGURE 1000

MPLDPYHSVTWGHAQGSHHFVFGELRVRP ILES LRDEPD DP RP SREGPAGRVGALARDGPEPCDAASPPGGASC
APELAR PREDKSAQQAKLEGGTRLCCRCPEESRLVPGGAVSPGDHVLEVSGTRGTCGCRPRRHAGPELAHS

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FIGURE 1001

CGCTGTTGTTAGTCACCGCGGAGCCGCCGAAACCTGCAGGAGTCTACTATGCAACTGCATACTGGATGCCTGCTG
AAAAGACAGTACAAGTCAAAAATGTAATGGACAAGAAATGGGGACGCCTATGGCTTTTACAATAACTCTGTGAAAA
CCACAGGCTGGGGCATCCTGGAGATCAGAGCTGGCTATGGCTCTCAAACCCTGAGCAATGAGATCATCATGTTTG
TGGCTGGCTTTTGGAGGGTTACCTCACTGCCCCACACATGAATGACCACTACACAAACCTCTACCCACAGCTGA
TCACGAAACCTTCCATCATGGATAAAGTGCAGGATTTTATGGAGAAGCAAGATAAGTGGACCCGGAAAAATATCA
AAGAATACAAGACTGATTCATTTTGGAGACATACAGGCTATGTGATGGCACAATAGATGGCCTCTATGTAGGAG
CAAAGAAGAGGGCTATATTAGAAGGGACAAAGCCAATGACCCTGTTCCAGATTCACTTCCTGAATAGTGTGGAG
ATCTATTGGATCTGATTCCCTCACTCTCTCCACAAAAAACGGCAGCCTAAAGGTTTTTAAGAGATGGGACATGG
GACATTGCTCCGCTCTTATCAAGGTTCTTCTGGATTTGAGAACGTCCTTTTTTGCTCACTCAAGCTGGTACACGT
ATGCAGCCATGCTCAGGATATATAAACACTGGGACTTCAACATCATAGATAAAGATACCAGCAGTAGTCGCCTCT
CTTTCAGCAGTTACCCAGGGTTTTTGGAGTCTCTGGATGATTTTTACATTCTTAGCAGTGGATTGATATTGCTGC
AGACCACAAACAGTGTGTTTAATAAAACCTGCTAAAGCAGGTAATACCCGAGACTCTCTGTCTGGCAAAGAG
TCCGTGTGGCCAATATGATGGCAGATAGTGGCAAGAGGTGGGCAGACATCTTTTCAAATAACAACCTCTGGCACCT
ATAACAATCAATACATGGTTCTGGACCTGAAGAAAGTAAAGCTGAACCACAGTCTTGACAAAGGCACTCTGTACA
TTGTGGAGCAAATTCCTACATATGTAGAATATTCTGAACAAACTGATGTTCTACGGAAAGGATATTGGCCCTCCT
ACAATGTTCCTTTCCATGAAAAAATCTACAACCTGGAGTGGCTATCCACTGTTAGTTCAGAAGCTGGGCTTGGACT
ACTCTTATGATTTAGCTCCACGAGCCAAAATTTTCCGGCGTGACCAAGGGAAAGTGACTGATACGGCATCCATGA
AATATATCATGCGATACAACAATTATAAGAAGGATCCTTACAGTAGAGGTGACCCCTGTAATACCATCTGCTGCC
GTGAGGACCTGAACTCACCTAACCCAAGTCCTGGAGGTTGTTATGACACAAAGGTGGCAGATATCTACCTAGCAT
CTCAGTACACATCCTATGCCATAAGTGGTCCACAGTACAAGGTGGCCTCCCTGTTTTTCGCTGGGACCGTTTCA
ACAAAACCTCTACATCAGGGCATGCCAGAGGTCTACAACCTTTGATTTTATTACCATGAAACCAATTTTGAACTTG
ATATAAAATGAAGGAGGGAGATGACGGACTAGAAGACTGTAAATAAGATACCAAAGGCACTATTTTAGCTATGTT
TTTCCCATCAGAATTATGCAATAAAATATATTAATTTGTCAAAAAAAAAAAAAAAAAA

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FIGURE 1002

MPAEKTVQVKNVMDKNGDAYGFYNNSVKTGTGWGILEIRAGYGSQTLSNEIIMFVAGFLEGYLTAPHMNDHYTNLY
PQLITKPSIMDKVQDFMEKQDKWTRKNIKEYKTDSEWRHTGYVMAQIDGLYVGAKKRAILEGTPMTLFIQFLN
SVGDLLDLIPSLSPKNGSLKVFKRWDMGHCSALIKVLPGFENVLFAHSSWYTYAAMLRIYKHWDENIIDKDTSS
SRLSFSSYPGFLESLLDFYILSSGLILLQTNSVFNKTLKQVIPETLLSWQVRVANMMADSGKRWADIFSKYN
SGTYNNQYMLDLKKVKNHSLDKGTLYIVEQIPTVEYSEQTDVLRKGYWPSYNVFFHEKIYNWSGYPLLQKL
GLDYSYDLAPRAKIFRRDQGVTDATSMKYIMRYNNYKKDPYSRGDPCNTICCREDLNSPNPSPGGCYDTKVADI
YLAQYTSYASGPTVQGLPVFRWDRFNKTLHQGMPEVYNFDFITMKPILKLDIK

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FIGURE 1003

CGGAAGCAGGAAGTGAGTTTGCGAACGGAGCAGCTGCTGCAGGGGCCCATGGCGGACACCCAGTACATCCTGCCCCA
ATGACATCGGCGTGTCTAGCCTGGACTGCCGTGAGGCCTTCCGCCTGCTGTCACCCACAGAGCGCCTCTATGCCT
ACCACCTGTCCCGTGCCGCCTGGTACGGAGGCCTGGCTGTGCTGCTTCAGACCTCCCCTGAGGCCCCCTACATCT
ATGCTCTGCTCAGCCGCCTCTTCCGCGCCAGGACCCCGACCAGCTGCGCCAACATGCCCTGGCTGAAGGCCCTTA
CCGAGGAGGAGTATCAGGCGTTCTTGGTCTATGCCGCGGGTGTCTTACTCCAACATGGGCAACTACAAGTCCTTTG
GTGACACCAAGTTTGTTCCTCAACTTGCCCAAGGAAAAGCTGGAACGGGTGATCCTAGGGAGTGAGGCTGCTCAGC
AGCACCCAGAAGAAGTCAGGGGCCTCTGGCAGACCTGCGGGGAGCTTATGTTCTCTCTGGAGCCAAGGCTTCGAC
ACCTCGGACTGGGGAAGGAGGGAATCACCACCTATTTCTCTGGGAATTGTACCATGGAAGATGCCAAATTGGCCC
AGGACTTTCTGGACTCACAGAACCTCAGTGCCTACAACACCCGGCTCTTCAAAGAGGTGATGGAGAAGGGAAGC
CCTACTACGAGGTGCGGCTGGCTTCTGTGCTTGGCTCAGAGCCTTCCCTGGACTCTGAGGTGACTTCCAAGCTGA
AGAGCTATGAATTCGGGGAAGCCCTTTCCAGGTGACCCGGGGGAGTACGCGCCCATCTCCAGAAGGTGGTG
AGCAGCTGGAGAAAAGCCAAGGCCTATGCAGCCAACAGCCACCAGGGGCAGATGCTGGCCCAGTATATAGAGAGCT
TCACCCAGGGCTCCATCGAGGGCCACAAGAGGGGCTCCCGCTTCTGGATCCAGGACAAAGGCCCCATCGTGAGGA
GTTACATCGGGTTCATCGAGAGCTACCGCGACCCCTTTGGTTCCCGAGGAGAATTTGAAGGTTTCGTAGCTGTGG
TGAACAAGGCCATGAGTGCCAAGTTTGAGCGGCTGGTGGCGAGCGCAGAGCAGCTGCTGAAGGAGCTGCCCTGGC
CCCCAACCTTTGAGAAGGACAAGTTCCTCACCCCTGACTTCACCTCCCTGGATGTTCTCACCTTCGCTGGCTCCG
GCATCCCTGCCGGCATCAACATCCCCAACTACGATGATCTGAGGCAGACGGAAGGCTTTAAGAACGTGTCTGCTGG
GGAATGTGCTGGCTGTGGCCTACGCCACGCAGCGGGAGAAGCTTACCTTTCTGGAGGAGGATGACAAGGACCTGT
ACATCCTCTGGAAGGGGGCCCTCCTTCGATGTGCAGGTGGGCCTGCACGAGCTGCTGGGCCATGGCAGTGGCAAGC
TCTTCGTACAGGACGAAAAAGGAGCATTCAACTTTGACCAGGAAACAGTGATCAACCCAGAGACGGGCGAGCAGA
TTCAGAGCTGGTATCGGAGCGGGGAGACCTGGGATAGCAAGTTCAGCACCATCGCCTCCAGCTACGAAGAGTGCC
GGGCTGAGAGCGTGGGTCTCTACCTCTGTCTCCACCCGCAAGTGCTGGAGATCTTTGGCTTTGAGGGGGCTGATG
CGGAGGACGTGATCTACGTGAAGTGGCTCAACATGGTTCGGGCCGGGCTGCTCGCTCTGGAGTTCTACACACCTG
AGGCCTTCAACTGGCGACAGGCCCATATGCAGGCCCCGTTTGTGATCCTGAGAGTCTTGCTGGAGGCTGGCGAGG
GACTCGTTACCATCACTCCCACACAGGCTCCGATGGGCGCCAGATGCCCGGGTCCGCCTCGACCGCAGCAAGA
TCCGGTCTGTGGGCAAGCCTGCTCTAGAGCGCTTCTGCGGAGACTTCAGGTGCTGAAGTCCACAGGGGATGTGG
CCGGAGGGCGGGCCCTGTACGAGGGGTATGCAACGGTCACTGATGCGCCCCCGAGTGCTTCTCACCCCTCAGGG
ACACGGTGCTGCTGCGTAAGGAATCTCGGAAGCTCATTGTTTACGCCAACACTCGCCTTGAAGGCTCAGACGTGC
AGCTTCTGGAATACGAGGCGTCAGCTGCTGGCCTCATCCGATCCTTCTCTGAGCGTTTCCAGAGGATGGACCCG
AGTTGGAGGAGATCCTCACACAGCTGGCCACAGCCGATGCCCGATTCTGGAAGGGCCCCAGTGAGGCCCCATCTG
GCCAAGCTTGAAGGAAGATGTGTGGCCTTGCCCCCAATTCCATCAGACCAAGGCTGCAAGTGGCCCTCCATTTCGTG
TGTGTATTTAGGGGCTGGGGAGGGGGAGGGGCGAGGAGCTTGGACCTTGGTACTACCTCAGCTGAGGGTGGTGACA
CAACCCCTTCCATTTGTCTAGCACTTTCCAGCCTGCCAATTGCTTCCCTCTGTGATCTCATTTTCATCTGCACTGC
CATACGTGGAGTGAGCAAGACAGGGCTTACCATCCTGTCTACCAGATGAGGAAATGGCAGTTCTGAGAAGTCACT
GGTCTAGATCCCGCAGGTGGCACGTGACAGCTAGGGTTCAAAACGTTCTCACCAATCCAATGCTCCTCACATAT
TAATTTTATAACCAGACAAATAAATATTAGAGACAACCAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1004

MADTQYILPNDIGVSSLDCREAFRLLSPTERLYAYHLSRAAWYGGGLAVLLQTSPEAPYIYALLSRLFRAQDPDQL
RQHALAEGLTEEEYQAFVLVYAAGVYSNMGNYSFGDTKFVPNLPKEKLERVILGSEAAQQHPPEVRGLWQTCGEL
MFSLEPRLRHLGLGKEGITTTFSGNCTMEDAKLAQDFLDSQNL SAYNTRLFKEVDGEGKPYEVR LASVLGSEPS
LDSEVTSKLKSYEFRGSPFQVTRGDYAPILQKVVEQLEKAKAYAANSHQGQMLAQYIESFTQGSIEAHKRGSRFW
IQDKGPIVESYIGFIESYRDPFGSRGEFEGFVAVVNKAMSAKFERLVASAEQLLKELPWPPTFEKDKFLTPDFTS
LDVLTTFAGSGIPAGINIPNYDDL RQTEGFKNVSLGNVLAVAYATQREKLTFL EEDDKDLYILWKGPSFDVQVGLH
ELLGHGSGKLFVQDEKGAFNFDQETVINPETGEQIQSWYRSGETWDSKFSTIASSYEECRAESVGLYLCLHPQVL
EIFGFEGADAEDVIYVNWLN MV RAGLLALEFYTPEAFNWRQAHMQARFVILRVLLEAGEGLVTITPTTGSDGRPD
ARVRLDRSKIRSVGKPALERFLRRLQVLKSTGDVAGGRALYEGYATVTDAPPECFLT LRDTVLLRKESRKLIVQP
NTRLEGSDVQLLEYEASAAGLIRSF SERFPEDGPELEEILTQLATADARFWKGPSEAPSGQA

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FIGURE 1005A

CGATAACGATTTGTGTTGTGAGAGGCGCAAGCTGCGATTTCTGCTGAACTTGGAGGCATTTCTACGACTTTTCTC
TCAGCTGAGGCTTTTCCCTCCGACCCTGATGCTCTTCAATTCGGTGCTCCGCCAGCCCCAGCTTGGCGTCCTGAGA
AATGGATGGTCTTCACAATACCCTCTTCAATCCCTTCTGACTGGTTATCAGTGCAGTGGTAATGATGAACACACT
TCTTATGGAGAAACAGGAGTCCCAGTTCCTCCTTTTGGATGTACCTTCTCTTCTGCTCCCAATATGGAACATGTA
CTAGCAGTTGCCAATGAAGAAGGCTTTGTTTCGATTGTATAACACAGAATCACAAAGTTTCAGAAAGAAGTGCTTC
AAAGAATGGATGGCTCACTGGAATGCCGCTTTTGACCTGGCCTGGGTTCCTGGTGAACCTTAACTTGTTACAGCA
GCAGGTGATCAAAACAGCCAAATTTTGGGACGTAAAAGCTGGTGAGCTGATTGGAACATGCAAAGGTCATCAATGC
AGCCTCAAGTCAGTTGCCCTTTTCTAAGTTTGAGAAAGCTGTATTCTGTACGGGTGGAAGAGATGGCAACATTATG
GTCTGGGATACCAGGTGCAACAAAAAGATGGGTTTTATAGGCAAGTGAATCAAATCAGTGGAGCTCACAATACC
TCAGACAAGCAAAACCCCTTCAAACCCCAAGAAGAAACAGAATTCAAAGGACTTGCTCCTTCTGTGGATTTCCAG
CAAAGTGTTACTGTGGTCTCTTTTCAAGACGAGAATACCTTAGTCTCAGCAGGAGCTGTGGATGGGATAATCAAA
GTATGGGATTTACGTAAGAATTATACTGCTTATCGACAAGAACCCATAGCATCCAAGTCTTTCCCTGTACCCAGGT
AGCAGCACTCGAAAACTTGATATTCAAGTCTGATTTTGGATTCCACTGGCTCTACTTTATTTGCTAATTGCACA
GACGATAACATCTACATGTTTAAATATGACTGGGTTGAAGACTTCTCCAGTGGCTATTTTCAATGGACACCAGAAC
TCTACCTTTTATGTAAAATCCAGCCTTAGTCCAGATGACCAGTTTTTAGTCAGTGGCTCAAGTGATGAAGCTGCC
TACATATGGAAGGTCTCCACACCCTGGCAACCTCCTACTGTGCTCCTGGGTCAATTCTCAAGAGGTCACGTCTGTG
TGCTGGTGTCCATCTGACTTCACAAAGATTGCTACCTGTTCTGATGACAATACACTAAAAATCTGGCGCTTGAAT
AGAGGCTTAGAGGAGAAACCAGGAGGTGATAAACTTCCACGGTGGGTGGGCCTCTCAGAAGAAAAAAGAGTCA
AGACCTGGCCTAGTAACAGTAACGAGTAGCCAGAGTACTCCTGCCAAAGCCCCAGGGTAAAGTGCAATCCATCC
AATCTTCCCCGTCATCCGAGCTTGTGCCCCAAGCTGTGCTGGAGACCTCCCTCTTCTTCAAATACTCCTACG
TTCTCTATTAACCTCTCCTGCCAAGGCCCGGTCTCCCATCAACAGAAGAGGCTCTGTCTCCTCCGTCTCTCCC
AAGCCACCTTCATCTTTCAAGATGTCGATTAGAACTGGGTGACCCGAACACCTTCCTCATCACCACCCATCACT
CCACCTGCTTCGGAGACCAAGATCATGTCTCCGAGAAAAGCCCTTATTCCTGTGAGCCAGAAGTCATCCCAAGCA
GAGGCTTGCTCTGAGTCTAGAAATAGAGTAAAGAGGAGGCTAGACTCAAGCTGTCTGGAGAGTGTGAAACAAAAG
TGTGTGAAGAGTTGTAACGTGTGTGACTGAGCTTGATGGCCAAGTTGAAAATCTTCATTTGGATCTGTGCTGCCTT
GCTGGTAACCAGGAAGACCTTAGTAAGGACTCTCTAGGTCTACCAAATCAAGCAAAATTGAAGGAGCTGGTACC
AGTATCTCAGAGCCTCCGTCTCCTATCAGTCCGTATGCTTCAGAAAAGCTGTGGAACGCTACCTCTTCTTTTGAGA
CCTGTGGAGAAGGCTCTGAAATGGTAGGCAAAGAGAATAGTTCCCCAGAGAATAAAAACTGGTTGTTGGCCATG
GCAGCCAAACGGAAGGCTGAGAATCCATCTCCACGAAGTCCGTCATCCCAGACACCCAATTCCAGGAGACAGAGC
GGAAAGACATTGCCAAGCCCGGTCAACATCACGCCCAGCTCCATGAGGAAAATCTGCACATACTTCCATAGAAAG
TCCCAGGAGGACTTCTGTGGTCTGAACTCAACAGAATTATAGATTCTAATCTGAGTGAGTTACTGAGCTTTG
GTCCACTAAAACAAGCTGAGCTTTGGTCCACTAAAACAAGATGAAAAATACAAGAGTGACTCTATAACTCTGGTC
TTTAAGAAAGCTGCCTTTTCAATTTTATAGACAAAATCTTTTCAACGCTGAAATGTACCTAATCTGGTTCTACTACC
ATAATGTATATGCAGCTTCCCAGGATGAATGCTGTGTTTAAATTTTATAAAGTAAATTTGTCACTCTAGCATT
TGAATGAATAGTCTTCACTTTTTTAAATTATTTCATCTTCTCTATAATAATGACATCCAGTTTATGGAGGCAAAAA
ACAAGTTTCTTGTTATCCTGAAACTTTCTATGCTCAGTGGAAGTATCTGCCAGCCACAGCATGAGGCCTGTGAA
GGCTGACTGAGAAATCCTCTGCTGAAGACCCCTGGTCTGTCTGCTTCCAACATGTATAATTTTATTTGAAATA
CATAATCTTTTCACTATGCTTTTGTGGGGTTTTTTTAAAGTATGTGTAAAATGTGATGCTCAGATAAGTACATT
TATATCAGTTCAGTGTTAAAATGCAGTCTCTTGAGTTAAAGTCATCTTTATTTTAAATGCAGTGATAAATGTCAA
CTCTTCGGAGAACTAGGAGAACAAACAGAAAGCTGTGTTTGTCTTTTTTCTCTCAAATATATCTCCCGTATG
AGATTTCAAGTCCCATGTTTTACCAAGCAATCTGCTATGTCAGCCAACCAACATCACTTTCTACAGGAGGTT
ATGATTTTTGCCATTTACTAGAGGAAGATGTTTTATGAAATCAATTTGGGGTTTGAATTCAGGTGCAGTCATCAG
TTCTTTAGGGGCTGCAATGTTTTAAAAAATAAGTCATCAGATTTTAAAGAAAAAGTGATGATTTCTTATTGAT
ATTTTTGTAACAGAATATAGCTCTTAACTGAAAATCCAGAACCAAGATAAATCTTGAGTTTCTTTTTCATGTA
CATAAAAAGCAATAGCCTTTTAGTATAGATAGCCCTGAGCCAAAAAGTAATAGAATTTTCTCTAGATATTTAATA
CAGAGAGTGTATAGACTGACTCTAAGTTAATAATGTGCAAAATATCTTAAACATCCCTCCCTTATTCAACAATT
ATGTATCAGTGATCTTGAACCATTGTTTTATATTTTTTACCTTTGTAACCTCATGGAAAGAGGCTTTACATACTT
TCTATGTACTATTTACTTAGAAGGGAGCCCCCTTCCAGTCATGAACTTCATTTGTTTTATCCATATCCCTGAGG

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FIGURE 1005B

ACTGTGTAGACTTTATGTCAGTTCTGTGTAGACTTTATGTCAGTTTTTGTTCATTATTTGAAAATCTATTCTGACA
ACTTTTAAATTCCTTTGATCTTATAAGTTAAAGCTGTAACAACTGAAATTGCATGGATCAAGTAAGCATAGTTTT
ATCCAGGGAGAAAAATAAAAGGAAGCCATAGAATTGCTCTGGTCAAAACCAAGCACACCATAGCCTTAACTGAAT
ATTTAGGAAATCTGCCTAATCTGCTTATATTTGGTGTTTGTTTTTGACTGTTGGGCTTTGGGAAGATGTTATTT
ATGACCAATATCTGCCAGTAACGCTGTTTATCTCACTTGCTTTGAAAGCCAATGGGGGAAAAAATCCATGAAAA
AAAAAAGATTGATAAAGTAGATGATTTTGTGTTGTATCCCTACCCATCTCCTGGCAGCCCTACTGAGTGAAATTGG
GATACATTTGGCTGTCAGAAATTATACCGAGTCTACTGGGTATAACATGTCTCACTTGGAAAGCTAGTACTTTTA
AATGGGTGCCAAAGGTCAACTGTAATGAGATAATTATCCCTGCCTGTGTCCATGTCAGACTTTGAGCTGATCCTG
AATAATAAAGCCTTTTACCTT

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FIGURE 1006

MLFNSVLRQPQLGVLRNGWSSQYPLQSLLTIGYQCSGNDEHTSYGETGVFVPPFGCTFSSAPNMEHVLAVANEEGF
VRLYNTEQSFRKKCFKEWMAHWNVFDLAWVPGELKLVTAAGDQTAKFWDVKAGELIGTCKGHQCSLKSVAFSK
FEKAVFCTGGRDGNIMVWDTRCNKKDGFYRQVNQISGAHNTSDKQTPSKPKKKQNSKGLAPSVDFQQSVTVVLFQ
DENTLVSAGAVDGI IKVWDLRKNYTAYRQEP IASKSFLYPGSSSTRKLGYSLLILDSTGSTLFANCTDDNIYMFNM
TGLKTSPVAIFNGHQNSTFYVKSSLSRDDQFLVSGSSDEAAYIWKVSTPWQPPTVLLGHSQEVT SVCWCPSDFTK
IATCSDDNTLKIWRLNRGLEEKPGGDKLSTVGWASQKKKESRPGLVTVTSSQSTPAKAPRVKCNPSNSSPSSAAC
APSCAGDLPLPSNTPTF SIKTSPAKARSPINRRGSVSSVSPKPPSSFKMSIRNWVTRTPSSSPPI TPPASETKIM
SPRKALIPVSQKSSQAEACSESRNRVKRRLDSSCLESVKQKCVKSCNCVTELDGQVENLHLDLCCLAGNQEDLSK
DSLGP TKSSKIEGAGTSISEPPSPISPYASESCGTLPLPLRPCGEGSEMVGKENS SPENKNWLLAMAAKRKAENP
SPRSPSSQTPNSRRQSGKTLPSPTITPSSMRKICTYFHRKSQEDFCGPEHSTEL

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FIGURE 1007

GCACGAGGGAAGAGGGTGATCCGACCCGGGGAAGGTCGCTGGGCAGGGCGAGTTGGGAAAAGCGGCAGCCCCCGCC
GCCCCCGCAGCCCCCTTCTCCTCCTTTCTCCACGTCCTATCTGCCTCTCGCTGGAGGCCAGGCCGTGCAGCATCG
AAGACAGGAGGAAGTGGAGCCTCATTGGCCGGCCCCGGGGCGCCGGCCTCGGGCTTAAATAGGAGCTCCGGGCTCT
GGCTGGGACCCGACCGCTGCCGGCCGCGCTCCCGCTGCTCCTGCCGGGTGATGGAAAACCCAGCCCGGCCGCCG
CCCTGGGCAAGGCCCTCTGCGCTCTCCTCCTGGCCACTCTCGGCGCCGCCGGCCAGCCTCTTGGGGGAGAGTCCA
TCTGTTCCGCCAGAGCCCCGGCCAAATACAGCATCACCTTCACGGGCAAGTGGAGCCAGACGGCCTTCCCCAAGC
AGTACCCCCTGTTCCGCCCCCTGCGCAGTGGTCTTCGCTGCTGGGGGCCGCGCATAGCTCCGACTACAGCATGT
GGAGGAAGAACCAGTACGTACAGTAACGGGCTGCGCGACTTTGCGGAGCGCGCGAGGCCCTGGGCGCTGATGAAGG
AGATCGAGGCGGCGGGGGAGGCGCTGCAGAGCGTGCACGCGGTGTTTTCGGCGCCCGCCGTCCCCAGCGGCACCG
GGCAGACGTGGCGGAGCTGGAGGTGCAGCGCAGGCACTCGCTGGTCTCGTTTGTGGTGCGCATCGTGCCAGCC
CCGACTGGTTCTGTGGGCGTGGACAGCCTGGACCTGTGCGACGGGGACCGTTGGCGGGAAACAGGCGGCGCTGGACC
TGTACCCCTACGACGCCGGGACGGACAGCGGCTTCACCTTCTCCTCCCCCAACTTCGCCACCATCCCGCAGGACA
CGGTGACCGAGATAACGTCCCTCCTCTCCAGCCACCCGGCCAACTCCTTCTACTACCCGCGGCTGAAGGCCCTGC
CTCCCATCGCCAGGGTGACACTGGTGCGGCTGCGACAGAGCCCCAGGGCCTTCATCCCTCCCGCCCCAGTCTTGC
CCAGCAGGGACAATGAGATTGTAGACAGCGCCTCAGTTCCAGAAACGCCGCTGGACTGCGAGGTCTCCCTGTGGT
CGTCTCGGGGACTGTGCGGAGGCCACTGTGGGAGGCTCGGGACCAAGAGCAGGACTCGCTACGTCCGGGTCCAGC
CCGCCAACAACGGGAGCCCCCTGCCCCGAGCTCGAAGAAGAGGCTGAGTGCGTCCCTGATAACTGCGTCTTAAGACC
AGAGCCCCCGCAGCCCCCTGGGGCCCCCGAGCCATGGGGTGTCGGGGGCTCCTGTGCAGGCTCATGCTGCAGGCGG
CCGAGGCACAGGGGGTTTCGCGCTGCTCCTGACCGCGGTGAGGCCGCGCCGACCATCTCTGCACTGAAGGGCCCT
CTGGTGGCCGGCACGGGCATTGGGAAACAGCCTCCTCCTTTCCCAACCTTGCTTCTTAGGGGGCCCCGTGTCCCG
TCTGCTCTCAGCCTCCTCCTCCTGCAGGATAAAGTCATCCCCAAGGCTCCAGCTACTCTAAATTATGGTCTCCTT
ATAAGTTATTGCTGCTCCAGGAGATTGTCCTTCATCGTCCAGGGGCCTGGCTCCACGTGGTTGCAGATACCTCA
GACCTGGTGCTCTAGGCTGTGCTGAGCCCACTCTCCCGAGGGCGCATCCAAGCGGGGGCCACTTGAGAAGTGAAT
AAATGGGGCGGTTTCGGAAGCGTCAGTGTTTCCATGTTATGGATCTCTCTGCGTTTGAATAAAGACTATCTCTGT
TGCTCAC

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FIGURE 1008

MENPSPAAALGKALCALLLATLGAAGQPLGGESIC SARAPAKYSITFTGKWSQTAFPKQYPLFRPPAQWSSLLGA
AHSSDYSMWRKNQYVSNGLRDFAERGEAWALMKEIEAAGEALQSVHAVFSAPAVPSGTGQTSAELEVQRRHSLVS
FVVRIVPSPDWFGVDSLDCGDRWREQAALDLYPYDAGTDSGFTFSSPNFATIPQDTVTEITSSSPSHPANSE
YYPRLKALPPIARVTILVRLRQSPRAFIPPAPVLP SRDNEIVDSASVPETPLDCEVSLWSSWGLCGGHCGR LGTKS
RTRYVRVQPANNGSPCPELEEEAECPDNCV

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FIGURE 1009

GCTGGAGCCGGGCGGGGCGGATGTGGAGCGCGGGCCGCGGCGGGGCTGCCTGGCCGGTGCTGTTGGGGCTGCTGC
TGGCGCTGTTAGTGCCGGGCGGTGGTGCCGCCAAGACCGGTGCGGAGCTCGTGACCTGCGGGTCGGTGCTGAAGC
TGCTCAATACGCACCACCGCGTGCGGCTGCACTCGCACGACATCAAATACGGATCCGGCAGCGGCCAGCAATCGG
TGACCGGCGTAGAGGCGTCGGACGACGCGAATAGCTACTGGCGGATCCGCGGCGGCTCGGAGGGCGGGTGCCCGT
GCGGGTCCCCGGTGCGCTGCGGGCAGGCGGTGAGGCTCACGCATGTGCTTACGGGCAAGAACCTGCACACGCACC
ACTTCCCGTCGCCGCTGTCCAACAACCAGGAGGTGAGTGCCTTTGGGGAAGACGGCGAGGGCGACGACCTGGACC
TATGGACAGTGCGCTGCTCTGGACAGCACTGGGAGCGTGAGGCTGCTGTGCGCTTACAGCATGTGGGCACCTCTG
TGTTCTGTGTCAGTCACGGGTGAGCAGTATGGAAGCCCCATCCGTGGGCAGCATGAGGTCCACGGCATGCCCAGTG
CCAACACGCACAATACGTGGAAGGCCATGGAAGGCATCTTCATCAAGCCTAGTGTGGAGCCCTCTGCAGGTCACG
ATGAACCTCTGAGTGTGTGGATGGATGGGTGGATGGAGGGTGGCAGGTGGGGCGTCTGCAGGGCCACTCTTGGCAG
AGACTTTGGGTTTGTAGGGGTCCTCAAGTGCCTTTGTGATTAAAGAATGTTGGTCTATGA

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FIGURE 1010

MWSAGRGGAAPVLLGLLLALLVPGGGAAGTGAELVTCGSVLKLLNTHHRVRLHSHDIKYGSGSGQQSVTGVEAS
DDANSYWRIRGGSEGGCPCGSPVRCGQAVRLTHVLTGKNLHTHHFPSPLSNNQEVSAFGEDGEGDDLDLWTVRCS
GQHWEREAAVRLQHVGTSVFLSVTGEQYGSPIRGQHEVHGMP SANTHNTWKAMEGIFIKPSVEPSAGHDEL

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FIGURE 1011

ACCTCCGGAAACCGTAGATTCCGGGCGGTCCGGAGCCGCCGGGAGCTGTAGTTCTCCCGCGGCTCAGAGAAGTAGG
CAGAGAGCGGACCTGGCGGCCGGGCAGCATGGCGGGGCTGGAGCTCTTGTCGGACCAGGGCTACCGGGTGGACGG
GCGGCGCGCCGGGGAGCTGCGCAAGATCCAGGCGCGGATGGGCGTGTTTCGCGCAGGCTGACGGCTCGGCCTACAT
TGAGCAGGGCAACACCAAGGCACTGGCTGTGGTCTACGGCCCGCACGAGATCCGGGGCTCCCGGGCTCGAGCCCT
GCCGGACAGGGCCCTAGTGAAGTGTCAATATAGTTCAGCGACCTTCAGCACAGGTGAGCGCAAGCGACGGCCACA
TGGGGACCGTAAGTCCTGTGAGATGGGCCTGCAGCTCCGCCAGACTTTCGAAGCAGCCATCCTCACACAGCTGCA
CCCACGCTCCCAGATTGATATCTATGTGCAGGTGCTACAGGCAGATGGTGGGACCTATGCAGCTTGTGTGAATGC
AGCCACGCTGGCAGTGCTGGATGCCGGGATACCCATGAGAGACTTTGTGTGTGCGTGCTOAGCTGGCTTCGTGGA
CGGCACAGCCCTGGCGGACCTCAGCCATGTGGAGGAAGCAGCTGGTGGCCCCCAGCTGGCCCTGGCCCTGCTGCC
AGCCTCAGGACAGATTGCGCTGCTTGAGATGGATGCCCGGCTGCACGAGGACCACCTGGAGCGGGTGTGGAGGC
TGCTGCCCAGGCTGCCCCGAGATGTGCACACCCTCTTAGATCGAGTGGTCCGGCAGCATGTGCGTGAGGCCTCTAT
CTTGCTGGGGGACTGACCACCCAGCCACCCATGTCCAGAATAAACCTCCTTGCCCACACXXXXXXXXXXXX

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FIGURE 1012

MAGLELLSDQGYRVDGRRAGELRKIQARMGVFAQADGSAYIEQGNTKALAVVYGPHEIRGSRARALPDRA LVNCQ
YSSATFSTGERKRRPHGDRKSCEMGLQLRQTFEAAILTQLHPRSQIDIYVQVLQADGGTYAACVNAATLAVLDAG
IPMRDFVCACSAGFVDGTALADLSHV EEAAGGPQLALALLPASGQIALLEMDARLHEDHLERVLEAAAQAARDVH
TLLDRVVRQHVREASILLGD

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FIGURE 1013

CCGCTTCCCCGTCTTGTACACCCCTAACTCCTGAGGCTCCTCCGAATCACGCGAGTGGAAGCGGAGAAGCTCAAG
TGGCCGCCATGTCAGAGGCTTATTTCCGAGTGGAGTCGGGTGCGCTGGGGCCTGAGGAGAACTTTCTTTCTTTGG
ACGACATCCTGATGTCCCACGAGAAGCTGCCGGTGCGCACGGAGACCGCCATGCCTCGCCTTGGCGCTTTCTTCC
TGGAGCGGAGCGCAGGCGCCGAGACTGACAACGCGGTCCACAGGGTTCCAAGCTTGAACCTACCCTTGTGGCTGG
CAAAAGGACTTTTTGACAACAAGCGACGGATCCTTTCTGTGGAACCCCCAAGATCTACCAAGAGGGTTGGAGGA
CTGTGTTTCACTGCAGATCCCAATGTGGTGGACCTCCACAAAATGGGGCCCCATTTCTACGGGTTTGGCTCCCAGC
TCCTGCATTTTACAGTCCCGAGAATGCAGACATTTCCAGTCTCTGCTGCAGACTTTTATCGGACGTTTTCGCC
GCATCATGGACTCCTCACAGAATGCTTACAACGAAGACACTTCAGCCCTGGTAGCCAGGCTAGACGAGATGGAGA
GGGGCTTATTTCAAACAGGGCAGAAAGGACTGAATGACTTTTCACTGTTGGGAGAAGGGGCAGGCTTCTCAGATCA
CAGCTTCCAACCTCGTTCAGAATTACAAGAAGAGAAAATTTCACTGATATGGAAGACTGAAAGCCGGAAGAACACA
GAATGGCTCCTCACAGACGTATCCCTCCGTGTGCTTGTATAGGAGCTGGTTGACCTTGTACAGAACCAGAATCC
TGTCCCATTTTATGGCTTATTTCCGTGTGGCCATAGAGAATTATAGGAACTGGACATGCTGGAGGATGTGGGTGT
CCCTGGCTCTGTGAGTCTTCCAGGACCGTCCACCCCTGCTGACCCACAGCCAGGCCCTTTAACCCAGAACCCA
TGGCCAAGGAGAAATCAAAGTCCTTCTAAATAAGAATCACTGCCATATAATATATCACAGTAGAGTTGCAACTG
AGATTCCCTTGTGTCTGGGAGTTTGGACAGCTTCAGATGTACAGTTTCACTAGCCACAAAGCACAGGTACAACTG
GGTCATCGCCTGTTCAAAAATGCTCTCTTGATCTTATTTGCCTCATCTTCTCATGGTTGTACAGAGGATAGCA
CCCCACCATGCCAGCCTGACTTGGAGATATCTCCTGCTGCCTGCCTGCAGGGAGTTACCCAGTTTCCAAAAACA
GTCGCCCAGATAAAGGAGGAAAAGGGAAAGGCAGACGAATGGCATGGCTTTTACTAAAGAAAAGATGTTGGCCTC
ATACTCTATACTCAGGGCTTAATGAACTGGAATCTGCATAACTCAGCAGTCAACCCAGAAGGGAAATGTTTAAAC
TGAGCTTGTTATTGCCTCGGAGAGCCTAAGAGCACCCGCACACTTAATTCTACTCCCTGTCTAGAAAAGCTGTCA
GGGAGTCGTTTGGAAATTGCAATGTAGTTATTAAGGGCTGTTAACCAGCCTGCATTACATCTGGAAGTCAGGACTT
GGGTGCTGACTATGAAGGGCCCTGTTTTCAAATCTAACATTGCAAGTGTAATGGGCAAGAAGCCTCCGTTGTG
CTTTTTTTTTCTCTTCAGTAACTTTGTCAACATTATTGCATAGAAGATCCCTGACCATTTACTAGGAACCTGGT
TAAGCAAGCACTAATCTCTTTTCTGGAGATCAAGGATGCAACCTCAGGTTGAGAAAGAAACAGGGTTCCCTGGG
CCCATTAGACTGTTTGCAGGGCATCACTGCTTCCCCCTGACACCTCACAACTAGCAAAAATTGTCTTTGTCTTTG
GAAATTATAGAGGGATTGGGTATCCAGATTGTGCAGATGCAAACTTAGGCTGTCTTGATGCAAACTTAGAACCA
CAGAAATGCTTTTAAATGCCTGTTTTAAGATGGAATTGTTGTTTTTATAATTTGATTTTAGTGCTAAATAAATG
ATTGGCTTTGTACATGAATATGTTCTGTACAAGTGCTTTTCACTAGTACTACAGATAATCAAAGCTATCAGAAT
TGTGTCTTTGATCATATTTGACGGTAATACACAAATAAATCCATGTTTTAGCAAAAAAAAAAAAAAAAAAAAAA
A

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FIGURE 1014

MSEAYFRVESGALGPEENFLSLDDILMSHEKLPVRTETAMPRLGAFFLERSAGAETDNAVPOGSKLELPLWLAKG
LFDNKRRILSVELPKIYQEGWRTVFSADPNVVDLHKMGPHFYGFSGQLLHFDSPENADISQSLQTFIGRFRRIM
DSSQNAYNEDTSALVARLDEMERGLFQTGQKGLNDFQCWEKGQASQITASNLVQNYKKRKFTDMED

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FIGURE 1015

GGCACGAGGGCACC GCAGGAGCAACGGTTGGTCCTGCGGCTGTGATGTCGGTGTGAGGCCCTGGACAAGCTGC
CCGGCCTGAACACGGCCACCATCTTGCTGGTGGGCACGGAGGATGCTCTTCTGCAGCAGCTGGCGGACTCGATGC
TCAAAGAGGACTGCGCCTCCGAGCTGAAGGTCCACTTGGCAAAGTCCCTCCCTTTGCCCTCCAGTGTGAATCGGC
CCCGAATTGACCTGATCGTGTTTGTGGTTAATCTTCACAGCAAATACAGTCTCCAGAACACAGAGGAGTCCCTGC
GCCATGTGGATGCCAGCTTCTTCTTGGGGAAGGTGTGTTTCCCTCGCCACAGGTGCTGGGCGGGAGAGCCACTGCA
GCATTCACCGGCACACCGTGGTGAAGCTGGCCCACACCTATCAAAGCCCCCTGCTCTACTGTGACCTGGAGGTGG
AAGGCTTTAGGGCCACCATGGCGCAGCGCCTGGTGC GCGTGCTGCAGATCTGTGCTGGCCACGTGCCCGGTGTCT
CAGCTCTGAACCTGCTGTCCCTGCTGAGAAGCTCTGAGGGCCCCCTCCCTGGAGGACCTGTGAGGGTGGCTGGCCC
CTGGGCTGCCCCCTTCTCATGGCTTCGTGCTGACTCCATAAACATTCTCTGTTGAGGATGTCCAGTCAGGGCTTGA
CAGGCCCAGGCTCAGCCCGCCGTGGCTGGGAAGGTTCCCTGCAGTGCCAGTGCTGCAGCAGGGAGAGCTGGGCAG
AAGCAGCGAGGGGGCCCAGCTGGCGAGACTGTAGCCCCCTCCCACTCCACACTCACTCTTGCAGAGCCTGTGTC
TTAAGCAGCTGGCGTGTACATCTCCATTTAAGGTTTCCTTTGAACAAAAGGTCTGTGGCTAAAAAAGTTTAA
AAATCAAAAAAAAAAAAAAAAAA

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FIGURE 1016

MSVLRPLDKLPGLNTATILLVGTE DALLQQLADSM LKEDCASELKVHLAKSLPLPSSVNRPRIDLIVFVNLH SK
YSLQNT EESLRHVDASFFLGKVCFLATGAGRESHCSIHRHTVVKLAHTYQSPLLYCDLEVEGFRATMAQRLVRVL
QICAGHVPGV SALNLLSLLRSSEGPSLEDL

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FIGURE 1017

GGGAGTAGGAGGTGTGACCGGAGGGCGAAATTGGGGCTTCCTCTGCTCTGGTGACCCAGAACCGTCAACTGAAAT
GACCCTGTCTGTGTAGTACTCCGGCAGGATGGGCCTCGGAGCGTAAAGGCGGCAAAAACAAAAATATTAAAAAA
AGGAGAGAGGGACAAAAAAGAAAAACCCGAAAGTTTCAGCTGCATTGCTGCGGAACGTTTTTTAGCCAGAAGGC
GAAAGAAGAAATCGGAAGTGACGTGCGCGGCCAAAACAAGCCCGGGCTTGGAGGCCTGTACTGAAAGCTGGCCTCAG
ATGGGAAGGCCCCGACTCGCTGTCTGCTGTCTGCTCGGTGGTTCGCGAGACCTTGCACTCTCACCGGGTCGGCCTCCAG
CCCCGTGTGCCCGGGATCCGCTCGCCGCGGATGAGCGAGAGTTTTCTTCCTGGGACTTTTTCGGGCACAGCTGGCCGG
TGGCGACAGAACGGACTTTCTTTCTGCAAGAGTCTCCCTCCAGCGGGAGACAGCGGGCTCCTGTCTCGGGACG
CTGGGACACCTGTCTGCTATTTTTTAAATATCCAGATTCCAAGAACACACTGGATACTGCTCTTACAAAACCAAGA
GGAAATCATGAAGAAATGTTTTAGTTATTGAACTACAGTTGAAATCATGGGATACATCAACAAATCTGGATATTG
GAGCCCAGCTTATCGTGGAAGAGTGTCCCAGCACTTATAGCCTAACTGGCATGCCAGACATTAAAAATAGAACATC
CACTGGACCCAAATTCAGAAGAAGGGTCAGCTCAGGGTGTGGCCATGGGAATGAAATTCATATTGCCTAACCGAT
TTGATATGAATGTGTGTTCTCGATTGTGAAGTCCTTAAATGAAGAAGATAGTAAAAATATTCAAGATCAGGTTA
ACTCTGACCTGGAGGTGGCATCTGTCTTATTTAAAGCTGAATGCAATATCCATACATCTCCTTCTCCGGGAATTC
AAGTAAGGCATGTCTACACCCCTCTACAACAAAGCATTCTCACCCATAAAACAGTCAACCACTTTAACCAACA
AACACAGAGGAAATGAGGTCTCTACCACACCTCTGTTAGCAAATCTTTGTCTGTTACCAGTTGGCTGCTCAGG
GAGAGATGCTCTATCTGGCTACTCGTATCGAACAAGAAATGTTATCAATCACACGGATGAAGAAGGATTTACTC
CTCTGATGTGGGCTGCAGCACACGGGCAAATAGCTGTGGTAGAGTTCCTACTTCAGAATGGTGCTGATCCCCAAC
TTTTAGGAAAAGGTGAGAAAGTGCACTGTCGTTGGCCTGTAGTAAAGGCTACACAGATATTGTCAAAATGCTGC
TTGATTGTGGAGTTGATGTAAATGAATATGATTGGAATGGAGGAACACCTCTGCTTTATGCTGTACATGGAAATC
ATGTGAAATGTGTAAAGATGCTCTTAGAAAGTGGGGCTGATCCAACAATTGAACTGACTCTGGATATAATTCTA
TGGATCTAGCTGTAGCCCTAGGCTATAGAAGTGTTCAACAGGTTATTGAGTCACATTTGTTGAAGCTGCTTCAA
ATATCAAGGAGTTAGACACAGTCATCAGAAAATGTCTGCCCTTTTGTCTTACTTCTTGGTCCTTATAAATGATAGTT
TTGTTTACTTATAAATTTTTACCTCAGTTGCAATATTTACTGGTTTTTAGTAGGTTTTAATAAATATTTCTCTGA
GTAATTCAGTGGTTTATAAATAATGTAATACTCTTTTATAACTATGTTTTACTGTATATTTAAAAATTATAAATT
AATGTTTTCGTGGCATGTAAATTTTTATGGTACAGATAGTTATCATCAGTCITTTGTATCAAGTGCTGTAAATTTGA
CATTTTCAGAAATTATTCTACCCTAGTCATCTTCACTCGTGTATTAAGTCATTCACCTTTATATAGGGTTTGCTAT
AAATCCCTAGAAAAAAATTGTTCTTATTGTTGAATTAAAAAGTGCACAGTGTGATTGTTTACAAAATGATATTAT
AAATAAATAAAATACTTCTTCTG

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FIGURE 1018

MDTSTNLDIGAQLIVEECPSTYSLTGMPDIKIEHPLDPNSEEGSAQGVAMGMKFILPNRFDNMVCSRFBVKS LNEE
DSKNIQDQVNSDLEVASVLFKAECNIHTSPSPGIQVRHVYTPSTTKHFSPIKQSTTLTNKHRGNEVSTTPLLANS
LSVHQLAAQGEMLYLATRIEQENVINHTDEEGFTPLMWAAAHGQIAVVEFLLQNGADPQLLGKGRESALSLACSK
GYTDIVKMLLDCGVDVNEYDWNGGTPLLYAVHGNHVKCVKM LLESGADPTIETDSGYNSMDLAVALGYRSVQQVI
ESHLLKLLQNIKE

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FIGURE 1019A

ATCCTTGCCGCCCGCCCCGGCCCCAGCCGCGTCCCGGAGCCGTCGGGCATGAGCCGTGGAAGCAGTGCGCGCAGT
GGCTCATCCATTGCAAGGTGCTGCCCACCAACCACCGGTGACCTGGGACTCGGCTCAGGTGTTGACCTTGCGC
AGACCTCCGCGATGGAGTCTGCTCTGCCAGCTGCTTAACAACCTCCGGGCGCACTCCATCAACCTGAAGGAGA
TCAACCTGAGGCCGCGAGATGTCCAGTTTCTCTGTTTGAAGAACATAAGGACATTTCTCACGGCCTGTTGTGAGA
CGTTTGGAATGAGGAAAAGTGAACTTTTGAGGCATTTGACTTGTTTGATGTTTCGTGACTTTGGAAAGGTTATAG
AAACATTATCACGACTTTCTCGAACACCTATAGCATTGGCCACAGGAATCAGGCCCTTCCCAACAGAAGAAAAGCA
TTAATGATGAAGACATCTACAAAGGCCTTCTGATTAAATAGATGAAACCCCTTGTTGGAAGATGAAGAAGATCTCT
ATGACTGTGTTTATGGGGAAGATGAAGGTGGAGAAGTCTATGAGGACTTAATGAAGGCAGAGGAAGCACATCAGC
CCAAATGTCCAGAAAATGATATACGAAGTTGTTGTCTAGCAGAAATTAAGCAGACAGAAGAAAAATATACAGAAA
CTTTGGAGTCAATAGAAAAGTATTTTCATGGCACCCTAAAAAGATTTCTGACAGCAGCAGAATTTGATTGAGTAT
TCATCAACATTCTGAACTTGTAAAACCTTCATCGGAACCTAATGCAAGAGATTCATGATTCCATTGTAAATAAAA
ATGACCAGAACCTGTACCAAGTTTTTATTAATACTACAAGGAAAGATTGGTTATTTACGGGCAGTACTGCAGTGGAG
TGGAGTCAGCCATCTCTAGTTTAGACTACATTTCTAAGTCAAAAGAAGATGTCAAACCTGAAATTAGAGGAATGTT
CCAAAAGAGCAAATAATGGGAAATTTACTCTTCGAGACTTGCTTGTTGTTCCCTATGCAACGTGTTTTAAAGTACC
ACCTTCTCCTCCAGGAACCTGGTCAAACATACCCTGATCCGACTGAGAAGGCAAATCTGAAACTGGCTCTTGATG
CCATGAAGGACTTGGCACAATATGTGAATGAAGTGAAAAGAGATAATGAGACCTTCGTGAAATTAAACAGTTTC
AGCTATCTATAGAGAATTTGAACCAACCAGTTTGTCTTTTGGACGACCTCAGGGAGATGGTGAAATTCGAATAA
CCACTCTAGACAAGCATAACCAACAAGAAAGGCATATCTTCTTATTTGATTGTCAGTGTATCGTATGTAAGAGAA
AAGGTGATAACTATGAAATGAAGGAAATAATAGATCTTCAGCAGTACAAGATAGCCAATAATCCTACAACCGATA
AAGAAAACAAAAGTGGTCTTATGGCTTCTACCTCATCCATACCCAAGGACAAAATGGGTTAGAATTTTATTGCA
AAACAAAAGATTTAAAGAAGAAATGGCTAGAACAGTTGAAATGGCTTTGTCTAACATAAGACCAGACTATGCAG
ACTCCAATTTCCACGACTTCAAGATGCATACCTTCACTCGAGTCACATCCTGCAAAGTCTGCCAGATGCTCCTGA
GGGGAACATTTTATCAAGGCTATTTATGTTTTAAGTGTGGAGCGAGAGCACACAAAGAATGTTTGGGAAGAGTAG
ACAATTGTGGCAGAGTTAATCTGGTGAACAAGGGACACTCAAACCTACCAGAGAAACGGACCAATGGACTGCGAA
GAACCTCTAAACAGGTGGATCCAGGTTTACCAAAGATGCAGGTCAATTAGGAACCTATTCTGGAACACCACCCCCAG
CTCTGCATGAAGGACCCCTTTACAGCTCCAGGCCGGGGATACCGTTGAACCTTCTGAAAGGAGATGCACACAGTC
TGTTTTGGCAGGGCAGAAATTTAGCATCTGGAGAGGTTGGATTTTTTCCAAGTGATGCAGTCAAGCCTTGCCCAT
GTGTGCCCAAACAGTAGATTATTCTTGCCAACCTGGTATGCTGGAGCAATGGAAAGATTGCAAGCAGAGACCG
AACTTATTAATAGGGTAAATAGTACTTACCTTGTGAGGCACAGGACCAAAGAGTCAGGAGAATATGCAATTAGCA
TTAAGTACAATAATGAAGCAAAGCACATCAAGATTTTAACAAGAGATGGCTTTTTTTCATTGTCAGAAAATAGAA
AATTTAAAGTTTAAATGGAACCTGTGGAGTACTACAAGCATCATTCTCTCAAGGAAGGGTTTCAAGACCTTAGATA
CAACTCTGCAGTTTCCATACAAGGAGCCAGAACATTCAGCTGGACAGAGGGGTAATAGAGCAGGCAACAGCTTGT
TAAGTCCAAAAGTGCTGGGCATTGCCATCGCTCGGTATGACTTCTGTGCAAGAGATATGAGAGAGTTGTCCTTGT
TGAAAGGAGATGTGGTGAAGATTTACACAAAGATGAGTGCAAATGGCTGGTGGAGAGGAGAAGTAAATGGCAGGG
TGGGCTGGTTTTCCATCCACATATGTGGAAGAGGATGAAATAAATTCAAATCCCGTGTTGCACCCTGCACCAAAAAT
TTCAGAGAAGGGATAAATAGAAGCCTGCACAGCATCGTGAATTAAGTGAAGTGTTTAAAAAGCTGCATTTCTGGC
TGTTCAACATCCTCCCTCCTTAGCCCCCTCCTAAGTCTTAATGCTGAGATTTCTAAAGATGCTGGTACTGACAGAT
TAATGGCTTGCTTAGAGCTGTGCAAGAAACAGCCTGCCAGTCTGTCAATTGTCAGGGACCAGGGCAAAACCAAGAG
CTGTTCTTCCCAGAAGAGCCCTGCAAACACATTGGTTCGTGCTTCCCTTTACTTCTTCTGGTCAGATACCATGAA
TGCCAGTCATCAGTAAATCTTAATACACTTTTGCTTTATTCTCACATGCCATTCACCAGATTATTTGATGGTACA
AAGAAGCAGAAGTGTAATTTTCTTTTCCAGCATGACGAAAAATTGGAGTTCTGCCATTTGAGCAGCTTACTGG
AAAGATCCAGCCTTACTTGTCTTAAATTGTCCAACAAGGTGACTCATTGCCCGGCAACACTTTTACCCTCAGAT
GTTACTCATGATATTATAAAATATGAGGCCAGTGCTCAGGTTTGATCATAAGTGAGCTATCCCTGAAGGGTTTT
AATTACTTATTTGGTGTCTGATTATATTGCAAACCTTCTTTATAAAAGGTGAAAAAGCACACAAAAGAGAGGG
TGTCTTCATATTAAACCTTCACAACCTTCATGATTTTCATAGGATTATTTTGGAAATATAGCACTTGACTTTATGA
AAGGATCTGGGCTAGGTATATTAGGGGTAGTTGCCAATAACCTGAAGAAGCTGGCATTGTTTACAGAAACAGATC
AAGGGCTATAATTTATGTCATTTTATAGCAGCAGTATCTATTAATACATGCCTTTTCTCCCATCCACCTCCCC
GCACACACACAAAGATGACCTGGGACATGATTTTTTTTATCCACATTTTCTTGGAGCACAAACACTTGTGTA

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FIGURE 1019B

GGATTTTGAAGGAAAGCACAACTGGGTCCCTTTATTCATTTCTGGGACAGAAAGAGGGTCAGTGGACTTTTGTGG
GCCTCCAGCTTCTCTCAGAGTCTCCCCCTCTGCAGCCCATCCTGGGAGTGTATTAAGTGGAGGGAAGATGGGTCT
TGCAGTACATTTGTTTTGCCAGCCATCACTCTTTTTTGTGAGGAGCCTAAATACATTCTTCCTGGGGTCCAGAG
TCCCCATTCAAGGCAGTCAAGTTAAGACACTAAGTTGGCCCTTTCCTGATGGAAATATTTCCCTCCATAGCAGAAG
TTGTGTTCTGACAAGACTGAGAGAGTTACATGTTGGGAAAAAAGAAGCATTAACTTAGTAGAACTGAACCAGG
AGCATTAAAGTTCTGAAATTTTGAATCATCTCTGAAATGAAGCAGGTGTAGCCTGCCCTCTCATCAATCCGTCTGG
GTGCCAGAACTCAAGGTTCAAGTGGACACATCCCCCTGTTAGAGACCCTCATGGGCTAGGACTTTTCATCTAGGAT
AGATTCAAGACCTTTACCTCAGAATTATGTAACTGTGATTGTGTTTTAGAAAAATTATTATTTGCTAAAACCAT
TTAAGTCTTTGTATATGTGTAAATGATCACAAAAATGTATTTTATAAAATGTTCTGTACAATAAAGTTACACCTC
AAAGTGTACTCTTGGAATGGATTCTTTCCTGTAAAGTCTTATCTGCGACTCTGTCTCGGGAATGTTTTGTCTGTT
GCCGTCAGCCGAACCTTTGTTATGGAGGGAGCAGCCTCACACAAGCAGAAACACTCCTGTGGATGGTATTGTAGCA
TGTATTGTTTTATTTTAGTCAATAGACCCCTCTCCTTATAAATGGTGTTTAGTCTTCCTGTTGCATTTTCATGGGCCT
GGGGGTTTTCTAGCAGAGGATATTGGAGCCCCTTTTTGTGACATTACCAATTACATCTTTGTCCACGTTTAATAC
TTTGTGTTTTGAAAAATTTAAATGCTGCAGATTTGTGTAGAGTTCTAATACCAAAGACAGAAAGTAAATGTTTTCCAT
ATACTTTGTCTTGCCCTGTATGCAGCCCTTGTGTAATATGGTGAATTAGAGTGGTATTTCACTTTGTATTATTTTG
TAAATATGTCAATATAATAAATAGTGACTAAAAAAAAAAAAA

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FIGURE 1020

MEPWKQCAQWLIHCKVLPTNHRVTWDSAQVFDLAQTLRDGVLLCQLLNNLRAHSINLKEINLRPQMSQFLCLKNI
RTFLTACCETFGMRKSELF EAFDLFDVRDFGKVIETLSRLSRTPIALATGIRPFPTEESINDEDIYKGLPDLIDE
TLVEDEEDLYDCVYGEDEGGEVYEDLMKAEAAHQPKCPENDIRSCCLAEIKQTEEKYTETLESIEKYFMAPLKRF
LTAAEFDSVFINIPELVKLHRNLMQEIHDSIVNKNDONLYQVFINYKERLVIYGQYCSGVESAISSLDYISKSKE
DVKLKLEEC SKRANNGKFTLRDLLVPMQVRVLKYHLLQLV KHTTDPTEKANLKLALDAMKDLAQYVNEVKRDN
ETLREIKQFQLSIENLNQPVLLFGRPQGDGEIRITTLDKHTKQERHIFLFDLAVIVCKRKGDNYEMKEIIDLQQY
KIANNPTTDKENKKWSYGFYLIHTQGQNGLEFYCKTKDLKKKWLEQFEMALSNIRPDYADSNFHDFKMHTFTRVT
SCKVCQMLLRGTFYQGYLCFKCGARAHKECLGRVDNCGRVNSGEQGTLLKLPKRTNGLRRTPKQVDPGLPKMQVI
RNYSGTPPPALHEGPPLQLQAGDTVELLKGDHSLFWQGRNLASGEVGFPSDAVKPCPCVFPKPV DYSCQPWYAG
AMERLQAETELINRVNSTYLVRHRTKESGEY AISIKYNNEAKHIKILTRDGFFHIAENRKFKSLMELVEYYKHHS
LKEGFRTLD TTLQFPYKEPEHSAGQQRGNRAGNSLLSPKVLGIAIARYDFCARDMRELSLLKGDVVKIYTKMSANG
WWRGEVNGRVGWFPSTYVEEDE

FIGURE 1021

[illegible]

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FIGURE 1022

MKTS DIKELNIVLPEFEKTHLEHQQRIESKVCKAAIATFYVNVKEQFIKMLKESQMLTNLKRKNAKMISDIEKKR
QRMIEVQDELLRLEPQLKQLQTKYDELKERKSSLRNAAYFLSNLKQLYQDYSQVQAQEPNVKETYDSSSLPALLF
KARTLLGAESHLRNINHQLKLLDQG

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FIGURE 1023

ATGTGGGGGCGCACGGCGCGGGCGGCGCTGCCCGCGGAACTGCGGCGCGGCCGGGAGGCGCTGTTGGTGCTCCTG
GCGCTACTGGCGTTGGCCGGGCTGGGCTCGGTGCTGCGGGCGCAGCGTGGGGCCGGGGCCGGGGCTGCCGAGCCG
GGACCCCCGCGCACCCCGCGCCCCGGGCGGCGCGAGCCGGTCATGCCGCGGCCGCGGTGCCGGCGAACGCGCTG
GGCGCGCGGGGCGAGGCGGTGCGGCTGCAGCTGCAGGGCGAGGAGCTGCGGCTGCAGGAGGAGAGCGTGCGGCTG
CACCAGATTAACATCTACCTCAGCGACCGCATCTCACTGCACCGCCGCTGCCCGTGCGCTGGAACCCGCTGTGC
AAAGAGAAGAAATATGATTATGATAATTTGCCAGGACATCTGTTATCATAGCATTTTATAATGAAGCCTGGTCA
ACTCTCCTTCGGACAGTTTACAGTGTCTTGAGACATCCCCGGATATCCTGCTAGAAGAAGTGATCCTTGTAGAT
GACTACAGTGATAGAGAGCACCTGAAGGAGCGCTTGGCCAAAGAGCTTTCGGGACTGCCCAAGGTGCGCCTGATC
CGCGCCAACAAGAGAGAGGGCCTGGTGCGAGCCCGGTGCTGGGGGCGTCTGCGGCGAGGGGCGATGTTCTGACC
TTCTTGGACTGTCACTGTGAGTGCCACGAAGGGTGGCTGGAGCCGCTGCTGCAGAGGATCCATGAAGAGGAGTCG
GCAGTGGTGTGCCCGGTGATTGATGTGATCGACTGGAACACCTTCGAATACCTGGGGAACCTCCGGGGAGCCCCAG
ATCGGCGGTTTTCGACTGGAGGCTGGTGTTACGTGGCACACAGTTCTTGAGAGGGAGAGGATACGGATGCAATCC
CCCGTCGATGTCATCAGGTCTCCAACAATGGCTGGTGGGCTGTTTGCTGTGAGTAAGAAATATTTTGAATATCTG
GGGTCTTATGATACAGGAATGGAAGTTTGGGGAGGAGAAAACCTCGAATTTTCTTTAGGATCTGGCAGTGTGGT
GGGGTTCTGAAACACACCCATGTTCCCATGTTGGCCATGTTTTCCCAAGCAAGCTCCCTACTCCCGCAACAAG
GCTCTGGCCAACAGTGTTTCGTGAGCTGAAGTATGGATGGATGAATTTAAAGAGCTCTACTACCATCGCAACCCC
CGTGCCCGCTTGGAACCTTTTGGGGATGTGACAGAGAGGAAGCAGCTCCGGGACAAGCTCCAGTGTAAGACTTC
AAGTGGTTCTTGGAGACTGTGTATCCAGAACTGCATGTGCCTGAGGACAGGCCTGGCTTCTTCGGGATGCTCCAG
AACAAAGGACTAACAGACTACTGCTTTGACTATAACCCTCCCGATGAAAACCAGATTGTGGGACACCAGGTCATT
CTGTACCTCTGTATGGGATGGGCCAGAATCAGTTTTTCGAGTACACGTCCAGAAAGAAATACGCTATAACACC
CACCAGCCTGAGGGCTGCATTGCTGTGGAAGCAGGAATGGATACCCTTATCATGCATCTCTGCGAAGAACTGCC
CCAGAGAATCAGAAGTTCATCTTGCAAGGAGGATGGATCTTTATTTACGAACAGTCCAAGAAATGTGTCCAGGCT
GCGAGGAAGGAGTCGAGTGACAGTTTCGTTCCACTCTTACGAGACTGCACCAACTCGGATCATCAGAAATGGTTC
TTCAAAGAGCGCATGTTATTGA

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FIGURE 1024

MWGRTARRRCPRELRRGREALLVLLALLALAGLGSVLRAQRGAGAGAAEPGPPRTFPRPGRREFVMPRPPVPANAL
GARGEAVRLQLQGEELRLQEE SVRLHQINIYLSDRISLHRRLPVRWNPLCKEKKYDYNLPRTSVIIAFYNEAWS
TLLRTVYSVLETS PDILLEEVILVDDYSDREHLKERLANELSGLPKVRLIRANKREGLVRARLLGASAARGDVL
FLDCHCECHEGWLEPLLQRIHEEESAVVCPVIDVIDWNTFEYLGNSGEPQIGGFDWRLVFTWHTVPERERIRMQS
PVDVIRSPTMAGGLFAVSKKYFEYLGSYDTGMEVWGGENLEFSFRIWQCGGVLETHPCSHVGHVFPKQAPYSRNK
ALANSVRAAEVWMDEFKELYHHRNPRARLEPFGDVTERKQLRDKLQCKDFKWFL ETVYPELHVPEDRPGFFGMLQ
NKGLTDYCFDYNPPDENQIVGHQVILYLCHGMGQNQFFEYTSQKEIRYNTHQPEGCIAVEAGMDTLIMHLCEETA
PENQKFILQEDGSLFHEQSKKCVQAARKESSDSFVPLLRDCTNSDHQKWFFKERML

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FIGURE 1025

AATTATATATTTTTACTCTATGTTTCTCTACATGTTTTTTTCTTTCCGTTGCTGGCGGAAGAGGCACGTGCGCTG
CTGAATGGAGCTGGTCGCTGGTTGCTACGAGCAGGTCCTCTTTGGGTTGCTGTACACCCGGAGCCCAAGGCTTG
CGGCGACCACGAGCAATGGACTCTTGTGGCTGACTTCACTCACCATGCTCACACTGCCTCCTTGTGAGCAGTAGC
TGTAATAGTCGTTTTTGTGGTCACTGGGAGCAAAGATGAAACAATTCACATTTATGACATGAAAAAGAAGATTGA
GCATGGGGCTCTAGTGCATCACAGTGGTACAATAACTTGCCTGAAATTCTATGGCAACAGGCATTTAATCAGTGG
AGCGGAAGATGGACTCATCTGTATCTGGGATGCAAAGAAATGGGAATGCCTGAAGTCAATTAAAGCTCACAAAGG
ACAGGTGACCTTCCTTTCTATTACCCATCTGGCAAGTTGGCCCTGTCGGTTGGTACAGATAAAAACCTTTAAGAAC
GTGGAATCTTGTAGAAGGAAGATCAGCATTCTATAAAAAATATAAAACAAAATGCTCACATAGTAGAATGGTCCCC
AAGAGGAGAGCAGTATGTAGTTATCATAACAGAAATAAATAGACATCTATCAGCTTGACACTGCATCCATTAGTGG
CACCATCACAAATGAAAAGAGAATTTCTCTGTAAATTTCTTTTCAGAGTCTGTCTTGCAGTGGCTGGAGATGA
AGAAGTTATAAGGTTTTTTGACTGTGATTCACTAGTGTGCCTCTGCGAATTTAAAGCTCATGAAAACAGGGTAAA
GGACATGTTTCAGTTTTTGAAATTCCAGAGCATCATGTTATTGTTTCAGCATCGAGTGATGGTTTCATCAAAATGTG
GAAGCTTAAGCAGGATAAGAAAGTTCCCCATCTTTACTCTGTGAAATAAACACTAATGCCAGGCTGACGTGTCT
TGGAGTGTGGCTAGACAAAGTGGCAGACATGAAAAGCCTTCCTCCAGCTGCAGAGCCTTCTCCTGTAAGTAAAGA
ACAGTCCAAAATTGGCAAAAAGGAGCCTGGTGACACAGTGCACAAAGAAGAAAAGCGGTCAAAACCTAACACAAA
GAAACGCGGTTTAACAGGTGACAGTAAGAAAGCAACAAAAGAAAGTGGCCTGATATCAACCAAGAAGAGGAAAAT
GGTAGAAATGTTGGAAAAGAAGAGGAAAAAGAAGAAAATAAAAACAATGCAGTGAATCACAGATGTCTCCTGAAA
GAACTCTTTTAGATGAAATCATTCTACTCAAATGTACCTTAATTTTTTTTTTTCCCTGAGTAAAAGCAAGAAATT
TCTTCCTTTGGAAAAATATATATATTAAAAAACCACTTTTAGATGGTTTTTTTTTAAAAAATAAATAAATAAATAA
TAAATTACTTTTGGCAGACAGTGTATGAATTATGTATCATGTTGATATATAATATGTTAATGTGTCATGTA
ATTTTACTTTGTACAAAGCAAATAAAGATCTTCTCAAAAAAAAAAAAAAAAAA

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FIGURE 1026

MELVAGCYEQVLFQFAVHPEPKACGDHEQWTLVADFTTHAHTASLSAVAVNSRFVVTGSKDETIHIYDMKKKIEH
GALVHHSGTITCLKFYGNRHLSGAEDGLICIWDAKKWECLKSIKAHKGQVTFLSIHPSGKLALSVGTDKTLRTW
NLVEGRSAFIKNIKQNAHIVEWSPRGEQYVVIIQNKIDYQLDTASISGTITNEKRISSVKFLSESVLAVAGDEE
VIRFFDCDSLVLCLCEFKAHENRVKDMFSFEIPEHHVIVSASSDGFIMWKLKQDKKVPPSLCEINTNARLTCLG
VWLDKVADMKSLPPAAEPSVPSKEQSKIGKKEPGDTVHKEEKRSKPNTKKRGLTGDSKKATKESGLISTKKRKMV
EMLEKKRKKKKIKTMQ

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FIGURE 1027

AAACCCAAAGCGGCCGCGTAGGCGAAGGTGAAGATGGCTGCCTCTGCCTTTGCTGGTGCAGTGAGAGCAGCTTC
AGGAATCCTACGGCCCCCTGAATATTTTGGCATCTTCAACCTACCGCAACTGTGTCAAGAATGCCTCTCTTATTTT
TGCAATTGTCCACTGGACGTTTTAGTCATATTTCAGACACCAGTTGTTTTCTCCACTCCCAGACTTACCACATCTGA
GAGAAACCTGACATGTGGGCATACCTCAGTGATCCTTAATAGAATGGCCCCCGTGCTTCCAAGTGTCTGAAGCT
GCCAGTCAGATCTCTAACATACTTCAGTGCAAGAAAAGGCAAGAGAAAGACCGTGAAAGCTGTCTATCGATAGGTT
TCTTCGACTTCATTGTGGCCTTTGGGTGAGGAGAAAGGCTGGCTATAAGAAAAAATTATGGAAAAAGACACCTGC
AAGGAAGAAGCGATTGAGGGAATTTGTATTCTGCAATAAAACCCAGAGTAAACTCTTAGATAAAAATGACGACGTC
CTTCTGGAAGAGGCGAAACTGGTACGTTGATGATCCTTATCAGAAGTATCATGATCGAACAAACCTGAAAGTATA
GATCAGAAGTTTTCACTTGTTTCTCAGTTATTGGATATGTATCTTTGTGTACATATCTTTGCAAAAATGGATAAGT
ACAAAACCTTGATGTAAATTGTACCAATGAATACGTAAACATACAGTGACAACATTAAACTTAGAAAAAGTTTTAAA
ACTTAATGGATCAGACTTTGCCAGATTGTTGTTAGGGAAACAGAAATTTAGAATGGTGCATTATTTTTAACAAATG
GTATTGGCTTAACTAGTTGTTTCACTTATGCTCTTTTAGTTGCAAGGAATCTCAAGTGGGACAAACATAAAAAGA
CTCAAAAGCTACAAGTTAGCTCAAGCAATGTGACATTATTTCAAGGATATGTGCCAGGGAATTCAGGAACCACCT
CACCAACCCCATCTCCCACTCAGAAATCACCTCCCAGCCTCAGGAAGAGTAGAAATTGGGTGGTGCCTCCTCAGCA
GGGGAAGGTGGATGTTTAGGCTTGGGCTCTGCATGCATGTGACTTGCTTCTTTTTGCAATTGTTAACTCCATTCTC
TCTATTACCAACTTCTCTACACAGCTTTTGCATACTTACAGTTTCTGTTTCTTTGTAATAACTTTAACTTGCAC
CTTTGAGGTTCTTTTCTACATGATGACCTTCAGCTCCTGCTGCTAGTCTCCAATTGCCAAGGGAATTTAACTGGG
CCAGACTACCTTTTTTATACTAGGTCTGGTTGGGTCACTGTCTAGAGTAGGGATTGGCTGTCTTAAAGTCAGGAGC
CCGCTTTGTATTAGCAGGTTTGCATGCAGCAAAAAACAGTTATGTGAGCAGTTTCACTTGGAGGTTACATGGG
GTGGCAGCACACTTAACATCTAACACACCAGGTTTATTGTGTTTATAACACTTGTCAATTTACTGTAACAACATTT
TTTCATAGGAGAGTAAATAGCCCTTCAGCATGCTCATTTCATGAAACAGAAGAGGCTGTACAAGTGAAGACAAGGG
CTTTTTATGCAAGTTTTGAAAGATAGGTATTTATTTTTTCTAGAGACAGGAGTTTTGCTCTGTTGCCAGGCTGG
AGTGCAGTGGTGCAATCATAGCTCATTGAAGCCTCGCACTCCGCGGCTCAAGTGGTCTCTGCTCAGCTTACT
GAGTAAGGATATGTATTTCTTAAAAAGTTAGTTTATCCACTTCAGATTTTCATGTTTTCAATTTGTAAGGATAAACTT
TTCCACAAATTTTCAACAATCATTGTAGAAACTAAGGGGGAGAAAGTAATCTCAGTTGTTTTAGAAACGAAAAA
GTTAAGCATTGTTTACTTGAAGTGGGCAGGGAAGCAGCACTGAGTAAAGTTCAATTGAGTGGTTACAGTCTAGGG
CAGTGGTTCCCAACTCTCCGATCAGAATCATCTGGGAAGCATTTC AACAGCAAAGTACTTTGAAAACCATTAT
TAAATAGAATTATGCATGAATTACTGTTTCAGATCCTTTAATGTGGTAGTTGGTAATAATAAGATGAAATTCCTC
TGTTGTTAGTAAATTTATGAAATTGAAGTTCTGCAGCATGTGAGGCCAGGATTATTAGGGAGATTCTCTGAAACT
AGTGTGTGTTTTATTAAAAGGAGAAAGGATAACAATAGAATGTTCTAAAACCAGAAGTCCAAGTGCCTGTCTACTT
ATGGGACCAATAAATAAAGAACAGACATTTGATTTGAGGTGAGGTAAAAGCCTGAAACATGGAATGGCATTCTGT
TTTGATGGATTTTCATTTCTTCGCACTTCTGAGACGGCAAAGCCAACCACTTAGAAGCCTTCCACATCTTTGTCA
CCTGCCTGGCTCCTGCTCTCTGATGTACCTCTGGGTAGTGAGATGGAAATGGTGCCTGCAGAAGTTGGGGAGAAG
GATACTTTTGCACAGCCTCCATGATGTCTTTATTGCAAATATGGATGACAAGGGTCTCTGTTACAGGGGGCCTCAG
AGCACCTTCGTTTCTCCTCTAGACCAGGGACAGGTGTAGAGATAAGGACTGGCAACCAGAGCCTCAGCATCCAAA
GATGGACTGAAGTGGGATGGCTGACAGGCACATAACTTACGGGAAAGGGAATTTATACATACGATTTTTGTTTT
GTGGGTAGGAGGGCTTATCATCAACACTGATTTTATAATCTGACAATAAATGTCTTTTATTAAAGAGTTTACCTA
AATGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

1136/1629
FIGURE 1028

MAASAFAGAVRAASGILRPLNILASSTYRNCVKNASLISALSTGRFSHIQTPVVSSTPRLTTSEARNLTCGHTSVI
LNRMAPVLPSVLKLPVRSITYFSARKGKRKTVKAVIDREFRLHCGLWVRRKAGYKKKLWKKTPARKKRLREFVFC
NKTQSKLLDKMTTSFWKRRNWYVDDPYQKYHDRTNLKV

1137/1629
FIGURE 1029

GGCGCCGGGGGACACGTTGGCTGCGTTTTTCGGCGGGCCTCCCGGGTACAAAAATGGCTGTGGCTAGCGATTTCTA
CCTGCGCTACTACGTAGGGCACAAGGGCAAGTTTGGGCACGAGTTTCTGGAGTTCGAATTTCCGGCCGGACGGAAA
GCTTAGATATGCCAACACAGCAATTACAAAAATGATGTGATGATCAGAAAAGAGGCTTATGTGCACAAGAGTGT
AATGGAAGAAGCTGAAGAGAATTATTGATGACAGTGAAATTACAAAAGAAGATGATGCTTTGTGGCCTCCCCCTGA
TAGGGTTGGCCGACAGGAGCTTGAAATTGTAATTGGAGATGAGCACATATCTTTTACCACATCAAAAATAGGTTC
TCTTATTGATGTAAATCAGTCAAAGGATCCTGAAGGCCTTCGAGTATTTTACTATTTGGTACAAGACTTGAAATG
TTAGTTTTTCAGTCTTATTGGATTACACTTCAAGATTAAACCAATTAAATTGTATGTTTTCAGGCTGTTTGTAT
ATTTAATTAAGGGATGGGAGGGGTTATTTGTCATTTACAGTATTGGGGTTTTTATGAATGTGAAGCAAACAAAA
AAATTTGTATGTAAACTGAAAATAAGAAAATACATTAGCAAGCTTAATGGTTATCCTTACTTGAGTCCACATGGG
TTGGACAGTCCCCACACACATTAAATCTGTAAATGAAAGCCACCTTTTGTAAAAAATTGCTCTAATAAAACAT
ACCAAATCCTGGTTGCAGAGTAGTTTTTTGTTTTTCCAGGAGGCTATGTCTCTAATTCACTTTAGAGATAATAA
GAAATTGTTCTGGTAGATACATCCTGTGACAGAAGATACTTTAGGTGGAACATAGTAGCCAGATTCCCATCCATG
AAAGGCAAGTGTAGATTGTCCCTTATTTCCCTTCATACATGATTGGATTAAATTTGGGGGGCTTATACAAGGTCT
AGTTTTTTTTTACAGTTATGACAAACCCCTCAGGGATTATTCACATTTAAATATTTTCAGTTACAAGCAGTGAGG
TCCTAAAGTGTACAAAGAGTACAGTCTACCCCATGTTAGGCATATCTTTGATTATGCTTTATTCCTTATTTTAC
AATGTATTTGGTGTGTAGGGGAGGGGGGAGAACTAAATGAGTTTTTCAGCTTTATAAATGTTAAACATTTAGACA
AACATATATGTATGTATGAATGTACATAAATATTTTAACTCCTATTGACCACGAGTCTCACTTCAGTTTCCAG
TTCTTTTCAACCTCTTTCTGATAGATTTCCTCTTTCACTTCTTTAGTAACCATGTTCTTGTTCCTTTTATTC
TTCCATCTGAAGCCCCACTCTTAAAAAGTTGCACTGTTCCAGTAGTTATAATCCACTTGCCCTAGGAACAAGTTA
GCACTGAATTTTGGGTGGAATAATTAGTTTCTGAAGGCTTGCCAGGACCCCTGAGCAGGTAGGCTCTAGAGTCGG
GCAGTCCAATAACTTTTTTGAATAATGGAAACGTCCTATGTGCAGTCCAATAGGGTAGCAACTGGCCAAATGAG
GCCTACTGATTACTTGAGGTGTGCCTTGTATAACTGAATTTATGGTGCTATTTAAACAATTTTTTCTAACGTGA
AAAGGATAAAACATAAAAAACTCTTGAGAACTATAAAGTGAACACCTATATGCCTACCCCTACCTAGATTCTATA
CTTAACATCTTTTTTACTGTAATATCTCTATTATAATAAATCTTGGTTTTTCACTTAACTGGTGTAATTGGTGCC
AATAAACTACTTTTTTTGTAGTGCTATTTAATTTTGATTAAATTTAGATAGCCACGTGTCTAGCGGCTACCGTTT
GGACAGTATAGCTCTAGAGCATGGCTTGGTAACCTGTTTGCCATGGAGCACTAGATGGTCTTTTCACTCTCTCAA
AATGCATGCCCATTGCCTTCAGGTTTGCCATGGAAAGTCAAATGATTTCCACTTCATTATGCAAGTACGCTATCA
TCTTCAGGTCTTTTGTATGTAAAATGTTTCTGTTCCAGTTGTAGACCTTGATGATTGTGCAGTATGAAATCGTAT
TGTAATTTTCTTGCAATTTAGATGTCAACCTCAGAAACAGGAACAATCGTCTTTTGAACCTTCAGTAGGCCCACAG
TTGTTGGTTGTTTCTCAAAACAGGTTGTGGCTCCTGTTGAATAAGATGATCCATTAATAAACTGAACAAGGTTGAG
GAGAAATAGTGCTTACGTTGAAAAATCTTTAAGTCTTTGTCCCGTTCTCTAACTTCCTTACGTTTTTCGTTTATT
TAGCTCCATCCCCACTATCTACTAGAATTTCTCATATTTAAACCAAGATGGGAGACTAGGTCATTAGGAAAATAT
TACCGTCTACAATTTTCTTATACTTTGATCTGTCTTTTATTTGATTGTAAGTTGCTGATGGACAGTGATCATTAG
AAACTGAATTTTGTATAATACTAGTTTATATGAACTAGATATTTATTGCGCTCAGGTTATGTTCTTTTACCT
CCTTCCTTAATAAAGAGACCACTTGAAAT

1138/1629
FIGURE 1030

MAVASDFYLRYVVGHKGKFGHEFLEFEFRPDGKLRVYANNNSNYKNDVMIRKEAYVHKSVMEELKRIIDDSEITKED
DALWPPPDRVGRQELEIVIGDEHISFTTSKIGSLIDVNQSKDPEGLRVFYLVQDLKCLVFSLIGLHFKIKPI

1139/1629
FIGURE 1031

GTGCGCTGCGCACCTGGCTCAGGTGAGCTGCCCCGCCCCCGCCGGCGCGAGCCCCAGGTCTGGCAGCAGCC
CCTGACCTGTCCAGGTGCCCTGTCCAGCTGACTGCAAGGACAGAGAGGAGTCCTGCCAGCTCTTGGATCAGTCT
GCTGGCCGAGGAGCCCGGTGGAGCCAGGGGTGACCCTGGAGCCAGCCTGCCCCGAGGAGGCCCGGCTCAGAGC
CATGCCAGGTGTCTGTGATAGGGCCCTGACTTCTCTCCCCGTCTGAAGACCAGGTGCTGAGGCCTGCCTTGGG
CAGCTCAGTGGCTCTGAAGTGCACGGCTTGGGTAGTCTCTGGGCCCCACTGCTCCCTGCCTTCAGTCCAGTGGCT
GAAAGACGGGCTTCCATTGGGAATTGGGGGCCACTACAGCCTCCACGAGTACTCCTGGGTCAAGGCCAACCTGTC
AGAGGTGCTTGTGTCCAGTGTCTGGGGGTCAACGTGACCAGCACTGAAGTCTATGGGGCCTTCACCTGCTCCAT
CCAGAACATCAGCTTCTCCTCCTTCACTCTTCAGAGAGCTGGCCCTACAAGCCACGTGGCTGCGGTGCTGGCCTC
CCTCCTGGTCTCTGCTGGCCCTGCTGCTGGCCGCCCTGCTCTATGTCAAGTGCCGTCTCAACGTGCTGCTCTGGTA
CCAGGACGCGTATGGGGAGGTGGAGATAAACGACGGGAAGCTCTACGACGCCTACGTCTCCTACAGCGACTGCCC
CGAGGACCGCAAGTTCGTGAACCTTCATCTAAAGCCGCGAGCTGGAGCGGCGTCGGGGCTACAAGCTCTTCCTGGA
CGACCGCGACCTCCTGCCGCGCGCTGAGCCCTCCGCCGACCTCTTGGTGAACCTGAGCCGCTGCCGACGCCTCAT
CGTGGTGCTTTTCGACGCCTTCTGAGCCGGGCCTGGTGCAGCCACAGCTTCCGGGAGGGCCTGTGCCGGCTGCT
GGAGCTCACCCGCAGACCCATCTTCATCACCTTCGAGGGCCAGAGGCGCGACCCGCGCACCCGGCGCTCCGCCCT
GCTGCGCCAGCACCGCCACCTGGTGACCTTGCTGCTCTGGAAGCCCGGCTCCGTGACTCCTTCTCCGATTTTGTG
GAAAGAAGTGCAGCTGGCGCTGCCGCGGAAGGTGCGGTACAGGCCGGTGGAAGGAGACCCCGAGACGCAGCTGCA
GGACGACAAGGACCCCATGCTGATTCTTCGAGGCCGAGTCCCTGAGGGCCGGGCCCTGGACTCAGAGGTGGACCC
GGACCCTGAGGGCGACCTGGGTGTCCGGGGGCCTGTTTTGGAGAGCCATCAGCTCCACCGCACACCAAGTGGGGT
CTCGCTGGGAGAGAGCCGGAGCAGCGAAGTGGACGTCTCGGATCTCGGCTCGCGAAACTACAGTGCCCGCACAGA
CTTCTACTGCCTGGTGTCCAAGGATGATATG**TAG**CTCCCACCCAGAGTGCAGGATCATAGGGACAGCGGGGGCC
AGGGCAGCGGCGTCGCTCCTCTGCTCAACAGGACCACAACCCCTGCCAGCAGCCCTGGGACCCTGCCAGCAGCCC
TGGGAAAAGGCTGTGGCCTCAGGGCGCCTCCAGTGCCAGAAAATAAAGTCCTTTTGGATTCTGAAAAAAAAAAAA
AA

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FIGURE 1032

MPGVCDRAPDFLSPSEDQVLRPALGSSVALNCTAWVVS GPHCSLPSVQWLKDGLPLGIGGHYSLHEYSWVKANLS
EVLVSSVLGVNVTSTEVYGAF TCSIQNISFSSFTLQRAGPTSHVA AVLASLLVLLALLLAALLYVKCRIN VLLWY
QDAYGEVEINDGKLYDAYVSYS DCPEDRK FVNFI LKPQLERRRGYKLF LDDRDLLPRAEPSADLLVNLSRCRRLI
VVLSDAFLSRAWCSHSFREGLCRLLELTRRPIFITFEGQRRDPAHPALRLLRQHRHLVTLLLWRPGSVTPSSDFW
KEVQLALPRKVRYRPVEGDPQTQLQDDKDPM LILRGRVPEGRALDSEVDPDPEGDLGVRGPVFGEPSAPPHTSGV
SLGESRSSEVDVSDLGSRNYSARTDFYCLVSKDDM

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FIGURE 1033

AGTCTTGGCGGAGGTGACCAAAGCCACGTAATGTCCGTAGTTCGCTCATCCGTCCATGCCAGATGGATTGTGGGG
AAGGTGATTGGGACAAAAATGCAAAGACTGCTAAAGTGAGAGTGACCAGGCTTGTTCTGGATCCCTATTTATTA
AAGTATTTTAATAAGCGGAAAACCTACTTTGCTCACGATGCCCTTCAGCAGTGCACAGTTGGGGATATTGTGCTT
CTCAGAGCTTTACCTGTTCCACGAGCAAAGCATGTGAAACATGAACTGGCTGAGATCGTTTTCAAAGTTGGAAAA
GTCATAGATCCAGTGACAGGAAAAGCCCTGTGCTGGAACCTACCTACCTGGAGAGTCCGTTGAGTTCGGAAACCACC
CAGCTAAGCAAAAATCTGGAAGAACTCAATATCTCTTCAGCACAGTGAAGCGGGAGTGGAAGAAGGATCTAAAGG
GAAAACTGACATGTTTATGTTATGGAAAAAGAAATTTTTCTAAGTTTCATCACAAACTGTGTCCAGTTTCTCTG
TGGTGTATTATGAAATAGCTAAAAAGCAAATGAAGTAAAGGGCATACTATGGTTTTTCACAAAAAAAAAAAAAAAAA

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FIGURE 1034

MSVVRSSVHARWIVGKVIQTKMQKTAKVRVTRLVLDPYLLKYFNKRKTYFAHDALQQCTVGDIVLLRALPVPRAK
HVKHELAEIVFKVGKVIDPVTGKPCAGTTYLESPLSSETTQLSKNLEELNISSAQ

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FIGURE 1035

GGCGCGCTTTCAAACGCTCAGGTTTCTACCTTCCGGCTGCTTGGGAACCTCTTTCTTGCCCGCCAAGCCCGCAG
CCACCCGGGCGCGGCGGGACTCCTAGACCCGGCGCTGCGATGAAGAGGACCCGCGACGAGGTGGATGCGACGCTG
CAGATCGCCAAGCTGAATGCGGCCGAGCTGCTGCCGGCGGTGCCTGCCCTGGGCTTCGGCCCTGGGGCCAGCGGC
GCTGCAGCCGGCGACTTCTGCCTGCTGGAGCTGGAGCCCCACGCTGTGCCAGCAGCTGGAGGATGGACACAGTCTT
GTGATTCTGGTGATAAAGACGAGCAAGCTGTGCTGTGCAGTAAAGACAAAACATACGACTTGAAGATAGCAGAC
ACTTCCAATATGTTGCTTTTTCATTCTGCTGTTGTAAACTCCGGACCAGTTGAAGAAGGAAGATTCACACTGTAAC
ATTATTCACACTGAGATCTTTGGTTTTTCTAATAATTATTGGGAATTAAGAAGACGTAGACCCAAGTTAAAGAAG
CTAAAGAACTTTTGATGGAAAATCCATATGAAGGACCTGACAGTCAAAAAGAGAAGGATTCAAATAGCTCAAAA
TATACAACCTGAAGATTTGCTTGATCAAATTCAGGCAAGTGAGGAAGAAATAATGACCCAATTACAAGTTCTAAAT
GCCTGTAAGATTGGAGGTTATTGGAGGATTCTTGAATTTGATTATGAGATGAAACTTCTGAATCATGTAACCTCAG
CTTGTGGATTCTGAATCATGGTCTTTTGGTAAAGTTCCTTTGAACACATGCCTTCAGGAACCTCGGACCATTGGAG
CCAGAGGAAATGATAGAACACTGTCTTAAATGTTATGGGAAGAAATATGTAGATGAAGGCGAAGTTTATTTTGAG
TTGGATGCTGATAAAATATGTAGAGCAGCAGCACGAATGCTACTTCAGAATGCGGTGAAATTCAATCTCGCTGAG
TTTCAAGAAGTGTGGCAGCAGAGTGTTCCTGAAGGAATGGTAACTAGTCTTGATCAGCTTAAGGGTTTAGCGCTG
GTGGATAGACACTCGAGACCAGAAATCATATTTTGTGAAAGTAGATGATTTACCTGAGGATAATCAGGAACGT
TTTAATAGCCTTTTCTCTCTAAGGGAGAAGTGGACAGAAGAAGATATTGCTCCATATATTCAAGATTTGTGTGGA
GAGAAGCAAACCATAGGTGCATTACTCACTAAATATTCTCGTTCTTCGATGCAAAATGGTGTTAAAGTTTATAAT
TCGAGAAGACCCATTTCTTAAAGAACAACAGTCTTTTCTTCAGGACTCAAGTTGCTTTATAAAGTTTGCTGGATA
CAAGAAAAATAACTTGTACTTTTTATTTCTGACTTTTAGAAACCTAGTCTTCTAAGGCATTTTTCTCCTCATCTTA
AGCATTTTGAACTACTGTTATTTCTTAAATGTTATAGGATGTAGCTTTAAAATTATATTTGTACTATGTACACA
GTGTAAACAAGGACAAAAGAATTCTTTCTATATTATGTCTGAGGTCTCTATGATTTATTTAAAGTTTGGCTTTT
TATATTTAAATGTCAATTTCTTTACTTAGGATTTGATGTTCTAATCATTAAATACACTTAAGTTTTCCAGAGAACT
AAATAGTAATAGTTTTCATAGAAGAGAACTATTTATTCACCTAAATATCATTTCTCAAGTGAGTGAGTTCCCTCT
ACTTTTAGCCTTCCACCCAAACTGGAAGCCTCTAGGTGCTATCAATTATTTATATCCATCGTTTACATCCATGAA
ATTGGCTGAATAATTACTCCTCTGCCTGGCGTAGACATGTGCTTTGGGAAAAAACGAGTTTATAATCCTATAAT
GAAGAATACTGGCACAGGCAATGCTCACTCGAAAACCTCAAGTAATTTCTAGTTGGTTTTGGAATGCTTGATAAA
GTTCTTTTACAGCTTTATTTTCTGATTTGTTTGGTTTAGATCAAAGTTCAAATTAATTTAACTTAGCTAATG
AACTCATCACCAGGACAGTTGGAGGGGGTAGGCCGAGGTTAAATGGTCCACGTTTCAAAAATGTTAATGGCTAAT
CCATAATTAAAGAAGGTTTAACTGTTACTGAAGTTTACAAGTTTTATTGTCATGAACATGAAATACAAACACGAT
GGCTTCGAAATGTCTTTCAATAAATGTTTCTGCATTTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1036

MKRTRDEV DATLQIAKLNAEELPAVHCLGFGPGASGAAAGDFCLLELEPTLCQQLEDGHSIVIRGDKDEQAVLC
SKDKTYDLKIADTSNMLLFIPGCKTPDQLKKEDSHCNIIHTEIFGFSNNYWELRRRRPKLKKLKKLLMENPYEGP
DSQKEKDSNSSKYTTEDLLDQIQASEEEIMTQLQVLNACKIGGYWRILEFDYEMKLLNHVTQLVDSESWSFGKVP
LNTCLQELGPLEPEEMIEHCLKCYGKKYVDEGEVYFELDADKICRAAARMLLQNAVKFNLAEFQEVWQQSVPEGM
VTSLDQLKGLALVDRHSRPEIIFLLKVDDLPEDNQERFNSLFSLEKRWTEEDIAPYIQDLCGEKQTIGALLTKYS
RSSMQNGVKVYNSRRPIS

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FIGURE 1037

GAGTTTTCATTTGTGGTGAGATTCTCTCCCAGGCCACAAGACATTTCTGCTCGGAACCTTGTTTACTAATTTCC
ACTGCTTTTAAGGCCCTGCACTGAAAATGCAAGCTCAGGCGCCGGTGGTTCGTTGTGACCCAACCTGGAGTCGGTC
CCGGTCCGGCCCCCAGAACTCCAACCTGGCAGACAGGCATGTGTGACTGTTTCAGCGACTGCGGAGTCTGTCTCT
GTGGCACATTTTGTTCCTTCCGTGCCTTGGGTGTCAAGTTGCAGCTGATATGAATGAATGCTGTCTGTGTGGAACAA
GCGTCGCAATGAGGACTCTCTACAGGACCCGATATGGCATCCCTGGATCTATTTGTGATGACTATATGGCAACTC
TTTGCTGTCCTCATTGTACTCTTTGCCAAATCAAGAGAGATATCAACAGAAGGAGAGCCATGCGTACTTTCTAAA
AACTGATGGTGAAAAGCTCTTACCGAAGCAACAAAATTTCAGCAGACACCTCTTCAGCTTGAGTTCTTCACCATCT
TTTGCAACTGAAATATGATGGATATGCTTAAGTACAACCTGATGGCATGAAAAAATCAAATTTTGTATTATTAT
AAATGAATGTTGTCCCTGAACCTTAGCTAAATGGTGCAACTTAGTTTCTCCTTGCTTTCATATTATCGAATTTCT
GGCTTATAAACTTTTTAAATTACATTTGAAATATAAACCAAATGAAATATTTTAACTGATAAAAAAAAAAAAAA
AAATAAAAAA

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FIGURE 1038

MQAQAPVVVVTQPGVGPGPAPQNSNWQTGMCD CFSDCGVCLCGTFCFPCLGCQVAADMNECCLCGTSVAMRTLYR
TRYGIPGSICDDYMATLCCPHCTL CQIKRDINRRRAMRTF

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FIGURE 1039

GGAAGAAAACCTGAAAAAGACCCCAAAGAAGAATATGAAAATGGTAACTGGAGCCGTAGCGTCGGTGCTGGAAGA
CGAGGCCACAGACACTTCTGATAGTGAAGGAAGCTGTGGATCGGAAAAGGACCACTTTTATTCTGATGATGACGC
AATAGAAGCTGACAGTGAGGGTGATGCTGAGCCCTGTGACAAAGAAAATGAAAATGATGGAGAATCAAGTGTTGG
GACTAATATGGGCTGGGCAGATGCTATGGCTAAAGTCCTCAACAAGAAAACCTCCTGAAAGTAAACCTACTATTCT
GGTCAAAAATAAGAAGCTGGAAAAGGAAAAAGAAAAGTTAAAGCAAGAAAGACTAGAGAAAATAAAACAGCGTGA
TAAGAGGCTGGAGTGGGAAATGATGTGCAGAGTAAAGCCAGATGTTGTCCAAGACAAAGAGACAGAGAGAAATCT
TCAGAGAATTGCAACAAGGGGTGTGGTGCAATTATTTAATGCTGTTTCAGAAACATCAAAAGAATGTTGATGAAAA
GGTTAAGGAAGCTGGAAGTTCTATGAGAAAGCGTGCTAAGTTGATATCAACTGTTTCCAAGAAAGATTTTCATCAG
TGTTTTGAGAGGGATGGATGGAAGTACAAATGAGACTGCTTCAAGCAGGAAGAAACCAAAGCCAAACAGACTGA
AGTGAAATCAGAAGAAGGCCAGGTTGGACGATCCTACGTGATGATTTTCATGATGGGAGCATCTATGAAAGACTG
GGACAAGGAAAGTGATGGGCCAGATGACAGCAGACCAGAATCTGCAAGTGACTCTGATACATTAAGCATCATAGG
AAATACAATTGCAGTCGTTTTATTTTTTCTAGAAAAATATGTCATCCTCTGATAGTTGGGGAATTATAAGGATAC
CATTTGTAAGAAAGCCAAAAGACTTTTGCCAGATTTTCATATTTCCCCTTTTCATGTACACTTTATATATACTTCA
TTAAAATTATATTTTAAACCCTTGTATAATTTTAAGCATTGTTTCCTCAGAACATTTGTAAAAGGATATATTTCTG
CTTGACCAGCGAGATGTGCATTTTGCCAGGATCATATTGGTCATGTCTATTGGTGTATTATTTTCAGTATCACCAA
TGTTTTTCAGAAATACAGTACTAATTCATCATTAAACTCTTTGAAGTTAATATTTTTCTGCCTTCTAACTTATAGA
CTCAACTATGTATCTGTAGTTTTTTGGGAATGGTTGGTGTTTTTTGCTTTGTGTTGGGAAGTTATTGAGAAAACCT
ATATAATAAAATTTAAAATTATAGTTTTTCAA

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FIGURE 1040

MKMVTGAVASVLEDEATDTSDSEGSCGSEKDHFYSDDDAIEADSEGDAEPCDKENENDGESSVGTNMGWADAMAK
VLNKKTPESKPTILVKNKKLEKEKEKLQERLEKIKQORDKRLEWEMMCRVKPDVVQDKETERNLQRIATRGGVVL
FNAVQKHQKNVDEKVKEAGSSMRKRAKLSTVSKKDFISVLRGMDGSTNETASSRKKPKAKQTEVKSEEGPGWTI
LRDDFMMGASMKDWDKESDGPDDSRPESASDSDT

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FIGURE 1041

GCTGCCGCCCCGCACTCGGGCGAGCGCGGGAGCCGCACAGTAGACGGAGCGCGCCCGGGCCGAGCGGGCCATGGCC
GCGGGGGCCGCCGCCGCGCAGGTGGTGGCGCGCGGTGAGGAGAGCGCGGCGCCCCCTCCGGGGCGGATGGAAACGCGG
CTCGGCGGGCGGGCAGTGCCGGCGTCCGCGGCTGGAATGGTGTGCTGGCTGTGTTGGTCGGTGCCTGCGTTCTGAAG
CCCAGAGGAGCCACAATGGAGACGCCGCCGCTGCCTCCCGCATGCACAAAGCAGGGTCATCAGAAGCCTCTCGA
TTCAAAAGATGATAATACCGAAAAACACTGCCCAGTGACAGTGAATCCTTGGCATATGAAGAAAGCTTTCAAAGT
CATGAACGAATTAAGAAGTCAAAATTTGCTGTGCGATGTCACAATTGTGGCAGAAGACATGGAAATTTCTGCTCA
TAGAGTGGTGTGCGCCGCTGTAGTCTTATTTTCATGCCATGTTTACAGGTGAGATGAGTGAGAGCCGAGCAAA
GAGAGTTAGAATAAAAGAGGTAGATGGCTGGACCTGAGGATGCTAATTGATTATGTTTACACTGCAGAAATTC
GGTTACAGAAGAAAATGTACAGGTACTTCTCCCAGCAGCTGGTCTCTTACAGTTACAGGATGTGAAGAAGACTTG
TTGTGAATTTTTGGAATCCAGCTTACACCTGTCAACTGCTTAGGAATCCGGGCTTTTGTGATATGCATGCATG
TACTGACCTTCTGAACAAGGCCAACACCTATGCAGAGCAACATTTTGCAGATGTTGTACTTAGTGAAGAATTTCT
CAATCTTGGCATCGAACAAGTGTGCAGCTTAATCTCAAGTGACAACTTACCATTTCTTCAGAAGAGAAGGTATT
TGAAGCAGTAATAGCATGGGTGAACCATGACAAGGATGTGAGGCAAGAGTTTATGGCCCGACTGATGGAACATGT
ACGGTTACCTTTGCTTCTCGGGAATATTTAGTTCAGAGGGTTGAAGAGGAAGCATTGGTCAAGAATAGCAGTGC
TTGCAAAGATTACCTCATTGAAGCAATGAAGTACCATTTGCTGCCAACAGAGCAGCGTATATTAATGAAGAGTGT
CCGGACCCCGCTGAGGACACCCATGAACCTTCCCAAATGATGGTGGTGGTGGGGGCCAAGCACCAAAGGCTAT
CCGGAGTGTGGAATGCTATGACTTTAAAGAAGAAAGGTGGCACCAGTAGCAGAGTTGCCTTCCAGGAGGTGCAG
GGCAGGCATGGTCTACATGGCTGGACTTGTTTTTGCTGTGGTGGCTTTAATGGCTCATTAAAGAGTTTCGCACTGT
AGATTCTACGACCCTGTGAAGGACCAGTGGACCAGCGTTGCTAACATGAGAGACCGGAGAAGCACTTTGGGAGC
TGCTGTGTTAAATGGATTATTATACGCTGTGGGAGGCTTTGATGGGAGTACAGGTTTGTCTGTGGAAGCATA
CAACATAAAGTCTAATGAGTGGTTTCATGTAGCTCCCATGAATACAAGGAGGAGCAGTGTGGTGTGGGTGTTGT
TGGAGGTTTGTCTATGCTGTAGGAGGTTATGATGTAGCATCACGTGCTTAGCACAGTAGAATGCTATAA
TGCTACAACAAATGAGTGGACCTATATAGCAGAAATGAGCACCAGGCGGAGTGGAGCAGGTGTTGGTGTGTTAA
CAATTTATTGTATGCTGTAGGAGGTCATGATGGCCCTTTAGTACGAAAAAGTGTGAAGTATATGATCCCACCAC
TAACGCATGGAGACAGGTTGCAGATATGAACATGTGCAGAAGAAATGCAGGAGTTTGTGCAGTTAATGGTCTGTT
ATATGTTGTTGGAGGGGATGATGGTTCTGTAACTTGGCGTCAGTAGAATATTATAACCCAACAACCGATAAATG
GACAGTTGTGTCTATCGTGTATGAGCACAGGGAGAGTTATGCAGGGGTCACAGTTATTGATAAACGATTATGAGC
CTGAAGGACATTTTCAGCATATTTATACATGAGAAACAGCCTTCAACAAGTATTTGTGAAGTGAAGTGAAGTCTA
GCATTTCTCCACTTGTAGCTGCACTTTAAGTCTCAGCAGAAGATACGATCGTCTGCCTTTATAGGCCTCAGATAC
TGAAGATTATTTTTGGTAGAAGCACCGTGTAGGCTTTTTCTGCAATGAGCAGCAGCTGACTGAATTTTCATAAGA
AACTTGGACTGCAGGACTTAATCTGTAGTCTTTAGACAACAGTTGCTTTTATAAAGACTAGTTCTTATCAACCTT
GAATGACTACAGATTATTTTGTGAAGGAGGATGAAGTAATGTGTGTTCTTGTAAAATTAAATTTTATCTTTATTT
CTTCTAAAAATCTGTATACCAGGAACCTGAAAACTTTGAAACAGATATTAAATCTACGTAAGTATACAACTAGT
TGAGGGATACACTGTTTGTCTTTTATAAAATAACTTTGATTACATGAATATAATAAATTATGTGCATATAAATGTG
TGTCTATATGCTTTTCTTTAAATATGTTTGAAGAGATGTTTGAAGCTTGATTATACTATTTATAATTGGCACAGT
ACTTTGAATTATGCCAGTACTACATTGTAAAACAGAGTTGTATTTTTTGTATTTTAAACATGCTTAACACTTTAA
ATGCCACTTCTGAGGAATGGACCTGGTGTAAACACACTGAATATGTGTGATGCCAACTTTTTAAATACAATAT
AAGTTATGCTTATTTATTTTCTTTAGTTAATCTTGGTCATGTTTTGGTGTGTATTTTAAATTTTTTCTTA
AATTAACACTTTGGCATGAACATTACTGCAGGTTTTGTATGAATATAATGAATGTATGGAATTCAATTGAATTTG
CATGGTCTTCGGAATTTTTTCTGTGTGTATAAATTTAGCTGCTATTAACAGAAGAGAGAACTTTCTGTGAGTAGC
CATGTGTGTTGATCAGATACAGTTTTTCTGAGATCTTCAATTAATCTCACTTTAAAAATGACCAAAACATGTCTT
TCTTGAATTAACCTTTGAATAAAAGTTTGTATATTAAGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGAAAAAA
AAAAAA

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FIGURE 1042

METPPLPPACTKQGHQKPLDSKDDNTEKHCPVTVNPWHMKKAFKVMNELRSQNLLCDVTIVAEDMEISAHRVVLA
ACSPYFHAMFTGEMSESRKRVRIKEVDGWTLRMLIDYVYTAEIQVTEENVQVLLPAAGLLQLQDVKKTCCEFLE
SQLHPVNCLGIRAFADMHACTDLLNKANTYAEQHFADVVLSEEFNLGIEQVCSLISSDKLTISSEEKVF EAVIA
WVNHDKDVRQEFMARLMEHVRLPLLPREYLVQRVEEEALVKNSSACKDYLIAMKYHLLPTEQRILMKSVRTRLR
TPMNLPKLMVVVGQAPKAIRSVECYDFKEERWHQVAELPSRRCRAGMVYAGLVFAVGGFNGSLRVRTVDSYDP
VKDQWTSVANMRDRRSTLGAAVLNGLLYAVGGFDGSTGLSSVEAYNIKSNEWFHVAPMNTRRSSVGVG VVGGLLY
AVGGYDVASRQCLSTVECYNATTNEWTYIAEMSTRRSGAGVGLNNLLYAVGGHDGPLVRKSVEVYDETTNAWRQ
VADMNMCRRNAGVCAVNGLLYVVGGDDGSCNLASVEYYNPTTDKWTVVSSCMSTGRSYAGVTVIDKRL

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FIGURE 1043

AGAAATCAACTGCTTAGCCGGGTTGTTAGGAGGATCTGATGAGACTAGGATGTGAGTTGAAACTGCTGTGCCAGG
CACACCTGTGTGGGTCTCACTTGTGCCAGGCATACCTGCGTGGGTCTCACCTGTGTAGGTCTCACCTGTGCCAGG
TGTACCTGTGTGGGTCTTACCTGTGCAGGTCTCCTGATGCAGGTCTCACCTGTGCCGAGTGTACCTACCTGTGCC
GGTCTCACCTGTGTGAGGCGTACGTGTAGGGGTCTCACCTGTGAACGTCTCACCTGTGCCAGGTGTATACCTGTG
TGGCTCTCACTTGTGTGGGTCTGGTATGTGACAAAGGCCTGGGAATTGGCAGCTGTTCATCTGCCAGGAGCAGACC
CTGAGCCAAGTTCCCTGTGCCCTTAGGCTCATTTTCATGCCCTCAGCTCTGGGAGGCCAATCCCTTTACTGCCACAT
TTTATAAATGGAAGACTGAGGTTAAGCAGTGGGCCAGGGCCATAGAACAGCTGAGCTGTGGAGCTGGACATCGA
CCTTGGGCAGGTGCTGCCAGGGGCTGAGCCAGGCCCTCCACTCCCGCATCCTCTGATGACCCATCCTGGGTGA
GTGGAGGCATCTGCCCGGCCAGTCAGGCCAGTGGTGATGGGCCCCATGCCACAGGACAGAAGCTGCTGGACT
CACTGGCAGAGACCTGGGACTTCTTCTTCAGTGACGTGCTGCCCATGCTGCAGGCCATCTTCTACCCGGTGCAGG
GCAAGGAGCCATCGGTGCGCCAGCTGGCCCTGCTGCACTTCCGGAATGCCATCACCTCAGTGTGAAGCTAGAGG
ATGCGCTGGCCCGGGCCATGCCCGCGTGCCCCCTGCCATCGTGAGATGCTGCTGGTGTGTCAGGGGGTACATG
AGTCCAGGGGCGTGACTGAGGACTACCTGCGCCTGGAGACGCTGGTCCAGAAGGTGGTGTGCCATACCTGGGCA
CCTACGGCCTCCACTCCAGCGAGGGGCCCTTACCCATTCTTGATCCTGGAAAAGCGCCTCCTCCGCCGCTCCC
GCTCGGGGGACGTGCTGGCCAAGAACCCTGTGGTGTGCTCCAAGAGCTACAACACGCCTCTGCTGAACCCCGTGC
AGGAGCACGAGGCGGAGGGCGCGCGCGGGTACCAGCATCCGCTGGCACTCTGTGTGCGAGATGACGTCTT
GCCCCGAGCCTCAGGGCTTCTCCGACCCGCCCGGCCAGGGCCCCACCGGGACCTTCAGGTCTCCCGGGCGCCCC
ACTCAGGGCCCTGCCCCAGCAGACTGTACCCACGACCCAGCCCCCTGAGCAGGGCTTGGATCCACCCGCGAGCT
CCCTGCCCCGCTCCAGCCCGGAGAACCTGGTGGACCAGATCCTGGAGTCCGTGGACTCGGATTCTGAAGGGATT
TCATTGACTTTGGCCGGGGCGGGGCTCTGGCATGTCCGACTTGGAGGGCTCTGGGGGCGGGCAGAGTGTGCTGT
GAGGCCTCACAGCTGGCCTTGAGTTTTTACTGACACGTCCCTGTGTGCGGGGTGTCCATGTGGCGTGTGTGTGA
GTGAGACTTTTTTACTGCGTCCCGTCCCGCCAGCCCTGTGCGCCTCGTCACTGGCCTTGGTCACTTTGTATTTCT
GTCTTGGTTGGAAATACCATCAGCCTTCTTGCTCGGCCAGGTCTGTTCAGGCATCTGAGTCAGCGTTTACCC
AGGGGCGGGCCAGAGACGGGGGCGGGCGCTCGCTCCCACGCTCCTCCTGCCCCAGCCCTCTGGTGTCCACACC
TGCCACAGAGAATGTAAACCCAGTGGGCTCTGCCACGCGGGGCCCCAAAGTGACCAGACTCCAGCACACCTGT
CTCCTCCTGCCTGGGGTGGCCATGGGGATGGAAGGGGTGGAATAAAACCTGTCAACCTGAAAAAAAAAAAAAA
AAAAAA

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FIGURE 1044

MAPMPTGQKLDSLAE TW DFF FSDVLPMLQAIFYPVQGKEPSVRQLALLHFRNAITLSVKLEDALARA HARVPPA
IVQMLLV LQGVHESRGVTE DYLRLE TLVQKVVS PYLGT YGLHSSEGPFTHSCILEKRLRRSRSGDVLAKNPVVR
SKSYNT PLLNPVQEHEAEGAAAGGTSIRWHSVSEMTSCPEPQGFSDPPGQGPTGTFRSSPAPHSGPCPSRLYPTT
QPPEQGLDPTRSSLPRSSPENLVDQILESVDSDSEGIFIDFGRGRGSGMSDLEGSGGRQSVV

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FIGURE 1045

TGTCAAAAGCCTGCACACGAGACCCCCGTGGGCCAGGACTGACTTCCTCCCCACACAGGGCTGGGCGGGGCAAGC
AGGAAGGAGCCTGTTACAGTCAAGGTGACGCATCCTTGCCGGGCCAGCCCCGAACAGCAGCTGGGTTCGGAAGCGA
CAGGAGCACGGGTTCATCTTTTCCCCAGAGGCGTCGGAATGACCTGTGCCACCCAGAGCCCGGGAGCTGAGCAG
CGGGGAGACGGAAAGAGTTACAGAGGATCAAGTGGCACCAGAAAGCAGCTCCTGGAGGACATCCAGAAGCTGAAGGA
TGAGATTGCAGATGTGTTTGGCCAAATCGACTGCTTCGAGAGTGGGAGGAGAGCCGGATGGCCAGAAGGAGAA
GGAGCTGTGTATTGGGCGCAAGAAGTTCAACATGGACCCCGCCAAGGGTATCCAGTATTTTCATTGAGCACAAGCT
GCTGACCCCTGACGTCCAGGACATTGCACGGTTCTGTATAAAGGCGAGGGCCTCAACAAGACAGCCATTGGTAC
CTACCTGGGGGAGAGGGATCCCATCAACCTGCAGGTCTCCAGGCCTTCGTGGACTGCCACGAGTTCGCCAACCT
CAACCTCGTCCAGGCCCTCAGGCAGTTCCTGTGGAGCTTCGGGCTGCCGGGCGAGGCCAGAAGATAGACCGGAT
GATGGAGGCCCTTTGCCACTCGATACTGCCTCTGCAACCCAGGCGTCTTCAGTCCACAGACACCTGCTACGTGTT
GTCCTTCTCCATCATCATGCTCAACACCAGCCTCCACAATCCCAACGTCCGGGACAGGCCGCCTTTCGAGCGCTT
TGTGTCCATGAACCGCGGCATCAACAATGGTAGCGACCTGCCGAGGACCAGCTGCGGAACCTCTTCGACAGCAT
CAAGAGTGAGCCATTCTCCATCCCTGAGGACGACGGCAATGACCTCACTCACACCTTCTTCAATCCAGACCGGGA
GGGTTGGCTGCTCAAGCTAGGGGGCGCGTGAAGACGTGGAAACGGCGCTGGTTCATCCTGACCGACAACCTGCGCT
CTACTACTTCGAGTTCACCACTGACAAGGAGCCACGGGGAATTATACCTCTTGAGAACCTCTCGGTGCAGAAGGT
GGATGACCCCAAGAAGCCATTCTGCCTGGAGCTCTACAACCTAGCTGCCGAGGCCAGAAAATCAAGGCCTGCAA
GACCGATGGCGACGGCAGGGTGGTGGAGGGCAAGCACGAATCGTACCGCATCTCAGCCACCAAGTCCGAGGAACG
TGACCAGTGGATCGAGTCCATCCGAGCCAGCATCACCCGTGTCCCCTTCTACGACCTGGTCTCTACTCGGAAGAA
GAAGATTGCCAGCAAGCAGTGAAGATTCTGGAGGTGGCACTGGGGGCTGGTCACCCTGAGAGTCCCATCGCCTGC
AGCACCTGGAGACCCACCTCCCACCCAGTGCACCTCTTTTGGGCCACAGACATCATTGCTGTTCCCCGTTACCTC
GAGCTGACTCTAGAGGGGAAGGCAGAGCTCAGGAGGGTGGGTGGGAGCTGCAGTGGGCTCAGAGTCCAGCAATGA
GGCCCCCTGGCCTGGGCACCCAGCTGCAGGCCCTGCCCTACGTGCACTACAGGAAGGGGTGAGGAGAGCAGCCA
GAGGAAAACAGCCCCAGAATGCTGCAACTTCTTCTCTCTGGAATTTCGGTGTCTCGGCTCTGAAGGCGCTCT
CTGCACCTTAGATGCTGTGACCCCTCAACGTAGGAGGGGCGTGGGGTCCCTAAGTGATTCTTCTCCCTGGCAAGG
CTCTTCTTTTTCAGGGATATCTCTGCCAACCTTCCCCTGTCTCGGGTGGGGCTGGGCCCTCTGCTGCTGAGAG
AGCTCAGCACACACAGCTCAGACCCACGGACAGGACCCCGGGACAGAACCCCGGGAGCACTGCCCTAGGAGCC
TGGACCCACAGAGCTCAGTCCCAGCTCTGCCTCTGACTCGCTGTGTACCTCTGCCAAGTCATGCCATTCTCTA
GTTCTTGCAAACTGCAGTGTGTTGGACTAGAAACGTATTGGCCCTGCTAGCCCTGTGCTCCAGCTTCCAGCTGG
AGATGGCAGCCGTTATTTGCGGAGCCAGGCTGACTCCGATTCAACGTTGCTGGGGAGAGAAAAGCAGTATAGA
CTCCACCTTCCAGGATGTCCATTTCGGGGAGAGGAGCAGGTGGGACCCTCAAGAAAATGACGGAGAACATCCAG
ACAGATGGGACTCAAGCAGGATGGGTGCTATATCCAAGAAGCCAAGAAGGGAGAGTTTCGTGCACTGTGGTTAAC
AGGAGGGCCGCTGGAGGCAGTGGCTGAGCCAGAAAGTAACACAGAGCTCATGCTTGAGAGATAGAGTCTTGGC
CATGGCTTTCTGCAAGACCACTGACGAGCAGTCCCATGGTGATAAAGGGCAGCCCGGGCGGTCCAGCATCTCG
AGACCTCTGCAGAAGTATTATCAGAGTAGAGCTGACTTCCAGTACCCGGGCAGCCAGCTCTGTCTCCAGGGAGG
CCTGGCCTGGAGGAGGAGTCCACTAACAGGAAACACTTCTCACCCCTCACACAGGCCAGGGGAGCCCTGGAG
GGAAATTCTTGGCAGGGGAACAGGAAATGTGGTGCCTCTGCCCCACTGCCAGCCTGAGTGGGCAAGGAAGCAG
GTGGATCCCCCAGAAGGAACCGCAGCTCGCGAGGCACCTCTCTCGTCCCCACCCACCCACATTTGCACACCT
TCCACAGGGTCAGGATGGAGTAGCTGCCTTGGCAGGTGGTGAGACTCCTGTCTCTGGAGGTCTGCAAGCACTGGT
AGTGATATTGCAGCAGACAAGGTCTGGGTGGGCGTCTGCAGGAGGAGACCTTGTGGGACATCTGAGGACATCCG
CAGATTCTTGTGACCTGTGAACTAGGCCCTGCCTCTGTACCTCATTGGTCCATGAAGGAGCAGCCAGGGGTGG
TGGAAGGAGCACTGGGCTAGGGGTGAGGGTCAGAGATTCTGTCTGTCTCTGGGATGCACTGGCTACTCCCTTA
GTCTACTCCCTTCCCCTCTCTGGTCTCAGCTTCTCCATCATGGAGGAGATGGGATCATGGATTTTCTGGGCAT
AAGTGGCTGTTCTGGGAGTCATTCCAAGAGAGAATAAACTCCTGATCCAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1046

MDLCHPEPAELSSGETEELQRIKWHRKQLLEDIQKLKDEIADVFAQIDCFESAEESRMAQKEKELCIGRKKFNMD
PAKGIQYFIEHKLLTPDVQDIARFLYKGEGLNKTAIGTYLGERDPINLQVLQAFVDCHEFANLNLVQALRQFLWS
FRLPGEAQKIDRMMEAFATRYCLCNPGVVFQSTDTCYVLSFSIIMLNTSLHNPVNVRDRPPFERFVSMNRGINNGSD
LPEDQLRNLFDSIKSEPFSSIPEDDGNDLTHTFNPDREGWLLKLGGRVKTWKRRWFILTDNCLYYFEFTTDKEPR
GIIPLENLSVQKVDDPKKPFCELYNPSCRGQKIKACKTDGDGRVVEGKHESYRISATSAEERDQWIESIRASIT
RVPFYDLVSTRKKKIASKQ

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FIGURE 1047

GTGTTTTCTGCGTGAGAGGAAAAGATGCTAGAACACAGGAGAATGGCGTGATTGACCTACCAGATTATGAGCAT
GTAGAAGATGAACTTTTCCTCCTTTCCACCTCCAGCCTCTCCAGAGAGACAAGATGGTGAAGGAACTGAGCCT
GATGAAGAGTCAGGAAATGGAGCACCTGTTCTGTACCTCCAAAGAGAACAGTTAAAAGAAATATACCCAAGCTG
GATGCTCAGAGATTAATTTTCAGAGAGAGGACTTCCAGCCTTAAGGCATGTATTTGATAAGGCAAAATTCAAAGGT
AAAGGTCATGAGGCTGAAGACTTGAAGATGCTAATCAGACACATGGAGCACTGGGCACATAGGCTATTCCCTAAA
CTGCAGTTTGAGGATTTTATTGACAGAGTTGAATACCTGGGAAGTAAAAAGGAAGTTCAGACCTGTTTAAAACGA
ATTGACTTGATCTCCCTATTTTACATGAAGATTTTGTTAGCAATAATGATGAAGTTGCGGAGAATAATGAACAT
GATGTCACCTTCTACTGAATTAGATCCCTTTCTGACAACTTATCTGAAAGTGAGATGTTTGCTTCTGAGTTAAGT
AGAAGCCTAACAGAAGAGCAACAACGAAGAATTGAGAGAAATAAACAACTGGCCTTGGAAGAAGGCAGGCAAAAG
CTGCTGAGTAATAGTCAGACCCTAGGAAATGATATGTTAATGAATACACCCAGGGCACACACGGTTGAAGAGGTT
AATACTGATGAGGATCAAAGGAGGAGTCAAATGGATTAAACGAAGACATTCTGGACAATCCATGTAATGATGCT
ATTGCCAATACTTTAAATGAAGAGGAAACACTGCTGGACCAGTCTTTTAAAAATGTGCAACAGCAACTTGATGCT
ACATCCAGAAATATTACTGAAGCTAGATAAGTTTCCATTAAAGAGAAAAATGTATCTGTTAAGTCATCGTCCTGCAA
GCTTGGCGTTACTATGTATTTTTTCTTCTTGGAGTGAAAATCCTTAGATAGTAAACTGTTATAGATTATTGTTT
AAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1048

MLEPQENGVIDLPDYEHVEDETFFPPFPPASPERQDGEGTEPDEESGNGAPVPVPPKRTVKRNIPKLDAQRLISE
RGLPALRHVFDKAKFKGKGHEAEDLKMLIRHMEHWAHRLFPKLQFEDFIDRVEYLGSKKEVQTCLKRIRLDLPIL
HEDFVSNNDEVAENNEHDVISTELDPFLTNLSESEMFASELSRSLTEEQORRIERNKQLALERRQAKLLSNSQTL
GNDMLMNTPRAHTVEEVNTDEDQKEESNGLNEDILDNPNDAIANTLNEEETLLDQSFKNVQQQLDATSRNITEA
R

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FIGURE 1049A

CGCTCGGAAAGTTTCAGCATGCAGGAAGTTTGGGGAGAGCTCGGCGATTAGCACAGCGACCCGGGCCAGCGCAGGG
CGAGCGCAGGCGGCGAGAGCGCAGGGCGGCGCGGCGTCCGGGAGCAGAACCCGGCTTTTCTTGGAGCGA
CGCTGTCTCTAGTCGCTGATCCCAAATGCACCGGCTCATCTTTGTCTACACTCTAATCTGCGCAAACCTTTTGCAG
CTGTTCGGGACACTTCTGCAACCCCGCAGAGCGCATCCATCAAAGCTTTGCGCAACGCCAACCTCAGGCGAGATGA
GAGCAATCACCTTCAGACTTGTACCGAAGAGATGAGACCATCCAGGTGAAAGGAAACGGCTACGTGCAGAGTCC
TAGATTCCCGAACAGCTACCCAGGAACCTGCTCCTGACATGGCGGCTTCACTCTCAGGAGAATACACGGATACA
GCTAGTGTGTTGACAATCAGTTTGGATTAGAGGAAGCAGAAAATGATATCTGTAGGTATGATTTTGTGGAAGTTGA
AGATATATCCGAAACCAGTACCATTATTAGAGGACGATGGTGTGGACACAAGGAAGTTTCTCCAAGGATAAAATC
AAGAACGAACCAAATTAATAATCACATTCAAGTCCGATGACTACTTTGTGGCTAAACCTGGATTCAAGATTTATTA
TTCTTTGTCTGGAAGATTTCCAACCCGCAGCAGCTTCAGAGACCAACTGGGAATCTGTCAACAAGCTCTATTTTCAGG
GGTATCCTATAACTCTCCATCAGTAACGGATCCCACTCTGATTGCGGATGCTCTGGACAAAAAAATTCAGAAATT
TGATACAGTGGGAAGATCTGCTCAAGTACTTCAATCCAGAGTCATGGCAAGAAGATCTTGAGAATATGTATCTGGA
CACCCCTCGGTATCGAGGCAGGTTCATACCATGACCGGAAGTCAAAGTTGACCTGGATAGGCTCAATGATGATGC
CAAGCGTTACAGTTGCACTCCCAGGAATTACTCGGTCAATATAAGAGAAGAGCTGAAGTTGGCCAATGTGGTCTT
CTTTCCACGTTGCCTCCTCGTGCAGCGCTGTGGAGGAAATTGTGGCTGTGGAAGTGTCAACTGGAGGTCCTGCAC
ATGCAATTCAGGGAAAACCGTGAAAAAGTATCATGAGGTATTACAGTTTGGAGCTTTGAGCCTGGCCACATCAAGAGGAGGGG
TAGAGCTAAGACCATGGCTCTAGTTGACATCCAGTTGGATCACCATGAACGATGTGATTGTATCTGCAGCTCAAG
ACCACCTCGATAAGAGAATGTGCACATCCTTACATTAAAGCTGAAAGAACCTTTAGTTTAAAGAGGGTGAGATAA
GAGACCCCTTTTCTACCAGCAACCAAACCTTACTACTAGCCTGCAATGCAATGAACACAAGTGGTTGCTGAGTCTC
AGCCTTGCTTTGTTAATGCCATGGCAAGTAGAAAAGGTATATCATCAACTTCTATACCTAAGAATATAGGATTGCA
TTTAATAATAGTGTGTTGAGGTTATATATGCACAAACACACAGAAATATATTCATGTCTATGTGTATATAGATC
AAATGTTTTTTTTTGGTATATATAACCAGGTACACCAGAGCTTACATATGTTTGGAGTTAGACTCTTAAATCCTTT
GCCAAAATAAGGGATGGTCAAATATATGAAACATGTCTTTAGAAAATTTAGGAGATAAAATTTATTTTAAATTTT
GAAACACAAAACAATTTTGAATCTTGCTCTCTTAAAGAAAGCATCTTGTATATTAAAAATCAAAAAGATGAGGCTT
TCTTACATATACATCTTAGTTGATTATTAATAAAGGAAAAATATGGTTTCCAGAGAAAAGGCCAATACCTAAGCA
TTTTTTCCATGAGAAGCACTGCATACTTACCTATGTGGACTATAATAACCTGTCTCCAAAACCATGCCATAATAA
TATAAGTGCTTTAGAAATTAAATCATTGTGTTTTTATGCATTTTGTGAGGCATGCTTATTCATTTAACACCTA
TCTCAAAAACCTTACTTAGAAGGTTTTTATTATAGTCTTACAAAAGACAATGTATAAGCTGTAAACAGAAATTTGA
ATTGTTTTTCTTTGCAAAACCCCTCCACAAAAGCAAATCCTTTCAAGAATGGCATGGGCATTCTGTATGAACCTT
TCCAGATGGTGTTCAGTGAAAGATGTGGGTAGTTGAGAACTTAAAAAGTGAACATTGAAACATCGACGTAACCTGG
AAATTAGGTGGGATATTTGATAGGATCCATATCTAATAATGGATTGAACTCTCCAAACTACACCAATTAATTTA
ATGTATCTTGCTTTTGTGTTCCCGTCTTTTGAATATAGACATGGATTTATAATGGCATTTTATATTTGGCAGG
CCATCATAGATTATTTACAACCTAAAAGCTTTTGTGTATCAAAAAATCACATTTTATTAATGTAAATTTCTAAT
CGTATACTTGCTCACTGTTCTGATTTCCTGTTTCTGAACCAAGTAAATCAGTCTAGAGGCTATGGTTCTTAAT
CTATGGAGCTTGCTTTAAGAAGCCAGTTGTCAATTGTGGTAACACAAGTTTGGCCCTGCTGCTCTACTGTTTAAT
AGAAAACCTGTTTTACATTGGTTAATGGTATTTAGAGTAATTTTTTCTCTCTGCCTCCTTTGTGTCTGTTTTAAAG
GAGACTAACTCCAGGAGTAGGAAATGATTCATCATCTCCAAAGCAAGAGGCTTAAGAGAGAAACACCGAAATTC
AGATAGCTCAGGGACTGCTAACAGAGAACTACATTTTTTCTTATTGCCTTGAAAGTTAAAGGAAAGCAGATTTT
TTCAGTGACTTTGTGGTCTCTAATACTACAACCAGTTTGGGTGACAGGGCTGGTAAAGTCCCAGTGTTAGATGAG
TGACCTAAATATACTTAGATTTCTAAGTATGGTGCTCTCAGGTCCAAGTTCAACTATTCTTAAGCAGTGCAATTC
TTCCAGTTATTTGAGATGAAAGATCTCTGCTTATTGAAGATGTACCTTCTAAAACCTTCTTAAAGTGTCTGAT
GTTTTTACTCAAGAGGGGAGTGGTAAATTAATACTCTATTGTTCAATTCTCTAAAATCCCAGAACACAATCAG
AAATAGCTCAGGCAGACACTAATAATTAAGAACGCTCTTCCTCTTCATAACTGCTTTGCAAGTTTCTGTGAAAA
CATCAGTTTCTGTACCAAAGTCAAATGAACGTTACATCACTCTAACCTGAACAGCTCACAATGTAGCTGTAA
TATAAAAAATGAGAGTGTCTACCCAGTTTTCAATAAACCTTCCAGGCTGCAATAACCAGCAAGGTTTTTCAGTTA
AAGCCCTATCTGCACTTTTTATTTATTAGCTGAAATGTAAGCAGGCATATTCACCTCACTTTTTCTTTGCCCTTTCT
GAGAGTTTTATTAATAACTTCTCCCTTGGTTACCTGTTATCTTTTGCACCTCTAACATGTAGCCAATAAATCTATT
TGATAGCCATCAAAGGAATAAAAAGCTGGCCGTACAAATTACATTTCAAACAAACCTAATAAATCCACATTTT

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FIGURE 1049B

CGCATGGCTCATTACCTGGAATAATGCCTTTTATTGAATATGTTCTTATAGGGCAAACACTTTCATAAGTAGA
GTTTTTTATGTTTTTGTGCATATCGGTAAACATGCAGCTTTTTCCTCTCATAGCATTTTCTATAGCGAATGTAATA
TGCCTCTTATCTTCATGAAAAATAAATATTGCTTTTGAACAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1050

MHRLIFVYTLICANFCSCRDTSATPQSASIKALRNANLRRDESNHLTDLYRRDETIQVKNGYVQSPRFPNSYPR
NLLLTWRLHSQENTRIQLVFDNQFGLEEAENDICRYDFVEVEDISETSTIIRGRWCGHKEVPPRIKSRTNQIKIT
FKSDDYFVAKPGFKIYYSLLEDFQPAAASETNWESVTSSISGVSYNPSVTDPTLIADALDKKIAEFDTVEDLLK
YFNPESWQEDLENMYLDTPRYRGRSYHDRKSKVDLDRLNDDAKRYSCTPRNYSVNIREELKLANVFFPRCLLVQ
RCGGNCGCGTVNWRSCTCNSGKTVKKYHEVLQFEPGHIKRRGRAKTMALVDIQLDHHERCDCICSSRPPR

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FIGURE 1051

AGTCGCTGTTTGGGACGCTGGGTGTGCGGTGTTCTGTCTCCGCTCCCGTTTCGCTGTACAGCCCGTTCCCTTCCC
GGAGCCCGGGACAGGCTGGGCGCGCGCCCGTGTGAGTGAGCGGGACTCAGGGCAGAAGTGTCCCTCACTGCGTT
TTTTTTTCTTTTATCCAAAGAACGGGGCAGTTAGTAGCCTTGCCTTCCTGTGCGCCCGTTGGGAGCGGGGTTGG
TGTGCGGAGTGGTTCGCCCTTTTTTTCTTTAGAACTTGTGAGCCTTTTTTTTTTTTTTTTTTTCTTTCTTTTTTT
AGGCTCAGTGCTGTCCGGGCTGGTTTGGCCGCTCCCTGACTAACGGCTTTCTGCCCCCTTCTCTCGCCACCCCTGC
CCAAGGTCGCCCTCTGCCTTCGCCCCCTGTCCCGGAGGGTGGGAAGCTTTGACCCCGCCCTGCCCACTCGCGTC
TCCGCAGCCGTAGCCGCGCCTGTCCCAATATGAATAGGGTCAACGACCCACTTATTTTTATAAGAGATATTAAGC
CCGGACTGAAAACTTAAATGTCGTCTTTATTGTCTGGAGATAGGACGCGTGACCAAAACCAAGACGGCCATG
AAGTGAGATCGTGCAAAGTAGCAGATAAAACGGGCAGCATCACTATTTCCGTGTGGGATGAGATCGGAGGTCTTA
TACAGCCAGGGGATATTATTCGGTTGACCAGAGGGTATGCATCCATGTGGAAAGGATGTCTGACACTTTTATACTG
GAAGGGGTGGTGAACCTTCAAAAAATTGGGGATCTAGGTGCGGTGCAGGCAGCCGAATGCGAGATTCCATACACT
ACTACCCTGGTAATGATCTCCACCCTGACCTGGAGGAGCCATCCTCTCTAGGGGTGTAAGATTTTGTATGGTTTA
TTCAGAAGTGCCAAATTTCACTGAACCAACCCAGATTATCGAGGACAGCAGAACAAGGGGCACAGAGTGAACA
GAAGAATAATTCATGAATAGTAATATGGGTACAGGTACATTGGACCAGTGGGAAATGGTGTTCACACTGGCCC
TGAATCAAGGGAACACCAGTTTTTACATGCTGGCAGAAGCAATGGCCGGGGACTTATAAATCCACAACACTACAAGG
AACAGCTAGTAATCAAACAGTGATGACCACAATAAGTAATGGCAGGGACCCCTCGGAGAGCCTTTAAAAGATGACC
TATGCTAAATACTCATGTGTAGTTTTTATACTACATGCCCTACTTGAACACTTATTGCACCTTTTATTATTGTTA
ACTGTGAAAAGTACGTCCTTTATTGGGTTTTCTTTTATATTCTTGGTTTGTAAAGAAGAATGGTTTGTTTTATA
GCAAACTGTTAAGCTGCTCGAGTCTCCTGTTGAAGAATGGGAACACTGAAAAGTAGGGGCATTTATTTTAGAG
TAAAAAGATTATTGGATAGCCTTTAAAAAACCTGCACCCATTTCATGGGTGAGTTACTTAAGACATCAGCTTTAT
AGCCTCTATGAGTCTATCTTCTGTATAAGTTTTGTAATATTTAACATAAGGCTTAATGGGAGATGTTCTTTTGTC
TTGTATTAGATATTGCCAACTAAAGCAATAACCATCAAAAAACACAAGAACTTGTCAATGCTAGCAGTAATTTT
TGAGTGTGTGGCTCTCGGAATGATTGACTTCGTTTCAGTGACTACTATTAAGATTTTCCAAGGACTGACTCATC
CCAAATTTTGTGTATTACCAAAAAACAGATTCTTATCAGAATTGGAATAGAATGTGATCTCTATTGCAAC
AAGTAATTTTAAAAGAAAGCTACATTTATTTTAGAGTAGTGCTCCTAACATGTATTATCAACTTTGTGGATTACA
TTGGAGGAAAAATTTAAACTGGGGCCTTGAATATTTATTTTTTGAACTACCATGTAAATACTGAAGTATAATT
TGGGGGAGTTATAAAGTTATGATAAACATTCTGATTATTTTAAACAATAGTTGTGGTAGATAAACATACTGG
AGGTGAGTAAATGAATTCATATAGTAACATGCAGTCTGAAGTCCTAGTTACTTAATAGGTACTCAGCCTGGAG
TGAAATCCTGGGTACTGACTTTGAGAGGAGTGAGTGTGCATGTTGTCAAAGTTTCTGAACACAGTTCACATAGC
CTTATTAGCAAAAGTTTTAAGAAATGGCTCTATCAAAGAAGCAATTGCAGCTTTATTCAGAAATATAAAAGTGGA
ATTTATGTACATGTCATAAGTGGTACCCACTTCCCCTTTTTACTGTAGGGTGGATAACTCTTAGGATTTAACTCT
TTGAATATTATCTCTTGAATAAAGCATGTGTTAATGTAAACAAACCTACGTAATTTTTGCCCTTTCAATGACTTA
CAGTGGAGAGCCAGTACATCTTAACACTGTTGTAGTGATGGTATCAACCTCATGGTTACTTAGCTCTGCATTTG
TTGCTTTGTTTTTTTCCACTTCAAATCACAAAATAAGTAGATTTTGTCTTGAAAACCTCCATAGCATTTGAAT
ACAAAAGTTGTGCCAGATTGTTTGCCCTAATTCAGTGTGTTTAAACAAATATTTTCAGTACACACTATGTATTAGG
CACTGTGTGGAAAGTGTTAAGGGGTAGACAAGATACCGAATAATCTCCACAAGTTTATTTGTGGTCTATAGTACT
TTTGTAACCTGGGGTTACAAAAATTATAGAAATTTTTTCTTTGTTTCATATGCATATTCATGATTATAATTTGGC
TTTGTGTGTGATTAATGTTTTCTTAAGATTTTACATTATAGAATACCTCAAAAGAAGTTGTCTAAGGACTGGGA
TAGAGAGTATGTTTCATAAAATTGTAGATGTTTAGAATTTTTAAAAACCTACAAATTAGTATATGATTGTTTTA
TATAAGTAAGATAGGAGCAACACTTTAAATTTTGTGGGAGAATACAGCATTAAAGGTGATTTTAAAAGAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1052

MNRVNDPLIFIRDIKPGLKLNLVVFIVLEIGRVTKTKDGHEVRSCKVADKTGSITISVWDEIGGLIQPGDIIRLT
RGYASMWKGLTLYTGRGGELQKIGDLGAVQAAAMRDSIHYYPGNDLHPDLEEPSSLGV

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FIGURE 1053

ATTCCCCAACCTGATAGCCCTCCGCGACGCATTACGCACCGCGGACAGCTGGAGAGGCCGAGGCGCTCTCGCTTT
GATTTGCGCGCCTCCGCCCTCGCGGGGAGAGATTGGCTGCGGCCGCGGGACGGGGTAGTGAGCGCGTCACTTCCT
GCCGCTGCCAGGCGCGTCTCCCGCGCGCTATGACGGCCAGCGCACAGCCGCGCGGGCGGGCCAGGAGTCGGA
GTCGGAGTCGTGGTGACCAGCTGCAAGCATCCGCGTTGCGTCTCTCTGGGGAAGAGGAAAGGCTCGGTTGGAGCT
GGCAGTTTCCAACCTCCCTGGAGGTCACTGAGGTTTCGGTGAAACCTGGGAAGAATGTGCTCAAAGGGAAACCTGG
GAAGAAGCAGCTCTTCACCTGAAAAATGTTCACTTTGCCTCAGTTGTGAATTCTTTCATTGAGAAGGAGAATTAC
CATTATGTTACTATATTAATGAAAGGAGAAGTGGATGTGACTCATGATTGAGAACCAAAGAATGTAGAGCCTGAA
AAAAATGAAAGTTGGGAGTGGGTTCCCTTGGGAAGAACTACCTCCCCTGGACCAGCTTTTCTGGGGACTGCGTTGT
TTAAAGAACAAGGCTATGATCCATTTAAAGAAGATCTGAACCATCTGGTGGGATACAAAGGAAATCATCTCTAG

GTGGCCGAGAAGATTTGATTTTCTTTAAAAAGACAAGAATAAGGTCTGGTTAGGGAATGAAAAATGTATACATTT
CGGAACAACCTCCATTTTATCTAAAAAGTTCTTGTGATTGCCAGTTTATTTGCAGTCTCTTAATGTATCCCCAC
TCTTTCAGCCAGTACTTGAGAAAATTTTTCTGAAATATGTCATTGAATTGTATTCCAGACACAGAATACATGATA
AATACTGATATTATGGGTAATCTGCTTTCCATATTTACCTATGATATTTACTGTGCAGTTTGTCACTACTAGCTT
GCATGGAGTAGGATGCAGTCAAATTTGCCTTAGTGTCTTCTGTTCAAATAGAGACCTGAATTCAAATATTGTAGTT
TAGGTTCAAACAGAGTATGGCTGTTGCAAAATTTACCAAATTTGTTGATTACCTCTTTTATTAAAGAAATGTTGG
GGAGAGGGTAATATATTGTGACAATTTTTGCAACTTACAGGGAATAGGACAGGTCATTAGGGTGTATTTCCCAGG
TTTCCAATTGAGAATCTAAACCAAGAGAAGTGAGACAAACCATCTAATATCTGTATCATGCTATTAATAGGCTGT
GATGTTGAGTTTCTCACTTACTCTTTCTGAGGTCCAGGGTCCTTATATGAAGAGATTCATATATATGAAGAGATT
CGTCTAGAGCAGTGGTTGTCAAAGTGTGGTCTGGGGGGGCCTCAAGAGCCTTTCAAGGGTATTCTAGGTCAAAGC
TGTTTTTATAACACTAAGACATTATTTCACTATTTATAGCTTTTCTTTTTTTTTTTTATTGAGAAGGAGTCTTGCTC
TGTTGCCACATTGGAGTGCAGTGGCAGCATCTCAGCTCATTGCAGCCTCCGCCACCTGGGTTCAAGCAATTCTC
CTACCTCAGCTTCCCGAGTAGCTGGGATTATAGGCACCCACCACCACACCTGGCTAATTTTTGTATTTTATGAGTGG
AGACGGGGTTTACCATGTTGGCCAGGCTGGTCTGGAACCTCTGAGCTCAAGTGATCTGCCCATCTCAGCCTCCC
AAAGTGCTGGGATTACAGGTATGAGCCACAACGCCAGCCATCATTTATCTTTTTCACTCATTTTTTCATGAGTA
TGCAGAGGAGTTTTCAAGAGGCTATCTGGTGTGATATTGTAATAGGCTGAATGCAAAAGCAGATACAAGATTCCA
GCTTTCGTCTGTCATCAGACATTGAAGAGATTGGAGAAATGTAAAGCAGCAGTACTCTTCTACTAATTTTTAT
TGTGGTTAGTTAGAAAAATGGTTATTTTTAGTGGTTTTAATATGTGAAAAAATAAAATTAGCTATTTGCC

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FIGURE 1054

MTASAQPRGRRPGVGVGVVVTSCKHPRCVLLGKRKGSVGAGSFQLPGGHLEFGETWEECAQRETWEEAALHLKNV
HFASVVNSFIEKENYHYVTILMKGEVDVTHDSEPKNVEPEKNESWEWVPWEELPPLDQLFWGLRCLKEQGYDPFK
EDLNHLVGYKGNHL

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FIGURE 1055

GCCCGCCCGCGCCCGACCGAGCCCGGCCTCGGGCAGCCACTCACCGGTGTCCCGTCCGCGTCCTTCCTCCCCGG
GTCCCGGCC**ATG**GCGCTGAGTGAACCCATCCTGCCGTCTTCTCCACTTTCGCCAGCCCGTGCCGCGAGCGCGGC
CTGCAGGAGCGCTGGCCGCGCGCCGAACCCGAGTCCGGCGGCACCGACGACGACCTCAACAGCGTGCTGGACTTC
ATCCTGTCCATGGGGCTGGATGGCCTGGGCGCCGAGGCCGCCCGGAGCCGCCGCCGCCGCCGCCGCCGCCCTGCG
TTCTATTACCCCGAACCCGGCGCGCCCCGCCCTACAGCGCCCCCGCGGGTGGCCTGGTGTCTGAGCTGCTGCGA
CCCGAGCTGGATGCGCCGCTGGGGCCCGCACTGCACGGCCGCTTTCGTGTGGCGCCGCCCGGCCCGCTGGTCAAG
GCCGAGCCCCCTGAAGCGGACGGCGGGCGGGCTACGGCTGCGCCCCGGGCTGACCCGTGGACCGCGCGGCCTC
AAGCGCGAGGGCGCCCCGGGCCCCGGCGGCTTCGTGCATGCGAGGTCCCGGGGGCGCCCCCGCCGCCGCCGAC
ACACCGCCGCTCAGCCCCGACGGCCCCGCGCGCTGCCCGCGCCCGGTCCGCGCGCCTCCTTCCCGCCGCTTTC
GGTGGCCCTGGTTTCGGCGCGCCCCGGGCCCCGGCTGCATTACGCGCCGCTGCGCCCCAGCCTTCGGTCTCTTC
GACGACGCGGGCGCCGCGCGGGCAGCCCTGGGCTGGCGCCCCCGCGCCCGCGGTCTCCTCAGCCGCTGCG
TCCCGCTGGAGCTGTGAGGCCAAGCCAAAGCGCGGCCGCGCTCTTGCCCCGCAAACGCACCGCCACTCAC
ACCTGCAGCTACGCGGGCTGCGGCAAGACCTACACCAAGAGTTCGCATCTGAAGGCGCATCTGCGCACGCACACA
GGTGAGAAGCCCTACCACTGCAACTGGGACGGCTGCGGCTGGAAGTTTGC GCGCTCAGACGAGCTCACGCGCCAC
TACCGAAAGCACACGGGCCACCGGCCATTCCAGTGCCATCTGTGCGATCGTGCTTTTCGCGCTCCGATCACCTG
GCGCTGCACATGAAACGGCACATG**TAG**CCGGGACGCCCCCGCCACCTGCGGCGGGCCGTGGCGGGTCCCACGCG
CCGGGCGCGGCCCCCTCCCAAATGTGACTGGTATTTATTGGACCCAGAGAACCGGGCCGGGCACAGCGTGGCTA
CAGAGGGTCTCCCTCGATGACGACGACGACGACGCCACCACCCAGCCCCGTCTGTGACTGAAGGCCCGGTGGG
AAAAGACCACGATCCTCCTTGACGAGTTTGTGTTTTCAAATGGTGCAATAATTTAAGTGGCATCTTCTCTCCCA
CCGGGTCTACACTAGAGGATCGAGGCTTGTGATGCCTTGTGAGAAATAAGGGCCTTAATTTGTACTGTCTGCGGC
ATTTTTTATAATATTGTATATAGTGAAGTAAATATTGTATTACTGTACATAGAGAGACAGGTGGGCATTTTTG
GGCTACCTGGTTCGTTTTTTATAAGATTTTGCTGGGTGGTTTTTTTTTTAATTAAAAAGTTTTGCATCTTTT

1165/1629
FIGURE 1056

MALSEPILPSFSTFASPCRERGLQERWPRAEPESSGGTDDDLNSVLDFILSMGLDGLGAEAAPEPPPPPPPPAFYY
PEPGAPPPYSAPAGGLVSELLRPELDAPLGPA LHGRFLLAPPGR LVKAEPPEADGGGGYGCA PGLTRGPRGLKRE
GAPGPAASCMRGP GGRPPPPDTPPLSPDGPARLPAPGPRASFPPPFGGPGFGAPGPGLHYAPPAPPAFGLFDDA
AAAAAALGLAPPAARGLLTPPASPLELLEAKPKRGRRSWPRKRTATHTCSYAGCGKTYTKSSHLKAHLRTHTEK
PYHCNWDGCGWK FARSDDELTRHYRKHTGHRPFQCHLCDRAFSRSDHLALHMKRHM

1166/1629
FIGURE 1057

CGGAATTGGTGGGTTCTTGGTCTCACTGAGTTCTAGAAATGAAGCTGCAGACCCCTCGCAGTGAGTGTTACAGCTCT
TAAGGCTCTCTGACTGCCACCCCTGCCTGCCTGCCCCGGCCCTGCACAACATGCAGCCCTCCGGCCTCGAGGGTCC
CGGCACGTTTGGTCGGTGGCCTCTGCTGAGTCTGCTGCTCCTGCTGCTGCTGCTCCAGCCTGTAACCTGTGCCTA
CACCACGCCAGGCCCCCCCCAGAGCCCTCACCACGCTGGGCGCCCCCAGAGCCCACACCATGCCGGGCACCTACGC
TCCCTCGACCACACTCAGTAGTCCCAGCACCCAGGGCCTGCAAGAGCAGGCACGGGGCCCTGATGCGGGACTTCCC
GCTCGTGGACGGCCACAACGACCTGCCCCCTGGTCCTAAGGCAGGTTTACCAGAAAGGGCTACAGGATGTTAACCT
GCGCAATTTTACGTACGGCCAGACCAGCCTGGACAGGCTTAGAGATGGCCTCGTGGGCGCCCAGTTCTGGTCAGC
CTATGTGCCATGCCAGACCCAGGACCGGGATGCCCTGCGCCTCACCTGGAGCAGATTGACCTCATACGCCGCAT
GTGTGCCTCCTATTCTGAGCTGGAGCTTGTGACCTCGGCTAAAGCTCTGAACGACACTCAGAAATTGGCCTGCCT
CATCGGTGTAGAGGGTGGCCACTCGCTGGACAATAGCCTCTCCATCTTACGTACCTTCTACATGCTGGGAGTGCG
CTACCTGACGCTCACCCACACCTGCAACACACCCTGGGCAGAGAGCTCCGCTAAGGGCGTCCACTCCTTCTACAA
CAACATCAGCGGGCTGACTGACTTTGGTGAGAAGGTGGTGGCAGAAATGAACCGCCTGGGCATGATGGTAGACTT
ATCCCATGTCTCAGATGCTGTGGCACGGCGGGCCCTGGAAGTGTACAGGCACCTGTGATCTTCTCCCACTCGGC
TGCCCCGGGTGTGTGCAACAGTGCTCGGAATGTTCTGATGACATCCTGCAGCTTCTGAAGAAGAACGGTGGCGT
CGTGATGGTGTCTTTGTCCATGGGAGTAATACAGTGCAACCCATCAGCCAATGTGTCCACTGTGGCAGATCACTT
CGACCACATCAAGGCTGTCAATTGGATCCAAGTTTCATCGGGATTGGTGGAGATTATGATGGGGCCGGCAAATTCCC
TCAGGGGCTGGAAGACGTGTCCACATACCCGGTCCTGATAGAGGAGTTGCTGAGTCGTGGCTGGAGTGAGGAAGA
GCTTCAGGGTGTCTTTCGTGAAACCTGCTGCGGGTCTTCAGACAAGTGGAAGGTACAGGAAGAAAACAAATG
GCAAAGCCCCCTGGAGGACAAGTTCCCGGATGAGCAGCTGAGCAGTTCTGCCACTCCGACCTCTCACGTCTGCG
TCAGAGACAGAGTCTGACTTCAGGCCAGGAACCTCACTGAGATTCCCATACTGGACAGCCAAGTTACCAGCCAA
GTGGTCAGTCTCAGAGTCTCCCCCACATGGCCCCAGTCCTTGCAGTTGTGGCCACCTTCCAGTCCTTATTCT
GTGGCTCTTGATGACCCAGTTAGTCCTGCCAGATGTCACTGTAGCAAGCCACAGACACCCACAAAGTTCCCTGT
TGTGCAGGCACAAATATTTCTTGAAATAAATGTTTTGGACATAGAAAAA

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FIGURE 1058

MQPSGLEPGTFRWPLLSLLLLLLLLLQPVTCAYTTPGPPRALTTLGAPRAHTMPGTYPSTTLSSPSTQGLQEQ
ARALMRDFPLVDGHNDLPLVLRQVYQKGLQDVNLRNFSYGQTSLDRLRDGLVGAQFWSAYVPCQTQDRDALRLTL
EQIDLIRRMCASYSLELELVTSAKALNDTQKLACLIGVEGGHSLDNSLSILRTFYMLGVRYLTLTHCNTPWAESS
AKGVHSFYNNISGLTDFGEKVVAEMNRLGMMVDLSHVSDAVARRALEVSQAPVIFSHSAARGVCNSARNVPDDIL
QLLKKNGGVVMVSLSMGVIQCNP SANVSTVADHFDHIKAVIGSKFIGIGGDYDGAGKFPQGLEDVSTYPVLIEEL
LSRGWSEEEELQGVLRGNLLRVFRQVEKVQEENKWQSPLEDKFPDEQLSSSCHSDLSRLRQRQSLTSGQELTEIPI
HWTAKLPAKWSVSESSPHMAPVLAVVATFPVLILWL

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FIGURE 1059

TATTTTGT CAGATGTGTTGAACCTCGATTAAAGATTGCATTATGACATTCTTGAAGACCGAGTTCCATCAGGACTT
ATTGTTGACTACCACAATCTGTTGTCTCAATGTGAGGAGAGTTACAGGAAATTTTAAATCTGAGAAGCAGTTTG
TCAAATTGTAACCTGACTCCGAGCAGGAAAATATCTCCATGGTGGAAGGGTTAAATTTGTATTTCGGAGATGGAA
CAGTTGAAACAAAAGCTGAAACTCATTGAGAATCCTTTGTTGAGGTATGTGTTTGTTATCAGAAGAATTCTAAC
ATCCAAGCAAAGGGTGTCCGTTCCAGCGGTGAGAAGATCACTCATGTGGTCTCCTCCACCATGATGGCTGGTCTC
CTGCGGTCCCTGCTTACGGACAGGCTTTGCCAGGAGCCTGGTGAGGAAGAAAGAGAAATTCAGTTCCATAGTGAT
CCATTGTCTGCTATAAATGCCTGCTTCGAAGGTGACACTGTTATTGTTTGTCTGGCCATTATGTGGTACATGGC
ACTTTCTCCATTGCTGACTCCATTGAGTTGGAGGATATGGCCTACCAGATGACATTGTGATAGAAAAGAGGGGC
AAAGGCGACACTTTTGTGGACTGCACTGGTGTGATATTAAATCTCAGGCATAAGATTTGTTTCAGCATGATGCT
GTAGAGGGAATCTTAATTGCTCACCGTGGTAAGACTACGCTGGAAGAACTGTGTGCTGCAGTGTGAGACGACCGGA
GTCACAGTGGCGACATCAGCAGAGTTTCTAATGAAGAACTCGGATTTATATGGCGCCAAGGGTGTGGTATAGAA
ATCTACCCTGGGAGTCAGTGCACCCCTGAGTGACAATGGGATCCATCACTGCAAGGAAGGGATCCTCATTAAAGGAC
TTCTTAGATGAACATTATGACATTCCCAAGATATCCATGGTGAATAATATAATACATAAATGAAGGTTATGGT
GTTGTCTTGGTGAAACCTACAATCTTCTCTGACCTGCAAGAAAATGCTGAAGATGGAACGAAGAAAATAAAGCG
CTTAAATTCAGACAAGTGGAGAGCCAGATGTGGCTGAAAGAGTGGATCTAGAAGAGCTGATTGAGTGTGCAACT
GGTAAATGGAGCTTTGTGCAAGAACTGACCCCTCTGAGCAAGTGGAGGGAAATTTGTGAAATTGTAAATGAAC
ATTGCTGCCTCCACACAGAAAGGCCAGATAAAGAAGAAAAGGTTGAGTGAAGTGGGGATCACGCAAGCTGATGAC
AACTTAATGTCACAGGAGATGTTTGTGGGATTGTGGGGAACCAAGTTCAGTGGAAATGGGAAAGGTAGTTTGGC
ACATTTCTTTTCTGACTACAGTGAAGTAGATAGCAAAATACTGGATTTTGCACATGCTGCCCTAAGAATCA
CTGCTGCCATTGTAGTTTGTCTGTATTGTCTGTATTTTATATTTGATTATTTGGGCTTGAGTGAAAGGTAGATTTA
TTTCCATTTCAGGTTGTGCACATAAAACACTCCCTCTTTATAAGAAAAATCATAAATGCATATAAAATAGAAAA
TATTTGGAGATTGCTTATCTGAAAGTCTTGCTTTCTTATACACATGGTTCTCTCATATTAAGCCTGGTGGTTACT
TTTTAGTGTAATTACCTTTAGCACTTCAAAGACGAGGAAGTAAGGAAGGGAATGCAAGACTAGTGCATAAAAAATG
CAATAGGTGTCATATGTACAGCATTCTTCTTAGAGTTGCCTTTTCATCCCAATTACAGTGAGTCTGATTTCCATC
CTGTATTTGCATAAATACTTGTCTTAAATAAAAGCTTTTATGATTGGGAATTTATCTGCCTAATCAGACTTATTA
TTGAGACGTCAATGGGACGCATTTTTCTGTTGAGCTATGCAGTCGTCAAAACAGCGATAGACAGCATAGGAGGTT
TGAAGCAGAAATGAAATGTGTTATTTCAGAGCCAATGTTGTACATAGAGCATTTTCACTATTGCTGAATGGGAATG
ATTAACAAACAAGGTATTTTTCGGGCCAGGCGGTGGCTCACGCTTGTAAATCGCAGCACTTTGGGAGGCTGAGGCAG
GAGGATCACTTGAGCCCAGGAGTTCAAGACTAGCCTAGGCAACATAGTGAGACCCTGTCTCTACTAAAAATAAAT
TTAAAAAAATTAGCTGAGTGTGGTGGTGCATGCATGTAGTTCCAGCTACTCAGGAGGCTGAGGCTAGAGGATCC
TTGAGCCCAGGAGTTGAGGCTGCAGTGAGGTGTGATTGCGCCACTGCATTCCAGCTTGGGCGACAGAGCGAGAC
CCAGTCTCAAAAAAAAAAAAAAGTATTTTCTCTTACCGTTACAGTATTCTGATTATATTACTGACACAGTCAA
AATGATTAACTGTACAACCTGTATCTGCTGGGTGTTCTTGTATCATATTGTAAAACAGCTTTAAAAATATTTAT
ATTTTAAAAACTGTATGTGACATTAATATGCCTAATGATTAAAATTATAGTGATGAAATAAAAAAAAAAAAAA
AAAAA

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FIGURE 1060

MVEGLKLYSEMEQLKQKLKIENPLLRVFGYQKNSNIQAKGVRSSGQKITHVVSSTMMAGLLRSLLTDRLCQEP
GEEEREIQFHSDPLSAINACFEGDTVIVCPGHYVVHGTFSIADSIIELEGYGLPDDIVIEKRGKGDTFVDCTGADI
KISGIRFVQHDAVEGILIAHRGKTTLENCVLQCETTGVTVRTSAEFLMKNSDLYGAKGAGIEIYPGSQCTLSDNG
IHHCKEGILIKDFLDEHYDIPKISMVNNIIHNNEGYGVVLVKPTIFS DLQENAEDGTEENKALKIQTSGE PDVAE
RVDLEELIECATGKMELCARTDPSEQVEGNCEIVNELIAASTQKGQIKKKRLSELGITQADDNLMSQEMFVGIVG
NQFKWNGKGSFGTFLF

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FIGURE 1061A

TTGGGAAACCCCTACCTGTCTGTACCTGTAGGTCTTTTCTCTGGGGTCTGGAAGAAGAATCCTTCAATATCTTGC
CTTCTGGTAATCTGAGAGCAGGGCGAGAAAAGGAAGATCAGAGTTCCACCCTTAAATCTGTAGGTTTTCACTCCC
CCACTCTCCTTTGCAGTCCCGTGGAGTCTCCATCTGAGCCCTTTTCTAGTCCAGGCATCCCCATGTTGGTGGATG
GCCCATCTGAGCGGCCAGCCCTGTGCTTCTTGCTGTTGGCTGTGGCAATGTCTTTCTTCGGCTCAGCTCTATCCA
TAGATGAAACACGGGCGCATCTGTTGTTGAAAGAAAAGATGATGCGGCTCGGGGGCGGCTGGTGCTGAACACCA
AGGAGGAGCTGGCCAATGAGAGGCTCATGACGCTCAAAATCGCTGAGATGAAGGAGGCCATGAGGACCCTGATAT
TCCCACCCAGCATGCACTTTTTCCAGGCCAAGCATCTCATTGAGAGAAGTCAAGTGTTTAATATTCTAAGGATGA
TGCCAAAAGGGGCTGCCTTGCACCTCCATGACATTGGCATCGTGACTATGGACTGGCTGGTGAGGAATGTCACCT
ACAGGCCTCACTGCCACATCTGTTTACCCCAAGGGGGATCATGCAGTTCAGATTGCTCACCCAACCTCCCCGTC
CATCAGAAAAATGTTCCAAGTGGATTCTGCTGGAGGATTATCGGAAGCGGGTGCAACGTCCTGAGTTTGATG
ACAGCTTGCTGAGGAATTTCACTCTGGTGACCCAGCACCCGGAGGTGATTTACACAAACCAAAATGTTGTCTGGT
CGAAATTTGAAACCATCTTCTTACCATCTCTGGTCTCATCCATTACGCACCAGTGTTTCAAGACTATGTCTTCC
GGAGCATGCAGGAGTTCTACGAGGACAACGTGCTCTACATGGAGATCAGAGCCAGGCTGCTGCCGGTGTATGAGC
TCAGTGAGAGACCATGACGAAGAGTGGTCAGTGAAGACTTACCAGGAAGTAGCTCAGAAGTTTGTGGAAACTC
ACCCTGAGTTTATTGGAATCAAAATCATTTATTTCGGATCACAGATCCAAAGATGTGGCTGTCTCGCAGAATCCA
TCCGAATGGCCATGGGGCTCCGAATCAAGTTCCCCACGGTGGTGGCAGGGTTTGACCTGGTGGGGCATGAGGACA
CTGGCCACTCCTTGCGTGACTACAAGGAAGCTCTGATGATCCCCGCCAAGGATGGCGTTAAGCTGCCTTACTTCT
TCCACGCCCGGAGAAACAGACTGGCAGGGTACTTCCATAGACAGGAACATTCTGGATGCTCTGATGCTGAACACTA
CCAGAATCGGCCATGGATTTGCTTTGAGCAAACACCCCGCAGTCAGGACTTACTCCTGGAAAAAGGACATCCCCA
TAGAAGTCTGTCCCATCTCTAACCAGGTGCTGAAACTGGTGTCTGACTTGAGGAACCACCCTGTAGCCACTCTGA
TGGCCACTGGGCACCCCATGGTGATCAGCTCTGATGACCCAGCTATGTTTGGTGCCAAAGGCTTGTCTATGATT
TCTATGAGGTCTTCATGGGCATTGGGGGGATGAAGGCTGACCTGAGGACCCTCAAACAGCTGGCCATGAACCTTA
TCAAGTACAGTACCCTGTTGGAGAGTGAGAAAAATACTTTTATGGAATCTGGAAGAAGAGATGGGATAAGTTCA
TAGCAGATGTGGCTACAAAGTGAGGAGAAGCTAGCCAGCCCTCTACAAGCTGTCTTCTTGACACGCTGTCACTT
CCTCTCACTCGTCTTGAATCAGCTCCATGTGCCCATGAAATCAATGGCCTCTGTATGGAGCGACCCTGTGAGAA
GCACTTGGCTGGCTGAGCAAATTCATCCTCTGGAATATTCTCTCTCAGCCACAGTGACATTGACCCTCTTGGTT
TTCTCCTCTCTTGCCATTTCTTCCAGTTTTCCCTATTTTCAAGTCTTCTCCTCTCTGATCTCTGTGCTGTTT
CCTCAGGACTCAGTCTGGGCTCTCTTCTATTCTGGTCTCTTTATTTTTTTATTTTTTGTATTTTTTCGAGATGGA
GTTTTGCTCTTGTGCCCAGGCTGGAGTACAATGGTGCGATCTCAGCTCAGTGCAACCTCCGCCACCCGGGTTCA
GGCAATTTCTTGCATCAGCCTCCCGAGTAGTTGGAATTATAGGCATGTGCCACCACACCCAGCTGATTTTTTGCA
TTTTTAGTAGAGACAGGTTTTTACCATGTTGGCGAGCTGGTATCCAACCTTTGACCTCAGGTGATCCACTCGCCC
CTTGGCTCCCAAAGTGCTGGAATTACAGGCGTTAGCCACCATGCTTGGCCTATTCTGGTCTCTTTAACTCTCTCC
TCTTTATTTCTCTCTCTCTCTGTACACTTTTCTGGGTGGTCTCATCCATTCTTTGCTTTTTTCATACCATTTA
TTTGTTAATGATTCCACATTTATTTATGCACCTGGAGAGCTCACAGGAATCTCAGAAACTGATGAGGTACAATT
CTGAACCCCTCAGTCTCTTCCCTTTAAACCTTTCTTTTTCTCTACTTTAATTTTTCTAAAGAGTGTCTTGCTATGT
TGCCCAGGCTGGTCTCCAACCTCAAGTGATCCTCCTGCCGAGTCTCCCGAAGTGCTGGGATTACTGACATGAGCC
ACCACACTCAGCCCTTTAAACCTTTCCCTGGCCTTTCCCATAGCTGGTGAAGGACACCTCCATCCATTCCACGCA
GTTGCTCAAAGCAGAAATTTTCAAGTGAAGTCTTGATGCTGCGCCGTCCCCACTCCCTACATCAGAACGCATCC
CTCATCTGGACTCCAGCGGTGGCTTCTTGATGCTGCGCGGTCCCCACTCCCTACATCAGAATGCATCCCGCATC
CAGACTCCAGCGGTGGTGCTCTACCTGCACGCTGTTGCCAAGTCCAAGTACCATACTCCTGCCTGAGCTATGAC
AACAGCCTCCTCACTGATCTCCCCTTTCTTCCCTTTGCCTCCTCCAGCTCATTTTTTACAGTGTAGAATGACATT
TTGTTTGTGTTTTGTTTTGTTTTGAGATGGAGTCTCGTTCTGTTGCCAGGGTGGAGTGCAGCGGTGCGATCTC
GGCTCACTGCAACTTCCACTCCCGGGTTCAAGCGGATTCTCGTGCCCTCAGCCTCCTGAGTAGCTGGGATTACAGG
CATGCAACCACCATGCCCGGATAATTTTTGTATTTTTAGTAGAGATGGGGTTTCACTATGTTGGCCAGGCTGGTCT
CGAACACCTGACTTCGTGGTCCACCCGCCTTCGGCCTCCCAAAGCACTGGGATTACAGGCGTGAGCCACCCGGCC
TGGCCTAGAATGACTTTTTAAAGATCAAATTAATCAGGTCACTCCTTTGCTTACAACGCAGTGCGTTTAGAGGT
ACACCCCATGTCTCCACAGGGCATAACAGCATCCGATTTAATCTGGATCCATTCCGGCGCTTCTCTCCAGTCAC
CCAGAGGGCCCCAACCCCGCGGCCCTTTCTTCTCAAATGTCTCGGCTCTATACCGTGCTGGGTCTTTTTCTC

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FIGURE 1061B

TTTCTCTCTGCCTGGAACATTCTTTCTTTCCCTTTTGTCTTGCCCACTCCTGTTTACCCTTCAAGTTTCAAGTT
CATGTCACGTCTCAGAGAGGTTTTCTGTGCTCGCCCTGTTTCTCTCAGGAAGCCTTGCTCTTTTCCATCATGC
CTCTAATCACAGCTTATAATCGGATATTTATTTCTGTGTCTACAGTCTTGCCCTGCCAGACTGTAAGCCCCATGT
GGGCAGGCGCTCATGATTGTTTCTGATTGTTTCACGCATGCTGCTAACCCAGAGCCTGGGCCCAAAGCTAGTTAG
TACTCAATAAACAATGCATTGAAAAAAAAAAAAAAAAAXTA

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FIGURE 1062

MLVDGPSEPALCFLLLVAVMSFFGSALSIDETRAHLLLKEKMMRLGGRLVLNTKEELANERLMTLKIAEMKEAM
RTLIFPPSMHFFQAKHLIERSQVFNILRMMPKGAALHLHDIGIVTMDWLVRNVITYRPHCHICFTPRGIMQFRFAH
PTPRPSEKCSKWILLEDYRKRQNVTEFDDSLRNFTLVTQHPEVIYTNQNVVWSKFETIFFTISGLIHYAPVFR
DYVFRSMQEFYEDNVLYMEIRARLLPVYELSGEHHDEEWSVKTYQEVAKFVETHPEFIGIKIYSDHRSKDVAV
IAESIRMAMGLRIKFPTVVAGFDLVGHEDTGHSLRDYKEALMIPAKDGVKLPYFFHAGETDWQGTSIDRNILDAL
MLNTRIGHGFALSKHPAVRTYSWKDIPIEVCPISNQVLKLVSDLRNHPVATLMATGHMPVISSDDPAMFGAKG
LSYDFYEVFMGIGGMKADLRTLKQLAMNSIKYSTLLESEKNTFMEIWKKRWDFIADVATK

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FIGURE 1063

CCAAGCTCCAGCTGTTTGTCAAGGCGAGTGAGGACGGGGAGAGCGTGGGTCACTGCCCCTCCTGCCAGCGGTCTT
CATGGTCCTGCTCCTCAAGGGCGTACCTTTACCCCTACCACGGTGGACACGCGCAGGTCCCCGGACGTGCTGAA
GGACTTCGCCCCCGGCTCGCAGCTGCCCATCCTGCTCTATGACAGCGACGCCAAGACAGACACGCTGCAGATCGA
GGACTTTCTGGAGGAGACGCTGGGGCCGCCCCGACTTCCCCAGCCTGGCGCCTCGTTACAGGGAGTCCAACACCGC
CGGCAACGACGTTTTCCACAAGTTCTCCGCGTTCATCAAGAACCCGGTGCCCGCGCAGGACGAAGCCCTGTACCA
GCAGCTGCTGCGCGCCCTCGCCAGGCTGGACAGCTACCTGCGCGCGCCCTGGAGCACGAGCTGGCGGGGGAGCC
GCAGCTGCGCGAGTCCCGCCGCGCTTCCTGGACGGCGACAGGCTCACGCTGGCCGACTGCAGCCTCCTGCCCAA
GCTGCACATCGTCGACACGGTGTGCGCGCACTTCCGCCAGGCGCCCATCCCCGCGGAGCTGCGCGGGCGTACGCCG
CTACCTGGACAGCGCGATGCAGGAGAAAGAGTTCAAATACACGTGTCCGCACAGCGCCGAGATCCTGGCGGCCTA
CCGGCCCCGCGTGACCCCCGCTTAGCGCCCCACCCCGCGTCTGTGCCCCAATAAAGGCATCTTTGTGGGAAAAA
AA

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FIGURE 1064

MVLLKGVFFTLTTVDTRRSPDVLKDFAPGSQLPILLYDSDAKDTLQIEDFLEETLGPPDFPSLAPRYRESNTA
GNDVFHKFSAFIKNPVPAQDEALYQQLLRALARLDSYLRAPLEHELAGEPQLRESRRRFLDGDRLTLADCSLLPK
LHIVDTVCAHFRQAPIPAELRGVRRYLD SAMQEKEFKYTCPHSAEILAAAYRPAVHPR

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FIGURE 1065

GGCACGAGGCACCTCGCTCGCAGCCTCCCCAGCGCAGCAGCCCGGCTGTGGGCCTGCGGCAGCCGGGTCTTCCTG
GTCCCCACCTCCTGGGGCCGACGGGCGGCAGGAAGGGGCTCGGCGGGACGCGCCGTGAGGGACCTGAGGAGGAAC
AACGGAACGCGTTTCGGAACGGCCTGGACTCCCGAGACTCACCCGACTCGTGGCCACACCGGGAGAACTGAAGCGG
CAGTAGCCGGCGGAGACGCCCCGACCCGAAGGCCGGCTGCTAGGGAGCAGACAGCTGAACCGCTTGCCAGACGCCG
AAACCCAGTGACGCCCTCCACCGCTCCACCGTGCTCCCGGCTCCCCGCCCCCGCGCCCGGGCCCCAAGGCGC
ATGCGCCGCTGTCTGGAGGGGCCATTTCCGTCCGTCTGTTGGGGGAGGCACAGTGAGTCCACTGGGGCACGGC
AGCGTCTAAGCCACAAGCCGAGCACATAAGCCAGGTCTTAACGGAGCCTATGTGTAAGTCCACTACTGGTGCAAG
GTTGCACACTTCTAAGAAGAGCGGCGTGGGGGGCTCGGCGACCTTCGCTTCAGTCGCTCCCCGTGCAGTCCCCT
GTGCCCAAGACACAGCCTGATGCTTGTGCTCCGGTGGGCGGAGCTTGGAGGCGGCGGGAAGTGAATTGGTGGCT
TTGAAGGCGCGCGAGCGGGAACAGCTCTTGAGGAGTGAGACTGCAGGAGATGTGGGCCGTGCCAAAGAGATGGA
TGAGACTGTTGCTGAGTTCATCAAGAGGACCATCTTGAAAAATCCCCATGAATGAAGTGAACAATCCTGAAGGC
CTGGGATTTTTTGTCTGAAAATCAACTGCAGACTGTAAATTTCCGACAGAGAAAGGAATCTGTAGTTTACGACTT
GATCCATCTGTGTGAGGAAAAGCGTGCAAGTATCAGTGATGCTGCCCTGTTAGACATCATTTATATGCAATTTCA
TCAGCACCAGAAAAGTTTGGGATGTTTTTCAGATGAGTAAAGGACCAGGTGAAGATGTTGACCTTTTTGATATGAA
ACAATTTAAAAATTCGTTCAAGAAAATCTTCAGAGAGCATTAAAAATGTGACAGTCAGCTTCAGAGAACTGA
GGAGAATGCAGTCTGGATTGCAATTGCCTGGGGAACACAGTACACAAAGCCAAACCAGTACAAACCTACCTACGT
GGTGTACTACTCCAGACTCCGTACGCCTTCACGTCTCTCCATGCTGAGGCGCAATACACCGCTTCTGGGTCA
GGAGTTAGAAGCTACTGGGAAAATCTACCTCCGACAAGAGGAGATCATTTTAGATATTACCGAAATGAAGAAAGC
TTGCAATTAGTGAACATGAAAGGAAAATAAAAAATTCCTCACAGTCAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1066

MDETVAEFIKRTILKIPMNELTTILKAWDFLSENQLQTVNFRQRKESVVQHLLHLCEEKRASISDAALLDIIYMQ
FHQHQKVWDFQMSKGPGEVDLFDKQFKNSFKKILQRALKNVTVSFRETEENAVWIRIAWGTQYTKPNQYKPT
YVYYYSQTPYAFTSSSMLRRNTPLLGOELEATGKIYLRQEEIILDITEMKKACN

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FIGURE 1067

GTTTTTGTGCAGGAACAGCCCCTCCCGTCTTTGTCCTGGCGGTGAGCACCCAGGGCTAAGCTTTTGAACACTTTC
TTTGTGTTTGGATTTCAGCCAGGCAATGCATATTTGCTTTCATTTCTTCTTGAGCTTGAGGAGCTCCTGGGTGCA
AATCTTGGAAAATGAGGATCTCTGAGCCTTTCAGGCCAGCTCTTTGTTTTGTAGCAGACAATTGAGGCTTTGAA
AAGGAAAGTGGGTGGGGGCACCCACAGGTGGCCCTCATCACCCAATTGCCAGTGCCTGCAGGCTGCTTCAGCAG
AGGCCCAGAGTCAAAGAGGACTTAAACACAGCTGTGCTTTCTCCCTTAGCTTCTGTGTATGAGAGAAACGACTTC
TGTTTTTCAAAGTAAGAACAAGGAGGAATTTGTTTTCTAAAAGAACATTAAACACAGGCTCGTGGTCTAAAAGCA
AATGTTTCAGCAGGATGTTTCAGGGCCTTAAAGCACAGTCAGCAGGACTCAGCATCTCCCAGCACCTGCTCTCCGG
TTGTTCATGGTAACATCATCCCCAACCAACACCTTGTCCAGCCGAGAGACAGCAATCATAAGGAGGGACCTCGG
TTTCCCCCGAGGATCCTGGGCTTCCTTTCTGAAACGCTTGCTTCTGAGCTCAGCAACCAGGAACACCAGGCCAGC
CCATCCCCAGCACCTCTGTGGAGATGAGGGACAAAGTCTACAGTCCCTCTTCTGTTCTGTATGAGAAAGGGAGG
GAAGAAAACATACCCCGAGCGCCTGCAATATGGTCATGACACTTTCAAAAAGCCTGTGCTATGGAGTCATGATCA
GAAACCAGAGTGTGGAGAGGGTCAGCAGCCTGCCTCAGAGCAGCCAGCTAGGCGGGGAGTGGTAAATTTGGGACT
TGTACCCAGGCATGACTGGCTCCGAGCCCAGTGCTCCACTCTATGGAATGTTCCCTGGGCCTCAGTTGCTTTCTT
TTCTTTTGAGGCCGCGGGCTGCTGCCACTCTGGCAGCTGGTGAGTT**AG**CTGGAGGGCAACATTCCAAAGCAGGG
GCAGCATGCTGCTTTCTCTCTGTGCCACTCCTGCGGGGAAGTCCGTTGACTCCCACCGCTGAAGGGAGCTGGCA
ACACCAGGATGAGGTCCCAGGGGACGGGAGCAGGTACCCACTGTCTGTCTACCTTCCCCTGGAAGACACGGAC
AGGCCAGCCCTTGCGGGGGCAGGCAGAGGACAGAGTTGGCTTTGCGCGGTCTCTGCCTGCTGAGCAGTTCCAATT
CCTCTCATGGGAGAAACAAGGAGGCAGTCGCTTGTGCATGTTCCAGAAGTTTACTGGGGAGGAGGAAGCGGACA
GAGGAAGCTGTGTGTGCATGTGAAGGGGTGGGCAGGGTGGGAGGGATGCACGCGTATGTGAGCATAGCATGTGTG
AGTACTACACACATCTCCATGCAGAAGCACAACTGGGCAGCCCTGGCTTCCAGCTCTGGGCTTCAGCACAAACAGA
CACCAGCCTGTGGTCTCTCAGAAGCCAGGGAGACCACATCGGGCTCAGGACGTTTTACCCAAAGTCCAGAGTTTT
TATGCCTCTCCCTGGCATTCTCCATAAAGAAGGGAAGGTGAGATGACCCCTTAGATCTGTGTCTATCTGGGAATTT
CCTTGGGCTGGTTTAGACACGATGCCCTCTTTTTCTCAGGATAGCAGATAACCTGCTTTGAAAGAGGGCTTAATT
CTGTGGGTCTAAATTTTCTCCTTTCTCTCTCTCTCTCTGTGTGTGTGTGTGTGGGAAAATGGCAAGTTTCCAATA
CCAGCTTTGGAGGAACGATTACGTTTTCCCTCCAATTTCAAGTCCGAAAGACCAGAGCCCTCATTCCAAAGCCCC
CCACCCAGATGGATTTTTTCGTTTCATTTGTTCATCCGTCCCATGGGAGGGCCCCATGTCTCCTCAGAACCCATCC
TGGAGGCAGCAGGTCCGGTAGAGTGAGTTTGGCCTGCTCATGACCTCCACCCCTGAGATTGTGAACAAGGATGTC
TGGGGCGATGCTGAGAATGTTTTGAAGCTGCTCCAGATGACGCTGATGATCACACCAGATTGAGTGCTGCGAT
CGCCTTGAGTCCAGCCTCTGCATAAACGAGGTTCTCATAAACAAAGTTCACTCTACCCCTAAGCTAAGTCTATGTGA
GCAAACCCACTTCATCCTTTGTACCTGGAGACCTGGTTACACTAACCTGATACTGACCTGTTTCATGTAGCTGGAA
TGGTGTGTTTTCATGCAGTGTGGACCAAGCAATGGCATGGGGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG
TGTTTGTGTATGCGTTCACACTTGTGTGTGTATATGTGCATGTAGATGCTGCATAAATGATTTTTGATGTCAAAG
ACAAACACATTCCATTGTTTTAAATATTCTATTATGTAAACAATACGCAGAGGGACCATACTACTCTTGTGCATA
TTATTTGTGATGGTAAACATGCATTTGCAATAAATTAAGCTTTCTGGGAAGGCAAGCAGTATTGGAGCCAAACG
ACTGTCTCGGAACATGTGTGTGTTATCTCGGTTTCATATCAAGTCCAAAGCTAATGGAGCCTTCCCCGCCATCCAG
GGAGGAACACCAGGACCCCGGAGTTTCTTCTTAGTGCTATATTTTAAAGTTGCATTGACGTTTTCTCCCTTCC
TTTTGTGCAAGTTGGAAGTAGCAGTGTTCTAAAAGATGGTTTGACGTTTTTGCTGTTGTTTTATGTTTTTAAAAA
TGTATCTGCTTTGTGTTTGGAAATAAAAATCTCTATTTTGGTCTATGAAAAAAAAAAAAAAAAAAAAA

1178/1629
FIGURE 1068

MVQQDVQGLKAQSAGLSISQHLLSGCHGNIIPNPTTLSSRETAIIRRD LGFPRGSWASFLKRLLLSSATRNT RPA
HPQHLCGDEGQSPTVPLPVLMRKGGKKTYPERLQYGHDTFKKPV LWSHDQKPECGEGQQPASEQPARRGVVNLGL
VERHDWLRACSTLWNVPWASVAFLSFAGRGLLPLWQLVS

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FIGURE 1069

GCCGCGGAGAAGGAGCCGGACCCCTTGGGCGGAGCGCCCAATGTGTGGTCCCTCACGCCGTCCCGCACCTTGCTT
TTTAGGGTTCTTTTCCGCTTTCTGAGCCCTTTTATACCTTACGTTTAGAAGGGGAAAATCATCCTCCACACCT
TCTCCCCGACTTTTTCCTTTTTTGTCTTGAAGTTACCCAAAGGCCTGTGTATTGTTCTCAATGGTCCCAAGAAT
TACTCTAATATAGTTGTTTTCTGAGGGAGGATGGATGGAGATAACTATCCTGATCCCAATGTCACTTTTTAAGG
CATTCGCTTCAAGAGACAAGCAGTTTGAATCAGGCAGAACTGGATTGCAAAAATTTATGGGCAGACCGAGAAAAT
GCTGCTGTGAAGACCCAATTAAAGCTTTCACATAAATGAAGCTACAGCTATCATGATTTAGTGCCCCCAAAGGA
AGAACTTCAGTGACACAAGAAAGGACATTTCTGGGGGTAGTAGAATGCTTGAGGCCTGGAATTTAAACCTGAGCCA
CTATCTGAAGGTTTAAATATATCTTTGCCAAGTCCAAGGGTACAAAGATTTTCTCCTGTGTTTTCTTCTAGAAGTT
TTATCATTTGATAGTCTGTGATCCATTTCAAGTTGATTTGCTATCTGGTGTGAGCTATTAAATAATAGAAGAAAA
TGGAATTGAATATGATGTCAGCATGGAACAATCTAATGATTCATTAAGAGTCAACCATAATGACGGTGAAGAGTC
AAAAACCAGTGCTCAAGTATTTGAGCATCTAATCTGTATGGACTCCAGGGATTCTTCCTTTGGACAAAATGATTC
TCCTACAGTTTTTGCCCATCACTACTCGTGAAGCAAATAATTCACTCATATCACAGAATATACCAGGGCCCCCTGAC
TCAGACACAGACTCTTTCTGCAGAGCAATTCCATCTAGTGGACCAAAATGGGCAGGCTATTCAATATGAACCTCA
GTCATTGGGGGAATCCAATGCACAAATGATGATCGTTGCCAGCCCAACAGAAAATGGACAGGTACTTCGTGTAAT
TCCACCTACCCAGACAGGAATGGCACAAGTGATTATACCTCAGGGGCAACTTGTGGATGTGAATAGTCTCGGGA
TGTCCCTGAAGAGAAACCCAGTAACAGAACTTACCAACTGTAAGAGTGGATACTCTAGCAGACAATACCAGCAA
TTACATTCTTCATCCTCAAACATCCTTCCCATTTGCCCAAAAAGTCAGTGACCGGAATGCTGGAAGAACCCTTCT
GGGGCCTCTTCAGCCACTTTCTTCTAATACACCTATATGGGCCTGCCGTCTTAGGAGCTGTGAGAAAATTGGAGA
TTCATACCGTGGCTACTGTGTAAGTGAGACTGAATTAGAAAGTGTCTAACATTTTACAAGCAGCAACACAGAG
TGTTTGGGGGACCCGTCAGTCTCCAAGCCCAGCCAAGCCTGCTACACGCTTGATGTGGAATCCAGTATGTTCC
ATATGATGGAATCCCATTTGTTAATGCAGGGAGTAGAGCTGTGGTAATGGAGTGTGAGTATGGGCCAAGAAGAAA
AGGTTTCCAGTTAAAAAAGTCAGTGAGCAGGAAAGCAGGTCTTGTGAGCTCTACAAAGCCACTTGTCCAGCTCG
GATTTACATTAAAAAGGTACAGAAGTTTCCTGAATATAGAGTTCTACAGACCCCAAAATTGACAAGAAAATTAT
CAGAATGGAGCAGGAGAAAGCTTTTAACATGCTAAAGAAGAACTTGGTAGATGCTGGTGGTGTCTTAGGTGGTA
TGTACAGTTACCTACACAGCAAGCTCATCAGTATCATGAATTAGAGACTCCCTGCCTCACTTTGTACCTTCTCC
TTTTCTGTGCTTCTCTTGAAGAAGAGGAACTGCAGTTAGAGATGAGAATTGTGCATTACCCTCACGTTTACA
TCCTCAAGTAGCACATAAGATTCAAGAATTAGTATCACAGGGAATAGAACAAAGTGTATGCAGTAAGGAAACAGCT
AAGAAAATTTGTGGAAAGGGAAGTGTCAAACCCGATGAGGTACCTGAAAGACATAATTTATCTTTTTTTTCCAAC
TGTAATGATATAAAAAATCACATCCATGAGGTACAGAAATCCTTGAGAAATGGAGATACGGTATATAACTCAGA
GATTATTCCAGCAACGCTTCAATGGACTACAGACAGTGGGAATATTCTCAAAGAGACCATGACAGTTACATTTGC
AGAAGGAAAATTCACCAGGAGAATCAATTACCACCAAAGTGGAAACAAATCAGACCAGGGGTTCTTTGTCTCCTGA
GCCAACCCTTGTCTCTCTCACTCTCCTCATTTTACGCCCCAAAATATTTACACAACCTACAGGGTTTTGCAGTTACA
ACCAAGGTACACCTCTCCTGATGAATCACCAGCTGTGGTATCAGTAAATAACCAGCCGTCTCTAGTCCTTCAGG
ACTTCTGGATACAATAGGAAGTGTGTAATGAATAATAATTCTCTACTGCTTGGTCAAAGTCATAGCCTTCAAAG
AGATACATGCTTAACCCAAAACAATAGTACTGCCTCCACCATGGGTAACTTCCAGAACCATCAAAATCTAGT
TGCAATGGACGAGCTGGTAGAAGTTGGAGATGTTGAGGATACAGGGAATCTGGAAGGAAGTTCATCGGATTCT
GTTGGGAGATGTGCAGACTATTCCAATACAGATTATAGACAACCACTCAGCTCTTATTGAAGAAAATCCAGAAAG
TACCATTTCTGTGAGCCAAGTTAAACAAGAACCACAAAGAACAGCATTGTCTATGGAAGCAAAAAACTGTGGACT
ATAAGAAATTATCTGCTACATAAATTATTGAAGCTTTTTCAGAAATTACAACCTCTGGTGACTTCTGATGTCTTAGA
AAGGAAGGTGAATATAGTCAAAGCGTGGCATTGAGATAATTGGACTGAAGACCAGTTTGATGAGAAGCTTTTATT
TAAACTGATATATTTGTTGCCAGTTCCATATTTTTACCTTCTTAAGAGATGTTTTACTCTTCTTATTTTGTAT
AATTTTATGCTCTTTGATTATCTAATAAGGCCAGTATTTCAAAGCTGTTCTGAATTTATCCACAGTAATATAG
TCTGAACACAAAATAGTTTAACTTATCCTTGGAAATATTCAATTTTGGTTATTACAAAACAGAAAAGAACAA
CAGCAACAAAAACATTGTGTGAATATATGTTGTATGTGTATGTATATCATGAATTTTTTTTTTAAGTTCTGA
AAAAGAACTTGTCTCTCTTAAAGTTGTGAAGAAATTGTTAATTGCCAGACAGGTAAGAAAATGTTTATAATCT
ATCTCATTAAGAAAGATGAAGTATTAGATTTTACATCATAACACAAAGTCCAGCAGCTACATC

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FIGURE 1070

MEQSNDSL RVNHNDGEESKTS AQVFEHLICMDSRDSSFGQNDSP TVLPIT TREANN SLISQNI PGPLTQTQTL SA
EQFHLVDQNGQAIQYELQSLGESNAQMMIVASPTENGQVLRVIPPTQTGMAQVIIPQGQLVDVNSPRDVPEEKPS
NRNLPTVRVDTLADNTSNYILHPQTSFPLPKKSVTGMLEEP LLGPLQPLSSNTPIWACRLRSCEKIGDSYRGYCV
SETELESVLT FHKQQTQSVWGTRQSPSPAKPATRLMWKSQYVPYDGI PFVNAGSRAVVM ECQYGPRRKGFQLKKV
SEQESRSCQLYKATCPARIYIKKVQKFPEYRVPTDPKIDKKIIRMEQEKA FNMLKKNLVDAGGVLRWYVQLPTQQ
AHQYHELETPCLT LSPSPFPVSSLEEEETAVRDENCALPSRLHPQVAHKIQELVSQGIEQVYAVRKQLRK FVERE
LFKPDEVPERHNLSFFPTVNDIKNHIHEVQKSLRNGDTVYNSEIIPATLQWTTDSGNILKETMTVTFAEGNSPGE
SITTKVETNQTRGSL SPEPTHLLSSLSSFQPKIFTQLQGLQLQPRYTSPDESPAVVSVNNQPSSSPSGLLDTIGS
AVMNNNSLLLGQSHSLQRDTCLTQNNSTASTMGNLPEPDQNLVAMDELVEVG DVEDTGNLEGTVHRILLGDVQTI
PIQIIDNHSALIEENPESTISVSQVKQEPKEPALSM EAKNCGL

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FIGURE 1071

AGTGTGGTTTTAGTTTTTCTAAGAAGTGGCGTGGTTTGGGGCTTTATATCCGGGAGGAGCATATGTACGCAAAT
CCTGGGGCGTTTGCAAACCCGGATCCGGGGCGTCTGGCCCCATGCCCGGCCGGGCGTTTGAGGGCTACTGCCACG
CAGCGTTTCTGGAGCCTGCCGGCTGGTGCCCTGGTGGCCTTTATCTCTGTCCCCCTTTGTCTCTTTATCTCAGG
CTCTCCAGGAGGCCGGGGGGCCCACTCCGCCATCGCTCCCTCGGCTACGCTGCCACTCCAATGCCCCGCAGGT
CGCGAGCTGCTGTTCTTTTGAAGGCGCCGGAGAACCAGGGGCGTCCCGGCCACCTCTGACTCGGAGCAGCGCCG
AGCACTGACGCTCCCGCCCTTGGGCAAGGACGCCAGTGCGCCCGCGCGTCCCTCTGCGCGGCAGCCCGTCCG
GGCCCTCAAGGGGAAGCCCAGGCCAGGATGCCCCGGGTGCGCGGTGGCCGGGCTCCTGTTGCTGGCGGCCGCC
GGCCTCGGAGGAGTGGCGGAGGGGCCAGGGCTAGCCTTCAGCGAGGATGTGCTGAGCGTGTTCGGCGCGAATCTG
AGCCTGTGCGCGGCGCAGCTCCAGCACTTGCTGGAGCAGATGGGAGCCGCTCCCGCGTGGGCGTCCCGGAGCCT
GGCCAGCTGCACCTTCAACCAGTGTTAACTGCTGAAGAGATCTTTCCCTTCATGGCTTTTCAAATGCTACCCAA
ATAACCAGCTCCAAATTCTCTGTCTGTCCAGCAGTCTTACAGCAATTGAACCTTTACCCATGTGAGGATCGG
CCCAAGCACAAAACAAGACCAAGTCATTGAGAAGTTTGGGGATATGGATTCTGTGCTGAGCATTATTAATCTG
GCATCTCTCCTCGGATTGATTTTGAAGTCCACTGATAAAGAAATCTTATTTCCCAAAGATTTTGACCTTTTTTGTG
GGGCTGGCTATTGGGACTCTTTTTTCAAATGCAATTTTCCAACCTATTCCAGAGGCATTTGGATTGATCCCAA
GTCGACAGTTATGTTGAGAAGGCAGTTGCTGTGTTTGGTGGATTTTACCTACTTTTTCTTTTTTGAAAGAATGCTA
AAGATGTTATTAAAGACATATGGTCAGAATGGTCATACCCACTTTGGAAATGATAACCTTGGTCCCAAGAAAA
ACTCATCAACCTAAAGCATTACCTGCCATCAATGGTGTGACATGCTATGCAATCCTGCTGTGACAGAAGCTAAT
GGACATATCCATTTTGATAATGTGAGTGTGGTATCTCTACAGGATGGAAAAAAGAGCCAAGTTCATGTACCTGT
TTGAAGGGGGCCAACTGTGAGAAATAGGGACGATTGCCTGGATGATAACGCTCTGCGATGCCCTCCACAATTT
ATCGATGGCCTGGCGATTGGGGCTTCTGCACTTGTCTCTCCTTCAGGACTCAGTACTTCCATAGCAATCCTA
TGTGAGGAGTTTCCCCACGAGTTAGGAGACTTTGTGATCCTACTCAATGCAGGGATGAGCACTCGACAAGCCTTG
CTATTCAACTTCTTTCTGCAATGTTCTGCTATGTTGGGCTAGCTTTTGGCATTTTGGTGGGCAACAATTTTCGT
CCAAATATTATATTGCACTTGTGAGGCGATGTTCTCTATATTCTCTGCGAGATATGTTTCCAGAGATGAAT
GATATGCTGAGAGAAAAGGTAAGTGAAGAAAAACCGATTTACCTTCTTCATGATTGAGAATGCTGGAATGTAA
ACTGGATTACAGCCATTCTACTCATTACCTTGATGCAAGAGAAATCGAATTGGAGTAATAGAAAATGGAAGAT
GGTGTGTTAATAAAGGCATTTAATAGATAAAAAACATCTCCAAAAGGATTTTGAAGCTGATCCTATTTAGTTAA
AAAGATAATTTGCTTTCAACTGTAGGTCCAGAAAATAATTATTGGCATCAGTCTGTGAAATAGTCCATTTATTT
GTTGTTAAAAATGCTTCAAAAGGTTTTCAGTGTGAGTCTGAGATGCCTGGTATATAGGAGCCTTTGGGAAATACT
TATTTTTCAGTATTCCATGCATATTAGATATCACCATGAAGCAAGAGACATGCATTCTATAATCATGTAGACACT
CAGACTCAGGGGAAAATACAAGTTATATCCTGAAAGCCTTTAAACTCTATGGTAGGATCAAAGATTCAAATGGT
TTCAGAGAGGTTTTATTTCAATTAATTTGTTCTAGTGCTTTCAAGAGCAAGTACATCAAAATGTAGAAGGTAAAA
TGTATGCAACACTAATATAAATTATTCCAAGTCTTTAAGGAGCCAAAGAAAAAAGATTTCTCACAGCTTTTTG
TCTGTTTTGTATTTCAATTAGGAAGTTCAGTATTTATTTGAAAACCATTTCTAAAATAATAGGAGTTAGGAAAT
AAATAAAGTTTTGCTAGCCCTGCTAAGTTCAGGCTTAGAGGCTTATCGCTAAGXTAACTTCACCAGATTCCAC
GAAAAGCTGGATAGCTTTTTTTCTGACTTATGTTGTGTTGCACCCCTCACAAATGGCAGAACAGTATGTAAAGC
TGGTAACACCTCGGTTTCAGTGCACCATGTGTTTGTGTTGTAAGGTGAAGAATATGTTGGTTTTAGAGAAAGAA
TTGGATGTAATTTTATGCAATTTACTTTTTAAAGACAAACATAACTATTTAGCAGAGAATATTTTAATAAATGCAA
AACAACAGCTGGACTGCTGTACATCAAGGACAGATTAAGTGGAAAACATATGTTCCCTTATGTGTGATTGAGAGCC
ATTGAGAAAAGACTTCTTTTGTGTTTCAGCCTATACTTTTCCATATGGTATACCTTGAAAAAATTAGCACACCAT
GGTTATTTTTCTACCTTTTTATAAAGACAGAGCCTGTTTACTCATTTAGAAAGATAGAGAAAATTGGTCTAAAATT
GAACATCCTAGATTACACTCCCAAGTCACTTAAGGTGATTTGATGGTGAAGAAAATGATTGACAAAGCCCAACA
ATGATCTCAGGAATTACATTTTCCAACAGACCAAAAAATGTTTTCATGTAGCAGCAATGCAGATTTGGTGAATAT
TTAATATATATTTTAGTATGTATTTCACTTTATGACTGACAATTAATAAATATTTGTTTGGCCAAATAGTAAACAC
CCTTTTGAAACCATGAAAAA

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FIGURE 1072

MAPGRAVAGLLLLAAAGLGGVAEGPGLAFSEDVLSVFGANLSLSAAQLQHLLLEQMGAASRVGVPEPGQLHFNQCL
TAEEIFSLHGFSNATQITSSKFSVICPAVLQQLNFHPCEDRPKHKTRPSHSEVWGYGFLSVTIINLASLLGLILT
PLIKKSYFFKILTFFVGLAIGTLFSNAIFQLIPEAFGFDPKVDSYVEKAVAVFGGFYLLFFFERMLKMLLKTYGQ
NGHTHFGNDNFGPQEKTHQPKALPAINGVTCYANPAVTEANGHIHFDNVSVVSLQDGKKEPSSCTCLKGPKLSEI
GTIAWMITLCDALHNFIDGLAIGASCTLSLLQGLSTSIAILCEEFPHELGDVILLNAGMSTRQALLFNFLSACS
CYVGLAFGILVGNNFAPNIIIFALAGGMFLYISLADMFPEMNDMLREKVTGRKTDFTFFMIQNAGMLTGFTAILLI
TLYAGEIELE

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FIGURE 1073

GAATTCGGGCTCCCGCGGCTGCAGGCGCGCGCTAGAGTGCCTGGCGGGCTCCGGCTTCCGCGTCCGCCCCGGCC
CCGGTCCAGACTTAGTCTTCAGCTCCGCGCCCCGCTCCGCCGCGGCCACCGCGCCCGCCGGCAGCCGAGCCCCCA
GCGACGCCCGCACAGCTCCGGGTGCCAGACAGGGGGCCATGCCGTGCCGGAGGGAGGAGGAAGAGGAAGCCGGC
GAGGAGGCGGAGGGGGAGGAAGAGGAGGAGGACAGCTTCTCTACTGCAGCAGTCAGTGGCGCTGGGCAGCTCG
GGCGAGGTGGACCGGCTGGTGGCCAGATCGGCGAGACGCTGCAGCTGGACGCGGCGCAXGACAGCCCGGCCCTCG
CCGTGCGGGCCCCCGGGGGCGCGCTGCGGGCCCCGGGGCCCCCTGGCTGCGGCGGTGCCGGCGGACAAGGCCAGG
TCCCCGGCGGTGCCGTGCTGCTGCTGCCGCCCGCTTGGCGGAGACTGTGGGCCCGGCGCCCCCTGGGGTCTGCGC
TGCGCCCTGGGGGACCGCGGCCGCGTGCAGGGCCGCGCTGCGCCCTACTGCGTGGCCGAGCTCGCCACAGGCCCC
AGCGCGCTGTCCCCACTGCCCCCTCAGGCCGACCTTGATGGGCCTCCGGGAGCTGGCAAGCAGGGCATCCCGCAG
CCGCTGTCCGGTCCGTGCCGGCGAGGATGGCTCCGGGGCGCCGCCGCTCCCGCGCCTGCAGCAGCGACGCGGG
TCCCAACCAGAAACCCGCACAGGCGACGACGACCCGCACCGGCTTCTGCAGCAGCTAGTGCTCTCTGAAACCTC
ATCAAGGAGGCGCTGCGAAGGCTTCATTGCGCAGCGCTGCAGTTACGTGCAAAGCTTCCCCAACGCCCGCTCCTG
GGACCTCTGTCCGCCCGGTGCATGAACCCCCCTTCGCTCGCAGCCCTCGCGCGGCCTGCAGTGACCTGGCGCC
TCCGGGAGGGCGCAGCTCAGAACTGGCGACGGCGTTCTTGTGCTTGGCAGCTAAACAGCCCCGGGGTGGCCACAGC
GCCAGCCTCAGACTGGAGGGCAAGGGGTTCCTTGAGGGCTGCAGTTCTACTCAGGCTGGTGGAGAAGCTCTGGCT
TTTGGAAGCGAGAGTAAAAAGCTAATGACGAGGAACCGAAAAATCGCGAGTGTTTCGCGGGTAAGTGGGGTTGAG
GGCCAAAATATTTGGAATGAAGGACTTGGCCCTATTTAAGGCAGATTTTACAGAGCGCACCTCAAACGTACAAGT
CAGTAGGACTCCTTATTTGGCGTGACCCGACCTGGCCGCGGAGCCTGCATTTCTCGCAGCCTCTCAGTGCCCTC
CAGCCCCGCGACCATGTGGCCACAATCCACGCTTCTCCGGATCGCGGTGCGCCGGAACACGAGGATGATGCCA
GTTACTTGCTTTTACCTTTTTCAGGGCTGGCTCCTGATCCACTTTGGGGGAGGAGAACATGAGTAGATAATTTAGG
GTGCAGCCCAATCTGCCAGACTTAAAAAAACCATCTTGTGTCTTTGGAGGTGCTGCTTAATATCAAACATGCGGT
GCCATGAAGGGACCTTTGGGGGTGAATAGGAGTTAACCCCTGCGCTCTCTTTGCAACTGTCTCTCTCTCAGA
GTGGTGGGGGAAGGCTGTACGACACGGGTGGGGAAAGGAGGTGGGGGCGGGGAGTATTGAATGGTGGTGAAGGG
TAGAGAGGCGCGGAGTGAACCCACGCCCTGTCTAAAGTGATTTTCAGAGCCGGCCCGCCTCTCCTCGGTTCAA
GGTCACTGTTTTCTGGGCACGCACTGGGTGCGGGACAGAGTAGCCAGTTTCTGCCGGTGCTCGGAGAAGAGCGC
AGTGTGTTTGCAAGTGCTGGAGTCTCCTGAGGACACGCGCGTCGCCGCCACCGCGGGTGTTGGGAAAGCGCGGACGT
GCTGGGCGTCTGTGCTTCGGTAGGCGACACCGCCCCCTGGCCGCGCTCCGGGCTTTCACGGAAACTCCCGAGACC
GGGCCCTGGGTTCTCCTCTCCTACTCGGCTCTGCAGTCTACTCAAGCGGTGGCTCTGGGATCCTGGGGGCCCT
GGGTGGGGGCTAGGGAGACGCCATGTGATGGACACTCCAGGGACACACAGCCTAGCACAGCAGCTTATAATGGG
CTCTCCGGGGCCATTTGCAATAACAGCTGCAATTCCTGGATAGACGAGTTGATTTCTCCTCTGCCCTCCCC
CAGCCATGCCAGCTGGCCTTTGTAAGTGCAAGGAAACCGAGTAGAAAATGTGACCCTCCAAATGGAGAAGCTGCCA
GCTTTGCCATTGTGAACCATGGTGAAGTGCTTGGAACTACTGTTCACTCACTCTAAAGGCGCTGAGACTGTGCT
GTGTTCTCGTTTTTATAGTCAATGGCTTGTTTCATCATCCAGATGTGGCTACTGACATATCTACACTTCGCACCG
GAGTGTCTGGAATTGTGGCTATCCTGATTATAGGATTTAACTTAACTGAAATGCCTGCTTTGAATAAATGTGTT
GGGTTTTT

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FIGURE 1074

MPCRREEEEEAGEEEAEGEREEEDSFLLLQQSVALGSSGEVDRLVAQIGETLQLDAAXDSPASPCGPPGAPLRAPG
FLAAAVPADKARSPAVPLLLPPALAETVGPAPPVLRGALGDRGRVRGRAAPYCV AELATGPSALSPLPPQADLD
GPPGAGKQGIPQPLSGPCRRGWLRGAAASRRLQORRGSQPETRTGDDDPHRLQLQLVLSGNLIKEAVRRLHSRRL
QLRAKLPQRPLLGPLSAPVHEPPSPRSPRAACSDPGASGRAQLRTGDGVLPVGS

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FIGURE 1075

GGGGGGGGCGGGGCGCCAGCGGGATGCGGTGAAGGGCGAGCGGCGCGGCGGGCTGCGATGAGTGCCTCTGCGGGCC
ACCGGGGTCTTCGTGCTGTCCCTCTCGGCCATCCCGGTCACCTATGTCTTCAACCACCTGGCGGGCCAGCATGAT
TCCTGGACTATTGTAGGGGTTGCTGCCCTCATCCTGTTCCCTGGTAGCACTGCTGGCTCGTGTCTCGTCAAAAGA
AAACCACCCCGGGACCCACTGTTCTATGTGTATGCAGTTTTTGGATTTACCAGCGTGGTGAACCTCATCATAGGA
CTGGAGCAAGATGGAATCATTGACGGGTTTCATGACACACTACTTGAGAGAGGGTGAACCGTATCTGAACACCGCA
TATGGGCACATGATCTGCTACTGGGATGGCTCTGCTCATTATCTGATGTACCTGGTGATGGTGGCAGCCATAGCA
TGGGAGGAAACTTATAGAACCATTGGCCTATATTGGGTTGGATCTATTATTATGAGTGTTGTTGTTTTGTGCCA
GGAAACATTGTAGGGAAGTATGGAACACGAATTTGCCCTGCTTTTTTCTTAAGCATAACCATATACTTGTCTTCCT
GTCTGGGCTGGTTTTCAGAATCTATAATCAGCCATCAGAAAATTATAATTACCCCTCAAAGGTTATTCAAGAAGCC
CAAGCGAAAGACCTGCTGAGAAGACCATTTGATTTAATGTTGGTTGTGTGTCTCCTCCTGGCAACTGGATTTTGC
CTGTTTCAGAGGTTTGATTGCTTTGGATTGCCCATCTGAGCTCTGCCGATTATATACGCAATTTCAAGAGCCCTAT
CTAAAGGATCCTGCTGCTTATCCTAAAATTCAGATGCTGGCATATAIGTTCTATTCTGTTCTTACTTTGTGACT
GCACTGTATGGCTTAGTGGTTCTGGATGTTCTGGATGCCTGACATCACATTGATACATGCTGGAGGTCTGGCT
CAGGCTCAGTTTTCTCACATTGGTGCATCTCTTCATGCTAGAACTGCTTATGTCTACAGAGTCCCTGAAGAAGCA
AAAATCCTTTTTTTAGCATTAAACATAGTATATGGAGTTCTTCCTCAGCTCTTGGCCTATCGTTGTATCTACAAA
CCAGAGTTCTTCATAAAAACAAAGGCAGAAGAAAAAGTGGAATAAAAAATTACTTCATGTTCCCTCCTTTCTAAA
TTACTAACTTTTGTTATACTGGTACTGATATTTTGTCCTTTCACTCTCTTCTCATACGTGAGTACTTAAGAAT
ATGTACATTCTTGCTCTGCACTGTATGTGTGAGCTATATGGTATTGTGTAAATTTTTTTGAAGGAAAATGGAAA
TTCTTGAGAAACAGTTTGTTTAAAGAAATATATTCAAATCATTGTGAATAAACTTGATCATCCATCTCAAAAA
AAAAAAAAAAAAAAAAAAAA

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FIGURE 1076

MSASAATGVFVLSLSAIPVTYVFNHLAAQHDSWTIVGVAALILFLVALLARVLVKRKPPRDPLFYVYAVFGFTSV
VNLIIGLEQDGIIDGFMTHYLREGEPYLNTAYGHMICYWDGSAHYLMYLMVAAIAWEETYRTIGLYWVGSIIIMS
VVVFVPGNIVGKYGTRICPAFFLSIPYTCLEPVWAGFRIYNQPSSENYNYP SKV IQEAQAKDLLRRPFDLMLVVCLL
LATGFCLFRGLIALDCPSELCLRYTQFQEPY LKDPAA YPKIQMLAYMFYSVPYFVTALYGLVVP GCSWMPDITLI
HAGGLAQAQFSHIGASLHARTAYVYRVPEEAKILFLALNIVYGVLPQLLAYRCIYKPEFFIKTKAEEKVE

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FIGURE 1077

GGCTGCCGGGGAGGCCAGAGCGTGGAGCGCTGCGCGGCGGGCGGGCCCTCGAGACGGGGACGGACACACC
AGCCCCCTCAGATACCACTTGGCCACTCCCGCTGAGGCCACTCCCACTGCGTGGCTGAAGCCTCGAGGTCACCAGG
CGGAGGCGCGGAGATGCCCCCTGCATCAGCTGGGGGACAAGCCGCTCACCTTCCCCAGCCCCAACTCAGCCATGGA
AAACGGGGCTTGACCACACCCCAAGGAGGAGGCGATCCCCGGGCACACCCCTGAGCCCCGGCTCCCTCCGCTC
CGCTGCCCCATAGCCCCCTGGACACCAGCAAGCAGCCCCCTCTGCCAGCTCTGGGCGGAGAAGCATGGCGCCCGGG
GACCCATGAGGTGCGGTACATCTCGGCCGGGCAGAGCGTGGCGTGCGGCTGGTGGGCCTTCGCACCGCCGTGCCT
GCAGGTCCTCAACACGCCCAAGGGCATCCTGTTCTTCTGTGTGCGGCCGATTCTGCAGGGGATGACTGTGAA
TGGCTTCATCAACACAGTCATCACCTCCCTGGAGCGCCGCTATGACCTGCACAGCTACCAGAGCGGGCTCATCGC
CAGCTCCTACGACATTGCCGCTGCCTCTGCCTCACCTTCGTGAGCTACTTCGGGGGCTCAGGGCACAAGCCGCG
CTGGCTGGGCTGGGGCGTGCTGCTTATGGGCACGGGTTTCGTGGTGTTCGCGCTGCCCCACTTCACGGCTGGCCG
CTATGAGGTGGAGTTGGACGCGGGTGTGAGGACGTGCCCTGCCAACCCCGCGCGGTGTGTGCGGACAGCACCTC
GGGCTGTCCCCTACCAGCTGGTCTTCATGCTGGGCCAGTTCTTGCATGGCGTGGGTGCCACACCCCTCTACAC
GCTGGGCGTCACCTACCTGGATGAGAAGCTCAAGTCCAGCTGCTCGCCCGTCTACATTGCCATCTTCTACACAGC
GGCCATCCTGGGCCCAGCTGCCGGCTACCTGATTGGAGGTGCCCTGCTGAATATCTACACGAAATGGGCCGACG
GACGGAGCTGACCACCGAGAGCCCACTGTGGGTGCGCGCCTGGTGGGTGCGCTTCCTGGGCTCTGGGGCCGCTGC
TTTCTTACCAGCGGTTCCCATCCTTGTTTACCTTCGGCAGCTGCCAGGCTCCCAGCGCTACGCGGTCTAGAGAGC
GGCGGAAATGCACCAGTTGAAGGACAGCAGCCGTGGGGAGGCGAGCAACCCGACTTTGGGAAAACCATCAGAGA
CCTGCCTCTCTCCATCTGGCTCCTGCTGAAGAACCCACGTTTCATCCTGCTCTGCCTGGCCGGGGCCACCGAGGC
CACTCTCATCACCGGCATGTCCACGTTTACGCCCCAAGTTCTTGGAGTCCCAGTTTACGCTGAGTGCCTCAGAAGC
TGCCACCTTGTGTTGGGTACCTGGTGGTGCCAGCGGGTGGTGGCGGCACCTTCCTGGGCGGCTTCTTTGTGAACAA
GCTCAGGCTCCGGGGCTCCGCGGTTCATCAAGTTCTGCCTGTTCTGCACCGTTGTGAGCTGCTGGGCATCCTCGT
CTTCTCACTGCACTGCCCCAGTGTGCCCATGGCGGGCGTCACAGCCAGCTACGGCGGGAGCCTCCTGCCCCAAGG
CCACCTGAACCTAACGGCTCCCTGCAACGCTGCCTGCAGCTGCCAGCCAGAACACTACAGCCCTGTGTGCGGCTC
GGACGGCCTCATGTACTTCTCACTGTGCCACGCAGGGTGCCCTGCAGCCACGGAGACGAATGTGGACGGCCAGAA
GGTGTACCGAGACTGTAGCTGTATCCCTCAGAATCTTCTCTGGTTTGGCCATGCCACTGCAGGGAAATGCAC
TTCAACTTGTGAGAGAAAGCCCTCCTTCTGGTTTTTCATATTGTTGTAATTTCTTTTACATTCTCAGCAGCAT
TCCTGCACTAACGGCAACTCTACGATGTGTCCGTGACCCTCAGAGATCCTTTGCCCTGGGAATCCAGTGGATTGT
AGTTAGAATACTAGGGGGCATCCCGGGGGCCATCGCCTTCGGCTGGGTGATCGACAAGGCCTGTCTGCTGTGGCA
GGACCACTGTGGCCAGCAGGGCTCCTGCTTGGTGTACAGAAATTCGGCCATGAGCCGCTACATACTCATATGGG
GCTCCTGTACAAGGTGCTGGGCGTCTCTTCTTTGCCATAGCCTGCTTCTTATACAAGCCCTGTGCGAGTCTTC
AGATGGCCTGGAACTTGTCTGCCAGCCAGTCTCAGCCCTGACAGTGCCACAGATAGCCAGCTCCAGAGCAG
CGTCTGACACCCGCGCGCCACCCGGCCACGGCGGGCACTCAGCAATTCCTGATGACAGAACAGTGCCGTTGG
GTGATGCAATCACACGGGAACCTTCTATTTGACCTGCAACCTTCTACTTAACCTGTGGTTTAAAGTGGGCTGTGAC
CTCCTGTCCCCAGAGCTGTACGGCCCTGCAGTGGGTGGGAGGAACCTTGCAATAAATATATATTTATGGACACACAG
TTTGATCAGAACGTGTTTATAGAATGTGTTTTATACCGATCGTGTGTGGTGTGCGTGAGGACAAACTCCGCGAG
GGGCTGTGAATCCCACTGGGAGGGCGGGCGGGCCTGCAGCCCGAGGAAGGCTTGTGTGTCCTCAGTTAAACTGTG
CATATCGAAATATATTTTGTATTATTAAGCCTGAAAAAAAAAAAAAAAAAAAA

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FIGURE 1078

MPLHQLGDKPLTFPSPNSAMENGLDHTPPSRRASPGTPLSPGSLRSAHSPLDTSKQPLCQLWAEKHGARGTHEV
RYISAGQSVACGWWAFAPPCLQVLNTPKGILFFLCAAAFLLQGMTVNGFINTVITSLERRYDLHSYQSGLIASSYD
IAACLCLTFVSYFGGSGHKPRWLGWGVLLMGTGSLVFALPHFTAGRYEVELDAGVRTCPANPGAVCADSTSGLSR
YQLVFMLGQFLHGVGATPLYTLGVITYLDENVKSSCSPVYIAIFYTAAILGPAAGYLIGGALLNIYTEMGRRTLT
TESPLWVGAWWVGFLGSGAAFFTAVPILGYPRQLPGSQRYAVMRAAEMHQLKDSSRGEASNPDFGKTIRDPLS
IWLLLKNPTFILLCLAGATEATLITGMSTFSPKFLESQFSLSASEAATLFGYLVVPAGGGGTFLGGFFVNKLRLR
GSAVIKFCFLFCTVVSLLGILVFSLHCPSPVMAGVTASYGGSLLPEGHLNLTAPCNAACSCQPEHYSPVCGSDGLM
YFSLCHAGCPAATETNVDGQKVYRDCSCIPQNLSSGFHATAGKCTSTCQRKPLLLVFIFFVIFFTFLSSIPALT
ATLRCVRDPQRSFALGIQWIVVRILGGIPGPIAFGWVIDKACLLWQDQCGQGSCLVYQNSAMSRYLIMGLLYK
VLGVLFFAIACFLYKPLSESSDGLETCCLPSQSSAPDSATDSQLQSSV

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FIGURE 1079

GAGTTCGGGGCCAGCAGCCGTCTACCCGGTGTGCGGTTCTGTGTTGTGGCGGCCCTGGATCCGGCGTCAGGGCGA
CCGGGCGGACGAGGTGGAGCCAGAGTCTGTGAGGCGGGTTGGTGAAGGGCGCGGGGCCGGGCACGGCGTTGGGAG
TGCGCGGCAGGGACCGGCCAGGCGGGCTGCAGGCACCTCAGAGCCCGGGACACCCCCCTCAACGTCCGCAGGCGCG
ATGAAGGCACTGATCTTAGTGGGGGGCTATGGGACGCGGCTACGGCCGCTGACGCTGAGCACCCCGAAGCCACTG
GTGGACTTCTGCAATAAGCCCATCTTGCTGCACCAAGTGGAGGCGCTAGCCGCGGCAGGCGTGGACCACGTGATC
CTGGCCGTGAGCTACATGTCGAGGTGCTGGAGAAGGAAATGAAGGCACAGGAGCAGAGGCTGGGAATCCGAATC
TCCATGTCCCATGAAGAGGAGCCTTTGGGGACAGCTGGGCCCTGGCGCTGGCCCGTGACCTACTCTCTGAGACT
GCAGACCCTTTCTTCGTCTCAACAGTGACGTGATCTGCGATTTCCCTTTCCAAGCCATGGTGCAGTTCCACCGG
CACCATGGCCAGGAGGGCTCCATCCTGGTGACCAAGGTGGAGGAACCCCTCCAAGTACGGTGTGGTGGTGTGTGAG
GCTGACACAGGCCGCGATTACACGGTTTCGTGGAGAAGCCACAGGTGTTTGTGTCCAATAAGATCAACGCAGGCATG
TACATCTGAGCCCTGCAGTGCTGCGGCGCATCCAGCTGCAGCCTACGTCCATTGAGAAGGAGGTCTTCCCCATT
ATGGCCAAGGAGGGGCGAGCTATATGCCATGGAGTTACAGGGCTTCTGGATGGACATTGGGCAGCCCCAAGGACTTC
CTCACTGGCATGTGCCTCTTCTGTCAGTCACTGAGGCAGAAGCAGCCTGAGCGGCTGTGCTCAGGCCCTGGCATT
GTGGGCAACGTGCTGGTGGACCCAAAGTGCCCGCATCGGCCAGAACTGCAGCATTGGCCCCAATGTGAGCCTGGGA
CCTGGCGTGGTGGTTCGAAGATGGTGTGTGTATCCGGCGGTGCACGGTGCTGCGGGATGCCCGGATCCGTTCCCAT
TCCTGGCTTGAGTCCTGCATTGTGGGCTGGCGCTGCCGCTGGGTGAGTGGGTAAGCCTGTGGGCTGGGCTGGGT
GGGAGAGGGGCGGGGAGTGTGCCTGCCTCCCTGACAAGGCCTATCCTCTCCTGGAGGTACGCATGGAGAACGTG
ACAGTGCTGGGTGAGGACGTCATAGTTAATGATGAGCTCTACCTCAACGGAGCCAGCGTGCTGCCCCACAAGTCT
ATTGGCGAGTCAGTGCCAGAGCCTCGTATCATCATGTGAGGGGATGCAGTGGGGCTGGCCGAGCCCCGGTTTTCC
CATCAGCAAGGGGAGTGCTGGCCTGACACATCAGAAGACCCTGGACTTGTCATTATTTGTCTGGGGGGCACTGGG
TGAAGCTGAAGCTGTTGGACACCTGCCTTCTCATGTGGACATCATCTGGCAGGATCCCTGCTGGGCACACCCAC
AAACCCCACTCCCTCAAGAAGGGCCAGGGCCAGGGCTGTATGGAATAATAATTTAATGCTCACTGTGAAAAAAA
AAAAAAAAAAAAA

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FIGURE 1080

MKALILVGGYGTRLRPLTLSTPKPLVDFCNKPILLHQVEALAAAGVDHVILAVSYMSQVLEKEMKAQEQRIGIRI
SMSHEEEPLGTAGPLALARDLLSETADPFFVLNSDVICDFPFQAMVQFHRHHGQEGSILVTKVEEPSKYGVVVCE
ADTGRIHRFVEKPQVFVSNKINAGMYILSPAVALRRIQLQPTSIEKEVFPIMAKEGQLYAMELQGFWM DIGQPKDF
LTGMCLFLQSLRQKQPERLCSGPGIVGNVLVDPSARIGQNCSIGPNVSLGPGVVVEDGVCIRRCTVLRDARIRSH
SWLESCIVGWRCRVGQWVSLWAGLGGERGGECACLPD KAYPLLEVRMENVTVLGEDVIVNDELYLNGASVLP HKS
IGESVPEPRIIM

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FIGURE 1081

AAGGCTATTATTACCACCACTGAGTGGCTTAAATAATCCTGTCAACAGCAATCGCCCATTTCCAAAGCCATGGTG
AAACATCTCTGTGCTAATTTCTTTTGTGTTTCTTAATTTTTTTTTTTTGGCAGGTGGTGGGAAATAATCTTT
GTCTTCTTTGGAGTAAACCTTCAACACCGGATTTTTTCTTTTAATTATGGATGTAAACCCCAATATCCCCATAAT
TTACATTGGGTCTCGACCAATTGCCTAATTATAAGAGGATATATTTAGGCTCTTATTTTCATCCACACAAAACTT
GTGTAACAGGTAGTTGGAAACATCTGAGGCACCACCTTGATTCTGTTTTGGATGGTCATGTTTTTCTCCTCCGT
TTCCCCAGCATGTCTGCCACCATCCTCATGCACTGCTTCCAAGTGCCTGGGAGCCTTTATGAGCGTCCCTAAACC
TAAAGAATCCAGAGGCGGGGCTCGGATGAACCCTCGAGATAAGCAAGTGAGCCGCTTCTCCCTCTAAAGGATG
TTTACACGTGGGTGGCACTCGCTGGAATCCAGCGCTCGGGCAGCCCTGGGAGGACGCGCTCAGCTGCGAGGAGGA
TGGAGAGCAATACATCATCATCTTTGGAGAATTTAGCGACGGCGCCTGTGAACCAGATCCAAGAAACAATTTCTG
ATAATTGTGTGGTGATTTTCTCAAAAAACATCCTGTTCTTACTGTACAATGGCAAAAAAGCTTTTCCATGACATGA
ATGTAACTATAAAGTGGTGGAACTGGACCTGCTTGAATATGGAACCAGTTCCAAGATGCTCTTTACAAAATGA
CTGGTGAAAGAACTGTTCCAAGAATATTTGTCAATGGTACTTTTTATTGGAGGTGCAACTGACACTCATAGGCTTC
ACAAAGAAGGAAAATTGCTCCCACTAGTTCATCAGTGTTATTTAAAAAAAAGTAAGAGGAAAAGAAATTTAGTAT
GTTTATACTAATAAGTTTGCTAGTACAGTGTCAGTTATTTAAAGTGGTAATGCCCGATAATGTCCTTTTAAATGTT
TGAGGATGTTTTAAATACATGCATTGTCTTCACGAAGAAGATGTAAAAATAATGAACAATAAATTGCGGTGGAAA
CCTAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1082

MNPRDKQVSRFSPLKDVTWVALAGIQRSGSPGRTRSAARRMESNTSSSLENLATAPVNQIQETISDNCVVIFSK
TSCSYCTMAKKLFHDMNVNYKVVELDLLEYGNQFQDALYKMTGERTVPRI FVNGTF IGGATDTHRLHKEGKLLPL
VHQCYLKKS KRKEFQ

[illegible]

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FIGURE 1084

MPAERPAGSGGSEAPAMVEQLDTAVITPAMLEEEEQLEAAGLERERKMLEKARMSWDRESTEIRYRRLQHLLLEKS
NIYSKFLITKMEQQQLEEQKKKEKLERKKESLKVKKGKNSIDASEEKPVMRKKRGREDESYNISEVMSKEEILSV
AKKNKKENEDENSSSTNLCVEDLQKNKDSNSIIKDRLSETVRQNTKFFFDVPVRKCNGQPVPFQQPKHFTGGVMRW
YQVEGMEWLRMLWENGINEILADEMGLGKTVQCIATIALMIQRGVPGPFLVCGPLSTLPNWMAEFKRFTPDIP TM
LYHGTQEERQKLVRNIYKRKGTLQIHPVVITSFEIAMRDRNALQHCYWKYLIVDEGHRICKNMKCR LIRELKRFNA
DNKLLLTGTPLQNNLSELWSLLNFFLLPDVFDDLKSFESWFDITSLSETAEDIIAKEREQNVLHMLHQILTPFLLR
RLKSDVALEVPPKREV VVYAPLSKKQEIFYTAIVNRTIANMFGSSEKETIELSPTGRPKRRTRKSINYSKIDDFP
NELEKLISQIQPEVDRERAVVEVNIPVESEVNLKLQNMMLLRKCCNHPYLI EYPIDPVTQEFKIDEELVTNSGK
FLILDRMLPELKKRGHKVLLFSQMTSMLDILMDYCHLRDFNFSRLDGSMYSEREKNMHSFNTDPEVFIFLVSTR
AGGLGINLTAADTVIIYDS DWN PQSDLQAQDRCHRIGQTKPVVYRLVTANTIDQKIVERAAAKRKLEKLIHKN
HFKGGQSGLNLSKNFLDPKELMELLKSRDYEREIKGSREKVISDKDLELLLLDRSDLIDQMNASGP I KEKMGIFKI
LENSEDSSPECLF

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FIGURE 1085

GAATTCGGGCAAAATGCATGACAGTAACAATGTGGAGAAAGACATTACACCATCTGAATTGCCTGCAAACCCAGG
TTGTCTGCATTCAAAGAGCATTCTATTAAAGCTACCTTAATTTGGCGCTTATTTTCTTAATCATGTTTCTGAC
AATCATAGTGTGTGGAATGGTTGCTGCTTTAAGCGCAATAAGAGCTAACTGCCATCAAGAGCCATCAGTATGTCT
TCAAGCTGCATGCCAGAAAGCTGGATTGGTTTTCAAAGAAAGTGTTTCTATTTTCTGATGACACCAAGAACTG
GACATCAAGTCAGAGGTTTTGTGACTCACAAGATGCTGATCTTGCTCAGGTTGAAAGCTTCCAGGAACTGAATTT
CCTGTTGAGATATAAAGGCCCATCTGATCACTGGATTGGGCTGAGCAGAGAACAAGGCCAACCATGGAAATGGAT
AAATGGTACTGAATGGACAAGACAGTTTCCTATCCTGGGAGCAGGAGAGTGTGCCTATTTGAATGACAAAGGTGC
CAGTAGTGCCAGGCACTACACAGAGAGGAAGTGGATTTGTTCCAAATCAGATATACATGCTAGATGTTACAGCA
AAGCCCCAACTAATCTTTAGAAGCATATTGGAAGTGAAGTCCATTTTAAATGAGCAAAGAATTTATTTCTTA
TACCAACAGGTATATGAAATATGCTCAATATCACTAATAACTGGGAAAATACAAATCAAATCATAGTAAATA
TTACCTGTTTTCATGGTGCTAATATTACCTGTTCTCCCACTGCTAATGACATACCCGAGAATGAGTAATTTATAA
ATAAAAGAGATTTAATTGAAAAAA

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FIGURE 1086

MHDSNNVEKDITPSELPANPGCLHSKEHSIKATLIWRLFFLIMFLTIIIVCGMVAALSAIRANCHQEPSVCLQAAC
PESWIGFQRKCFYFSDDTKNWTSSQRFCDSDADLAQVESFQELNLLRYKGPSDHWIGLSREQGPWKWINGTE
WTRQFPILGAGECAYLNDKGASSARHYTERKWICKSDIHV

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FIGURE 1087A

CTCCTCCTCCGTCTCCTCCTCTCTCTCATCTGCTGTGGTTATGSCCTGTCGCTGGAGCACAAAAGAGTCTCCG
CGGTGGAGGTCTGCGTTGCTCTTGCTTTTCTCGCTGGGGTGTACGGAAATGGTGCTCTTGCAGAACATTCTGAA
AATGTGCATATTTTCAGGAGTGTCAACTGCTTGTGGAGAGACTCCAGAGCAAATACGAGCACCAAGTGGCATAATC
ACAAGCCCAGGCTGGCCTTCTGAATATCCTGCAAAAATCAACTGTAGCTGGTTCATAAGGGCAAACCCAGGCGAA
ATCATTACTATAAGTTTTTCAGGATTTTGATATTCAAGGATCCAGAAGGTGCAATTTGGACTGGTTGACAATAGAA
ACATACAAGAATATTGAAAGTTACAGAGCTTGTGGTTCCACAATTCCACCTCCGTATATCTCTTCCACAAGACCAC
ATCTGGATTAGGTTTCATTCCGGATGACAACATCTCTAGAAAAGGTTTCAGACTGGCATAATTTTTTCAGGGAAATCT
GAGGAACCAAATTTGTGCTTGTGATCAGTTTCGTTGTGGTAATGGAAAAGTGTATACCAGAAGCCTGGAAATGTAAT
AACATGGATGAATGTGGAGATAGTTCCGATGAAGAGATCTGTGCCAAAGAAGCAAATCCTCCAAGTCTGCTGCT
TTTCAACCCCTGTGCTTACAACCAGTTCCAGTGTATATCCCGTTTACCAAAGTTTACACTTGCCCTCCCCGAATCT
TTAAAATGTGATGGGAACATTGACTGCCTTGACCTAGGAGATGAGATAGACTGTGATGTGCCAACATGTGGGCAA
TGGCTAAAATATTTTTATGGTACTTTTAATTCTCCCAATTATCCAGACTTTTATCCTCCTGGAAGCAATTGCACC
TGGTTAATAGACACTGGTGATCACCCTAAAGTCATTTTACGCTTCACTGACTTTAAACTTGATGGTACTGGTTAT
GGTGATTATGTCAAAATATATGATGGATTAGAGGAGAATCCACACAAGCTTTTGGCGTGTGTTGACAGCTTTTGAT
TCTCATGCACCTCTTACAGTTGTTTCTTCTTCTGGACAGATAAGGGTACATTTTTGTGCTGATAAAGTGAATGCT
GCAAGGGGATTTAATGCTACTTACCAAGTAGATGGGTCTGTTTGCCATGGGAAATACCCTGTGGAGGTAAGTGG
GGGTGTTATACTGAGCAGCAGCGTTGTGATGGGTATTGGCATTGCCCAAATGGAAGGGATGAAACCAATTGTACC
ATGTGCCAGAAGGAAGAATTTCCATGTTCCCGAAATGGTGTCTGTTATCCTCGTTCTGATCGCTGCAACTACCAG
AATCATTGCCCAAATGGCTCAGATGAAAAAACTGCTTTTTTGGCCAACCAGGAAATTTCCATTGTAAAAACAAT
CGTTGTGTGTTTGAAAGTTGGGTGTGTGATTCTCAAGATGACTGTGGTGATGGCAGCGATGAAGAAAATTGCCCA
GTAATCGTGCCATACAAGAGTCATCACTGCTGCCGTCATAGGGAGCCTCATCTGTGGCCTGTTACTCGTCATAGCA
TTGGGATGTACTTGTAAGCTTTATTCTCTGAGAAATGTTTGAAAGAAGATCATTGAAACACAGTTGTCAAGAGTG
GAAGCAGAATTGTTAAGAAGAGAAGCTCCTCCCTCGTATGGACAATTGATTGCTCAGGGTTTAATTCCACCAGTT
GAAGATTTTCTGTTTGTTCACCTAATCAGGCTTCTGTTTGGAAAATCTGAGGCTAGCGGTACGATCTCAGCTT
GGATTTACTTCAGTCAGGCTTCCCTATGGCAGGCAGATCAAGCAACATTTGGAACCGTATTTTTTAATTTTGCAAGA
TCACGTCATTCTGGGTCAATTGGCTTTGGTCTCAGCAGATGGAGATGAGGTTGTCCCTAGTCAGAGTACCAGTAGA
GAACCTGAGAGAAATCATACTACAGAAAGTTTGTTTTCCGTGGAGTCTGATGATACAGACACAGAAAATGAGAGA
AGAGATATGGCAGGAGCATCTGGTGGGGTTGCAGCTCCTTTGCCTCAAAAAGTCCCTCCCACAACGGCAGTAGAA
GCGACAGTAGGAGCATGTGCAAGTTCTCAACTCAGAGTACCCGAGGTGGTTCATGCAGATAATGGAAGGGATGTG
ACAAGTGTGGAACCCCCAAGTGTGAGTCCAGCACGTCACCAGCTTACAAGTGCACCTCAGTCGTATGACTCAGGGG
CTACGCTGGGTACGTTTTACATTAGGACGATCAAGTTCCCTAAGTCAGAACCAGAGTCCTTTGAGACAACCTTGAT
AATGGGGTAAGTGAAGAGAAGATGATGATGATGTTGAAATGCTAATTCCAATTTCTGATGGATCTTCAGACTTT
GATGTGAATGACTGCTCCAGACCTCTTCTTGATCTTGCCCTCAGATCAAGGACAAGGGCTTAGACAACCATATAAT
GCAACAAATCCTGGAGTAAGGCCAAGTAATCGAGATGGCCCTGTGAGCGCTGTGGTATTGTCCACACTGCCCAG
ATACCAGACACTTGCTTAGAAGTAACACTGAAAAACGAAACGAGTGATGATGAGGCTTTGTTACTTTGTTAGGTA
CGAATCACATAAGGGAGATTGTATACAAGTTGGAGCAATATCCATTTATTATTTTGTAACCTTACAGTTAAACTA
GTTTTAGTTTAAAAAGAAAAAATGCAGGGTGATTCTTATTATTATATGTTAGCCTGCATGGTTAAATTCGACAA
CTTGTAACCTCTATGAACCTTAGAGTTTACTATTTTAGCAGCTAAAAATGCATCACATATTATATTGTTCAATAAT
GTCCTTTTCAATTTGTTTCTGATTGTTTTTCATCCTGATACTGTAGTTCACTGTAGAAATGTGGCTGCTGAAACTCAT
TTGATTGTCATTTTTATCTATCCTATGTTAAATGGTTTGTTTTTTACAAAATAATACCTTATTTTAATTGAAACGT
TTATGCTTTTGGCAACACATCTTGTAACCTTAATATACTAGATGTTAAGGTTGTTAATGTACAAAAAAAACCCCT
TATACTCACCTGCGTTTTTCAATTTGTTTGACATTTGTCTATTATTGGATTTCATTATCATATGAACCTTGTCAGTGG
GAAACAACTGTCTAAAAATTTTTCTCTTACGTTTAAACATACAATCATGTGAAATTTAGGCAGAGTTTCGATAAAT
TACTGGCAAAAACAAACTCTTTTATAAAGATTTTCTAATGTTGACTTTAATACTCTAACATGGTACAAAACCAA
TGGTAAAATCCCAAGTCATTTCTTTTTTTCATCTCTATTTAGCAACAGAATTAAGTGGATGAAGATATTCTACTAT
GCATTAAATCTTGAACCTTTATAAAACATGTACAAAAATGTACAAGATAAGTTCCACCTGGTAATGTCCTTCCCT
AATACAGGGTTGCGCTTGCATTGGACCCTAGGGATTTGCACTAAAATTATATCAAGGTCTCAGATGAGCTTAGTG
CACAAGCACTATCACTTTAAATACTATTATTGCTACCACAGCAACTATATATTTCCATAGCTTTTGGCTGGGGG

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FIGURE 1087B

CGGGGGACATTTTTATTACAACCTGAAATTGCTTTGCTGGTTTCATATTTATTTGTTGTATTTAAAAAATACATT
GTTGTAAGAGTGATTTTTTCAATATATTTTATTCCTGGGGGGGATCATGCTACACTCTCAAAAGAAAATTAAGAA
ATCATTTCAGATCATCCCCCTTTTAAAGTAGTGTGAATTGCAAACCCAACATATTTTTTTTACTGTCAGTTGCG
GTTTATTTATTTCTTTAACTGCTCTGTTTTAGTAGTTTAATGATTATGAAAAATGTATCTGTGTGTGATTGCTATT
TATTAAATTTTAAAGTACTTTGCTGAATGTCATTTTAAAGCATGTTTGAAGTCTTGTGTATTTGTCTGTGTTAATG
CTGTCAGGAGGAAGTACTGACTAAGATGTTTTAATATGTATCAAAAATTAAATGATTTTTTTTATTGCCTTGAGGTA
CTTTTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1088

MACRWSTKESPRWRSALLLLFLAGVYGNALAEHSENVHISGVSTACGETPEQIRAPSGIITSPGWPSEYPAKIN
CSWFIRANPGEIITISFQDFDIQGSRRCNLDWLTETIYKNIESYRACGSTIPPPYISSQDHIWIRFHSDDNISRK
GFRLAYFSGKSEEPNCACDQFRGNGKCIPEAWKCNNMDECGDSSDEEICAKEANPPTAAAFQPCAYNQFQCLSR
FTKVYTCLPESLKCDGNIDCLDLGDEIDCDVPTCGQWLKYFYGTFNPNYPDFYPPGSNCTWLIDTGDHRKVILR
FTDFKLDGTGYGDYVKIYDGLEENPHKLLRVLTAFDSHAPLTVVSSSGQIRVHFCADKVNAARGFNATYQVDGFC
LPWEIPCGGNWGCYTEQQRCDDGYWHCPNGRDETNCMCQKEEFPCSRNGVCYPRSDRCNYQNHCPNGSDEKNCFF
CQPGNFHCKNNRCVFESWVCDSDDCGDSDEENCPVIVPTRVITA AVIGSLICGLLLVI ALGCTCKLYSLRMFE
RRSFETQLSRVEAELLRREAPPSYGQLIAQGLIPPVEDFPVCSPNQASVLENLRLAVRSQLGFTSVRLPMAGRSS
NIWNRI FNFARSRHSGSLALVSADGDEVVPSQSTSREPERNHTHRSLSVESDDTD TENERRDMAGASGGVAAPL
PQKVPPTTAVEATVGACASSSTQSTRGGHADNGRDVTSEPPSVSPARHQLTSALSRMTQGLRWVRFTLGRSSSL
SQNQSPLRQLDNGVSGREDDDDVEMLIPISDGSSDFDVNDCSRPLLDLASDQGQGLRQPYNATNPGVRPSNRDGP
CERCGIVHTAQIPDTCLEVT LKNETSDDEALLLC

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FIGURE 1089

GGGGGTGGCGGGGACGCGAGTGGCGGCCGCGGGGCCCCGGACAAGGGTCCGAGAGCTGCAGCCTTCGAGGGCCA
GCCCTCTCCGAGTCCGGGGCTGGGTCCCACCAGTGACAAGGCGGCAGCCCCGCGCACACCAAAGAGAAAGCGGCT
GTGGCGGCAGCGGCAGCCCCAGCC**ATG**CTGTGTTATGTGACGAGGCCGGACGCGGTGCTGATGGAGGTGGAGGTG
GAGGCGAAAGCCAACGGCGAGGACTGCCTCAACCAGGTGTGCAGGCGACTGGGAATCATAGAAGTTGACTATTTT
GGACTGCAATTTACGGGTAGCAAAGGTGAAAAGTTTATGGCTAAACCTGAGAAACCGGATCTCCCAGCAGATGGAT
GGGCTAGCCCCCTTACAGGCTTAAACTTAGAGTCAAGTTCTTCGTGGAGCCTCATCTCATCTTACAGGAGCAGACT
AGGCATATCTTTTTCTTGACATCAAGGAGGCCCTCTTGGCAGGCCACCTCTTGTTGTTCCCCAGAGCAGGCAGTG
GAACTCAGTGCCTCCTGGCCCAGACCAAGTTTGGAGACTACAACCAGAACACTGCCAAGTATAACTATGAGGAG
CTCTGTGCCAAGGAGCTCTCCTCTGCCACCTTGAACAGCATTGTTGCAAAACATAAGGAGTTGGAGGGGACCAGC
CAGGCTTCAGCTGAATACCAAGTTTTGCAGATTGTGTCGGCAATGGAAACTATGGCATAGAATGGCATTCTGTG
CGGGATAGCGAAGGGCAGAGACTGCTCATTGGGGTTGGACCTGAAGGAATCTCAATTTGTAAAGATGACTTTAGC
CCAATTAATAGGATAGCTTATCCTGTGGTGCAGATGGCCACCCAGTCAGGAAAGAATGTATATTTGACGGTCACC
AAGGAATCTGGGAACAGCATCGTGCTCTTGTTTAAATGATCAGCACCAGGGCGGCCAGCGGGCTCTACCGAGCG
ATAACAGAGACGCACGCATTCTACAGGTGTGACACAGTGACCAGCGCCGTGATGATGCAGTATAGCCGTGACTTG
AAGGGCCACTTGGCATCTCTGTTTCTGAATGAAAACATTAACCTTGGCAAGAAATATGTCTTTGATATTAAAAGA
ACATCAAAGGAGGTGTATGACCATGCCAGGAGGGCTCTGTACAATGCTGGCGTTGTGGACCTCGTTTCAAGAAGC
AACCAGAGCCCTTCACACTCGCCTCTGAAGTCCTCAGAAAGCAGCATGAACTGCAGCAGCTGCGAGGGCCTCAGC
TGCCAGCAGACCCGGGTGCTGCAGGAGAAGCTACGCAAGCTGAAGGAAGCCATGCTGTGCATGGTGTGCTGCGAG
GAGGAGATCAACTCCACCTTCTGTCCCTGTGGCCACACTGTGTGCTGTGAGAGCTGCGCCGCCAGCTACAGTCA
TGTCCCGTCTGCAGGTGCGGTGTGGAGCATGTCCAGCACGTCTATCTGCCAACGCACACCAGTCTTCTCAATCTG
ACTGTAATCT**TAA**TCTGTTGTGCTTTTGTGGACTTGGCATGTTTCCATGAACTGCACTATTATAAACTATTAAAA
TGATAGATGTTGGAGAAAGTAATTATTCCAACACCCATCTGCCCATGCGATGTTAAAAA

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FIGURE 1090

MLCYVTRPDAVLMEVEVEAKANGEDCLNQVCRRLGIIIEVDYFGLQFTGSKGESLWLNLRNRISQQMDGLAPYRLK
LRVKFFVEPHLILQEQRHIFFLHIKEALLAGHLLCSPEQAVELSALLAQTKFGDYNQNTAKYNYEELCAKELSS
ATLNSIVAKHKELEGTSQASAEYQVLQIVSAMENYGIEWHSVRDSEGQRLLIGVGPEGISICKDDFSPINRIAYP
VVQMATQSGKNVYLTVTKESGNSIVLLFKMISTRAASGLYRAITETHAFYRCDTVTSAVMMQYSRDLKGHLASLF
LNENINLGKKYVFDIKRTSKEVYDHARRALYNAGVVDLVSRSNQSPSHSPLKSSESSMNCSSCEGLSCQQTRVLQ
EKLRKLKEAMLCMVCCEEEINSTFCPCGHTVCCESCAAQLQSCPVCRSRVEHVQHVVLPHTHTSLLNLTVI

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FIGURE 1091

GGAAGCTCAGCAGTGTCCACTGTGCGCCATTCCTTGGCCATAGAAAACAATGTATTTGAATTTTGATGTAAGCATA
GCAAATTGAAGATGAAGATGACACGTTGATTTCTTGTTTGAAATTAACCAAGTCCCGAGAAAAGAAAGTGAATAG
TGTTAGCACGAGGAGGAAGGAAGAAATGAGATTAGATTGGATACTCTTTCTGCATCACTGGGTAGATCCAGCAC
TTTAAATGACTGCAACTTGGGAAGATAAATTAGCTTGGTATGAAGGTGAAGCTTACATGTGGCATCACTGGAAGCC
TTTTCTGAAAACCTCTCTGGACATGTCTTGATTTCCAAATAGCACAAAGTTGGACCCTGGGACTACTGCTCCTC
TTGTATTGCGCCACACACGTCTCAAGTCTTCCTGCTCAGATATGGATCTCCTACATTCATGGCGAAGCAGCAGTTT
TGGGAATTTGATCGTTTTTCGGAATAATTCTTTATCAAAACCAGATGATTCAACTGAGGCACATGAAGGAGATCC
CACAAATGGAAGTGGAGAACAAGTAAACTTCAAATAATGGAGGCGGTTTGGGTAAAAAATGAGAGCTATTTTC
ATGGACAATGAAGAAAAAGTGGGTAAAAAGTACATCAAAGCCCTTTCTGAGGAAAAGGATGAGGAAAGATGGAGA
GAATGCCCCACCATATAGAAACAGTGACCCTGTGATTGGGACCCACACAGAGAAGGTGTCCCTCAAAGCCAGTGA
CTCCATGGATAGTCTCTACAGTGGACAGAGCTCATCAAGTGGCATAACAAGCTGTTTCAGATGGTACAAGTAACCG
GGACAGCTTTGACTGGATGACGATGGCCCCATTTCAGGACCATTCTGTGGCCGTGCCAGAGTGCATACGGATTT
CACGCCAAGTCCCTATGACACTGACTCCCTCAAATCAAGAAAGGAGACATCATAGACATTATTTGCAAAACACC
AATGGGGATGTGGACAGGAATGTTGAACAATAAAGTGGGAACTTCAAATTCATTTATGTGGATGTCATCTCAGA
AGAGGAAGCAGCCCCCAAGAAAATAAAGGCCAAACCGAAGGAGTAACAGCAAAAAATCCAAGACTCTGCAGGAGTT
CCTAGAGAGGATTCATCTGCAGGAATACACCTCAACACTTTTGCTCAATGGTTATGAGACTCTAGAAGATTTAAA
AGATATAAAAGAGAGTACCTCATTGAATTAATATTGAAAACCCAGATGACAGAAGAAGGTTACTATCAGCTGC
TGAAAACCTTCCTTGAAGAAGAAATTATTCAAGAGCAAGAAAATGAACCTGAGCCCTATCCTTGAGCTCAGACAT
CTCCTTAAATAAGTCACAGTTAGATGACTGCCCAAGGGACTCTGGTTGCTATATCTCATCAGGAAATTCAGATAA
TGGCAAAGAGGATCTGGAGTCTGAAAATCTGTCTGACATGGTACATAAGATTATTATCACAGAGCCAAGTGACTG
AACACGCATTCCCACTATATATCTACAGATGCATTCCATTTTAACTCTTCTTGAGCTAAAACGTCAAATAGGAG
AGGAAGATAAGATAAATATTTGTAAATAAAACCTAAAGTTTAAATGTTTTAATCTGAATAATTGTACATAAAATT
TTGTATCTCTAACATTCCAAATTACTGTCAATAAAATATATATTTATTATTTTAAATGCTATGTGTTAATATTTT
ACTTGCTTGTATTAGAAAGGCCAAATGTAAGACTTTGGTATGTGTGACATATGCTTTATTTGGCTTTATTTTACA
AGTACAGTATCTGCAAAAACAAAGTAACCTTTTTTCATACCTGCCAGTTTTGAATTTATATATGTTATTGAACA
AATAGTAATAGAGGATTCGCTGTTGAAACAAGTTGTCCAAGCAATGTTATATTCATTTTTTATACTTATTGGGAAA
GTGTGAGTTAATATTGGACACATTTTATCCTGATCCACAGTGGAGTTTTAGTAATTATATTTGTTGATTCTTC
ATTTTGTCTTCTGGTATAAAAGTAGAGATAATGTGTAGTCACTTCTGATTTAGTGAAACCAATTGTAATAATTGT
GGAAATGTTTTGTCTTTAAGTGTAATATTTTAAATTTGACATACCCTAATGTTAATAATAAAAGAACTATTT
GCATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1092

MEIRLDTLSASLGRSSTLNDCNLEDKLAWYEGEAYMWHHWKPFPEPLWTCCLDFQIAQVGPWDYCSCCIRHTRLK
SSCSDMDLLHSWRSSSFGNFDRFRNNSLSKPDDSTEAEHGDPTNGSGEQSKTSNNGGGLGKKMRAISWTMKKKVG
KKYIKALSEEKDEEDGENAHPYRNSDPVIGTHTEKVSLKASDSMDSLYSGQSSSSGITSCSDGTSNRDSFRLDDD
GPYSGPFCGRARVHTDFTPSPYD TDSLKIKKGDIIIDIICKTPMGMWTGMLNNKVGNFKFIYVDVISEEEAAPKKI
KANRRSNSKSKTLQEFLEIRHLQEYTSLLLNGYETLEDLKD IKESH LIELNIENPDDRRRLLSAAENFLEEEI
IQEQENEPEPLSLSSDISLNKSQLDDCPRDSGCYISSGNSDNGKEDLESENLSDMVHKIIITEPSD

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FIGURE 1093

CGGGAATCCCTGCAGCTGAGCCTGTCTCTCACGGGACCGGGAAGCTGGAGAGAGCCCCAACCCCTGCCCGCTGGGG
CCGAGCTCCCTGCTCCTGCAGCAGTCCCATGCCCCACACTCTGAGTCTGCCCTATCCACAGCTGCTGGGCCTCTC
TGTGGCCACCATGGTGACTCTTACCTACTTCGGGGGCCACTTTGCTGTTCATCCGCCGAGCGTCCCTGGAGAAGAA
CCCGTACCAGGCTGTGCACCAATGGGCCTTCTCTGCGGGGTTGAGCCTGGTGGGCCTCCTGACTCTGGGAGCCGT
GCTGAGCGCTGCAGCCACCGTGAGGGAGGCCAGGGCCTCATGGCAGGGGGCTTCCTGTGCTTCTCCCTGGCGTT
CTGCGCACAGGTGCAGGTGGTGTCTGGAGACTCCACAGCCCCACCCAGGTGGAGGACGCCATGCTGGACACCTA
CGACCTGGTATATGAGCAGGCGATGAAAGGTACGTCCACGTCCGGCGGCAGGAGCTGGCGGCCATCCAGGACGT
GTTTCTGTGCTGTGGGAAGAAGTCTCCTTTTCAGCCGTCTGGGGAGCACAGAGGCTGACCTGTGTCAGGGAGAGGA
GGCGGCGAGAGAGGACTGCCTTCAGGGCATCCGGAGCTTCCTGAGGACACACCAGCAGGTGCGCTCCAGCCTGAC
CAGCATCGGCCTGGCCCTCACGGTGTCCGCCTTGCTCTTCAGCTCCTTCCTGTGGTTTGCCATCCGCTGTGGCTG
CAGCTTGGACCGCAAGGGCAAATACACCCTGACCCACGAGCATGTGGCCGCCAGCCCCAGGAGCCCAGCCTCTT
GAGATGCTCCCAGGGTGGACCCACACATTGTCTCCACTCCGAAGCAGTTGCTATTGGTCCAAGAGGATGCTCGGG
TAGTCTTCGGTGGCTGCAGGAGAGCGATGCTGCGCCTCTGCCCCCTCTCCTGCCACCTGGCTGCCACAGAGCTCT
CCAGGGCAGAAGTCGCGGTGGGCTCAGTGGGTGCCCTGAGCGGGTCTCTCAGACTGACGTGAGGCCTTGGTGGG
CTGCACTCTCACCTGGAGGCTCCGGGGAAGCATCTGCCTCCAGGACCATTGAGGCTGTTGACAAGTCAACTCCTC
ATGGCTGTAGGACTGAGGTTCCCAAGTCCTTGTCCTGGTCCTGTGGTCCCTCCACCTTCAAACCAGCAATGGTG
CATTGAGCAAATTGTGGTCAAATATACATCACATCAAATTTACCATCTTAAAAAA

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FIGURE 1094

MVTLTYFGAHFAVIRRASLEKNPYQAVHQWAFSAGLSLVGLLTLGAVLSAAATVREAQGLMAGGF LCFSLAFCAQ
VQVFWRLHSPTQVEDAMLDTYDLVYEQAMKVSVLWEEVSFQPSGEHRG

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FIGURE 1095

GGAAATCTCACTCATTGTTCATATATTGGTCTCTG
AGGTCCCTTCTAGGCTCTGACAACTGGAACTCTGAAAATAGACATATTGATGCTTTTGAAGTGTGGAAACCTTG
CAGAGCAAGAATTTGTAACCATTGCACGTCACTACCGTGTGCCTGAGGGCACATGTTTCAGATATGGATTTCTTAA
TCGCACTGGCCACGAAAAGTTCAAGAAAAATATGTTTGAGAATTTGACACTTTTCATTTATTCTGTGTGTATG
AAGATCGAGAAAAAAAAAATGTATTACCCACCAAAGACATTAAAAGGCTGTGCAAATCCTCCAGATTACCTTTGA
GTGATGATCTTCTAGAATCCTTATTGTCAAGGTTTGAAGACAGTGAAAAACAAATAGATTATAAGTCATTTTTCT
CTGCCCTGAACTGGAGAAAGAATCCAGCGCTGAATTGCAACCAGCATCATACCTTAAAGAGAGATGTGAAGATG
TTTGGCTTGGTATGCCATCACCTATTCTGCGAAATACATTGACTACTGGACCTTTTTTGAAGGACGCGTTTGGCT
TAGAGGAGGAATAAACCATGCCAGTTTTTGGTCAATTCCTCTATGATTTACTTCTCTCATTTTGCCACATTTACTTTA
GTAGATATAATTTTCAATTAACCAAAAAAGAAACAAGGTTTATATTAAATGGAAATCCATAAACCACAATTAATC
CTATTTTGTCTATGTTAGTTTTACAGAACATCATGTTACATTGCCGACGTACTGTTACTATTTAAATGCCATCTT
AAAACATGTTGAATATTTTTATTATATGTATGGTTTATTAATACCAAAAATCTTCTGATAATTTTGTATCCAAC
ATAATTTGATTCATTACTATATGAACAGAAAATGACTTTTGAAGGTTATACATGACAATACAAAATCAAATTATA
TCACAGCAATAAGTTGTGATTCTATTAAACATTTTGAACCTTTTGGACACGTTTATTACTTACATAATTAAGT
TTTGTAGCAACCCACCTCATCAAAATAATTCTTAAACCTCTCTAGAGTAAATATATTTATCTTTGAACTTAGTA
AAGCTATGGGAAGAAAAAGAACCTCCAACACACACACACACACACACACACACGACGTGCACACACACTGGAAA
CATATGCAGTATTTATATTTGTAATGCCCTTTTTCTATCTAAAGTCAGCTTGTTAGCCTAGGAATATATGCATG
TGTGTATAATTATAGTTTGACCAAACTTTATTATGTCTAAAATATTTACAAATGTGAAAGCTGAAGATTTTGAG
ATTTTTGTTTTTTTTTTTGGTTTGTTTTACACACACATCCCACGCGCCCCACCCTAGAGGTTTAAATATTCAGAAA
CTACAACATTTTCCCTGCATTTTCTAGTTCTATTTTATTTTCTTCAGCAGAACTCTTGTCTATGTAGTGTA
CATTTGATTAAACCCATAGCCATGTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1096

MSLTVGNLAEQEFVTIARHYRVPEGTCSDMDFLIALAHEKFKKNMFENFDTFIYSCVYEDREKKNVLP TKDIKRL
CKSSRLPLSDDLLESLLSRFEDSEKQIDYKSFFSALNWRKNPAPELQPASYLKERCEDVWLGMPSP IPAKYIDYW
TFLKDAFGLEEE

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FIGURE 1097

ATTTTCATGTTATACTTAATAAAACAAAACATACCTGTATACACACACATTCACTCACATTGAAGATGCAAGATGA
AGAAAGATACATGACATTGAATGTACAGTCAAAGAAAAGGAGTTCTGCCCAAACATCTCAACTTACATTTAAAGA
TTATTTCAGTGACGTTGCACTGGTATAAAATCTTACTGGGAATATCTGGAACCGTGAATGGTATTCTCACTTTGAC
TTTGATCTCCTTGATCCTGTTGGTTTCTCAGGGAGTATTGCTAAAATGCCAAAAAGGAAGTTGTTCAAATGCCAC
TCAGTATGAGGACACTGGAGATCTAAAAGTGAATAATGGCACAAGAAGAAATATAAGTAATAAGGACCTTTGTGC
TTCGAGATCTGCAGACCAGACAGTACTATGCCAATCAGAATGGCTCAAATACCAAGGGAAGTGTATTGGTTCTC
TAATGAGATGAAAAGCTGGAGTGACAGTTATGTGTATTGTTTGGAAAGAAAATCTCATCTACTAATCATACATGA
CCAACCTTGAAATGGCTTTTATACAGAAAAACCTAAGACAATTAAACTACGTATGGATTGGGCTTAACCTTTACCTC
CTTGAAAATGACATGGACTTGGGTGGATGGTTCTCCAATAGATTCAAAGATATTCTTCATAAAGGGACCAGCTAA
AGAAAACAGCTGTGCTGCCATTAAGGAAAGCAAATTTTCTCTGAAACCTGCAGCAGTGTTCATGATTGTTG
TCAGTATTAGAGTTTGACAAAATTCACAGTGAAATAATCAATGATCACTATTTTGGCCTATTAGTTTCTAATAT
TAATCTCCAGGTGTAAGATTTTAAAGTGCAATTAAATGCCAAAATCTCTCTCCCTTCTCCCTCCATCATCGACA
CTGGTCTAGCCTCAGAGTAACCCCTGTTAACAACTAAAATGTACACTTCAAATTTTACGTGATAGTATAAAC
CAATGTGACTTCATGTGATCATATCCAGGATTTTATTTCGTCGCTTATTTTATGCCAAATGTGATCAAATTATGC
CTGTTTTTCTGTATCTTGCGTTTTAAATTCTTAATAAGGTCCTAAACAAAATTTCTTATATTTCTAATGGTTGAA
TTATAATGTGGGTTTATACATTTTTTACCCTTTTGTCAAAGAGAATTAACTTTGTTCAGGCTTTTGCTACTCT
TCATCTAGCTACAATAAACATCCTGAATGTTTTCTTAAAAA

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FIGURE 1098

MQDEERYMTLNVQSKKRSSAQTSQLTFKDYSVTLHWYKILLGISGTVNGILTTLISLILLVSQGVLLKCQKGSC
SNATQYEDTGDLKVNNGTRRNISNKDLCASRSADQTVLCQSEWLKYQGKCYWFSNEMKSWSDSYVYCLERKSHLL
IIHDQLEMAFIQKNLRQLNYVWIGLNFTSLKMTWTWVDGSPIDSKIFFIKGPAKENSCAAIKESKIFSETCSSVF
KWICQY

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FIGURE 1099A

GAAGGCGTCCCGGCATCGGCCAAGATTCTACATTGCTCATCTGGGCATCTGAGCCTCCTTCGAAGTTTCTGTCA
CAACTGTCTCTTTGACAGCAATGGATGAGGAGGAAGACAATCTGTCTCTGCTGACCGCACTGCTGGAAGAAAATGA
GTCAGCCTTGGATTGTAATTCAGAAGAAAATAACTTCTTGACGCGGGAAAATGGCGAGCCCGACGCATTTGATGA
GCTCTTTGATGCCGACGGCGACGGTGAATCTTATACAGAAGAGGCTGATGATGGAGAAACAGGAGAGACAAGAGA
CGAAAAGGAAAATCTGGCCACTCTCTTTGGAGATATGGAGGACTTAACAGATGAAGAAGAAGTTCCCGCATCACA
GTCAACTGAAAATAGGGTCTCTCCCTGCTCCTGCCCCAGGCGAGAGAAAACGAATGAAGAGTTGCAAGAGGAATT
AAGGAATTTGCAAGAGCAAATGAAGGCCTTACAAGAGCAGCTAAAAGTAACAACAATTAACAGACAGCAAGCCC
AGCCCGTCTGCAAAAATCCCCTGAGAAGTCTCCCCGGCCACCTCTTAAGGAGAGGAGAGTTTACAGAGAATTCAGGA
GTCAACATGCTTTTCTGCGGAGCTTGATGTCCCTGCGCTACCAAGAACCAAGAGGGTGGCTCGAACACCAAAGCC
TTCACCTCCAGATCCCAAAGCTCATCTTCAAGGATGACAAGTGCACCTCCCAACCCCTACAGACGATTTCTCG
GAACAAACCTAGTGGGATAACTAGAGGTCAAATTGTGGGGACCCAGGAAGTTCTGGGGAAACGACTCAACCCAT
CTGTGTGGAAGCCTTCTGTGCTGCGGCTCAGGCGGCCTCGAGTATCTCCACAGAAATGAACAAGAAAATGAC
CGGCCGAAAACCTGATCAGACTGTCTCAGATCAAGGAAAAGATGGCCAGAGAGAAGCTGGAAGAATAGATTGGGT
GACATTTGGGGTTATATTGAAGAAGGTTACGCCACAGAGTGTGAATAGTGGAAAAACCTTCAGCATATGGAACT
GAATGATCTTCGTGACCTGACACAATGTGTGCTTGTCTTATTGAGAGAAGTTTACAAAGCGCTCTGGAAGAC
GGAGCAGGGGACTGTCTGATGGGATCCTCAATGCCAACCCCATGAAGCCCCAAGGATGGTTTACAGAGGAGGTGTGTTT
ATCTATCGATCATCCTCAGAAGGTCTTAATTATGGGTGAAGCTCTTGACCTGGGAACCTGTAAAGCCAAGAAGAA
GAATGGAGAGCCGTGCACGCAGACTGTGAATTTGCGTGACTGTGAGTACTGTGAGTACCATGTCCAGGCTCAGTA
CAAGAAGCTCAGTGCAAAGCGTGCGGATCTGCAGTCCACCTTCTCTGGAGGACGAATTCCAAAGAAGTTTGCCCG
CAGAGGCACACAGCCTCAAAGAACGGCTGTGCCAAGATGGCTTTTACTACGGAGGGGTTTCTTCTGCCTCGTATGC
AGCTTCAATTGCAGCAGCTGTGGCTCCTAAGAAGAAGATTCAAACCACTCTGAGTAATCTGGTTGTTAAGGGCAC
AAACTTGATCATCCAGGAAACACGGCAAAAACCTCGGAATACCCCAAGAGCCTGTCTTGCTCTGAGGAGTTCAA
GGAACCTGATGGACCTGCCGACGTGTGGAGCCAGGAACCTTAAACAACATTTAGCCAAAGCCTCAGCTTCAGGGAT
TATGGGGAGCCCAAAACCAGCCATCAAGTCCATCTCGGCCTCAGCACTCTTGAAGCAACAGAAGCAGCGGATGTT
GGAGATGAGGAGAAGGAAATCAGAAGAAATACAGAAGCGATTTCTGCAGAGCTCAAGTGAAGTTGAGAGCCCAGC
TGTGCCATCTTCATCAAGACAGCCCCCTGCTCAGCCTCCACGGACAGGATCCGAGTTCCCCAGGCTGGAGGGAGC
CCCGGCCACAATGACGCCCAAGCTGGGGCGAGGTGTCTTGGAAGGAGATGATGTTCTCTTTTATGATGAGTCACC
ACCACCAAGACCAAACTGAGTGTCTTAGCAGAAGCCAAAAGTTAGCTGCTATCACCAAATTAAGGGCAAAAGG
CCAGGTTCTTACAAAAACAAACCCAAACAGCATTAAAGAAGAAACAAAAGGACCCTCAGGACATCCTGGAGGTGAA
GGAACGTGTAGAAAAAACACCATGTTTTCTTCTCAAGCTGAGGATGAATTGGAGCCTGCCAGGAAAAAAGGAG
AGAACAACCTGCCTATCTGGAATCTGAGGAATTTAGAAAATCCTAAAAGCAAAATCAAAACACACAGGCATCCT
GAAAGAGGCCGAGGCTGAGATGCAGGAGCGCTACTTTGAGCCACTGGTGAAAAAGAACAATGGAAGAAAAGAT
GAGAAACATCAGAGAAGTGAAGTGCCGTGTGCTGACATGCAAGACGTGCGCCTATACCCACTTCAAGCTGCTGGA
GACCTGCGTCAGTGAGCAGCATGAATACCACTGGCATGATGGTGTGAAGAGGTTTTTCAAATGTCCCTGTGGAAA
CAGAAGCATCTCCTTGGACAGACTCCCGAACAAGCACTGCAGTAACTGTGGCCTCTACAAATGGGAACGGGACGG
AATGCTAAAGGTATGCCATTTGCGTACTAATTTTTGACTCCTTTTTAGTGACCCATGCTAATAATGTGGAACCATC
TCCTATTAATAATTTTTCTATTTTTCTAGGAAAAGACTGGTCCAAAAGATAGGAGGAGAACTCTGTTACCAAGAGG
AGAAGAACATGCTAAATTTCTGAACAGCCTTAAATAACCCGAACCTTACAGACATTTTCCACAGACTTCCTGGCCT
CCTGTGACTCTGGAAAGCAAAGGATTGGCTGTGTATTGTCCATTGATTCCCTGATTGACGCCGTCAAAAACAAATG
CTTGTTAAGCCCATAAGCTTTGCCTGCTTACTTTCTGCCATTGGGTTGGTTTGATACCACATTTAACATTGACAT
TTAAGTGGAAAAACCAAGTTATCATTGTCTTTCTAAGCTCAGTGTGGATGATTGCATTACTTCACTTCACTGAAGT
TTTTGCCCAAAAATTGGAAGGTAAACAGAGAGCTATGTTTCTGTATCTTTTGGTTATAGAGTGTTCACTTCTTTA
TCATAACAAAATTTCTAGTGTTTATACGAACACCCAGAGGCAAAAGAAATTTGGCTTAATTCTCACTCCAGGTAAGT
AGCTTAACTTCTGGGCTTCAGTTTTCTCATCTGTAAAATCAGGAAGATTGGACTAAGTGATCCTGAAATGTATTT
TTTAGCACTGGATTTCTACAAATAATAAACTTTCCCATCTAGATAATGATGATCACATAGTCTTGATGTACGGA
CATTAAAAGCCAGATTTCTTCAATTCAATTCTGTTATCTCTGTTTTACTCTTTGAAATTGATCAAGCCACTGAATC
ACTTTGCATTTCAAGTTTATATATAGAGAGAGAAAGAAGGCTGTCTGCTCTTACATTATTGTGGAGCCCTGTGATA
GAAATATGTAAATCTCATATTATTTTTTTTTTAATTTTTTTTATTTTTTATGACAGGGTCTCACTATGTCACCTT

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FIGURE 1099B

GGCTGGAGTGCAGTAGTGCATCGCGGCACACTGCAGCCTTGGCTTCCCTGGGCTCAAGCAGTCCTCCACCTCA
GTCTCCCAAATAGCTAGGACTACAGGCGTGCGTGACCAAGCCCAGCTAATTTTTGCATTTTTTTGTAGAGATGGGG
TTTTGCCATGTTGCTCAGGCTGGTCTCAAACCTCTGAGCACTAGCAATCCACCCACCTCTGTTTCCAAAAAAAAA
AAAAAATGAAAGGTCAACCCCTATGCAAATTACCACAGCAAAGGTTTCATTAGGAGATTCTTCCATCTGGGCA
ACCTGGTTTTCCAAATATCATTTGACCTAAGTGAATGTTGATACTAGCTAAAGATTGGGTAAATTGGTTGAATTA
TTGTATTGAAGCTTGAGCTGTAGCTAAAAGTAATTTAGGTTTTCCCTAAGATGTTATTATGTTAGGGACATAACA
CTTTTGGGAGGTTGTTGTGGGAGATGGTTGATTTAGGTTTTCAAAGCTAGAAATAAAATTTACATGCCTTAGAT
TTCATAAAATTTCTGCTCTAATTGGGTGGAAGGTGCTGTATCTAAGTTGTGTTCCCTCCTAAGGTTATGTCTAATA
ACTATTCTTTTAGGAGTATACTTCTACTTTATAGAAGGTTGCTTTTCTTTTAAATTTTTCTAACAAAGAAAAGA
ATAAAGTATTTATTAATAAGAACCAGAAAGCACTTGAACTGATGTTTTTAATGGCTCATTAGGGTAGATTTAT
TTATCTCATTAACCTAAACAGCTATGTGTATGAAATAGGTCACAACAGAACTTGAACACCAGGTTGGTGTCTGA
GCAATCCCTTTCTTATGGGAAAAACAATGTTCTTGTGTTGAACAGAGGGTATCATTGCAGTCAGTATTCACGTGTA
TATTGTTATATAAGTTGTATAATATGCTTGTAAGGCTGAGGGTGAGCTGTATCTGGATGCCTTTTTTACAATTTG
ATTTTAACTTTTAAATAAATTTAAACATAAAAAAAAAAAAAA

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FIGURE 1100

MDEEDNLSLLTALLEENESALDCNSEENNFLTRENGEPDAFDELFDADGDGESYTEEADDGETGETRDEKENLA
TLFGDMEDLTDEEEVPASQSTENRVLPAPAPRREKTNEELQEELRNLQEQMKALQEQLKVTTIKQTASPARLQKS
PEKSPRPPLKERRVQRIQESTCFSAEILDVPALPRTKRVARTPKPSPDPKSSSSRMTSAPSQPLQTI SRNKPSGI
TRGQIVGTPGSSGETTQPICVEAFSGLRLRRPRVSSTEMNKKMTGRKLIRLSQIKEKMAREKLEEIDWVTFGVIL
KKVTPQSVNSGKTFSIWKLNDLRDLTQCVSLFLFGEVHKALWKTEQGTVVGILNANPMKPKDGSSEEVCLSIDHPQ
KVLIMGEALDLGTCKAKKKNGEPTQTVNLRDCEYCYHVQAQYKKLSAKRADLQSTFSGGRI PKKFARRGTSLK
ERLCQDGFYYGGVSSASAYAASIAAAVAPKKKIQTTLNLVVKGTNLIIQETRQKLGIPQKSLSCSEEFKELMDLP
TCGARNLKQHLAKASASGIMGSPKPAIKSISASALLKQQKQRMLEMRRRKSEEIQKRFLQSSSEVESPAVPSSSR
QPPAQPPRTGSEFPRLGAPATMTPKLGRGVLEGDDVLFYDESPPPRPKLSALAEAKKLAAITKLRAKGQVLT KT
NPNSIKKKQKDPQDILEVKERVEKNTMFSSQAEDLEPARKKRREQLAYLESEEFQKILKAKSKHTGILKEAEAE
MQERYFEPLVKKEQMEEKMRNIREVKCRVVTCKTCAYTHFKLLETVCVSEQHEYHWHHDGVKRFFKCP CGNRSISLD
RLPNKHCSNCGLYKWERDGM LKVCHLRTNF

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FIGURE 1101

ACCGTCTTCCGCCGCACGTGGATTGAGCGCGATGCCCAAATCCAAGCGCGACAAGAAAGTCTCCTTAACCAAAAC
TGCCAAGAAAGGCTTGGAATTGAAACAAAACCTGATAGAAGAGCTTCGGAAATGTGTGGACACCTACAAGTACCT
TTTCATCTTCTCTGTGGCCAACATGAGGAACAGCAAGCTGAAGGACATCCGGAACGCCTGGAAGCACAGCCGGAT
GTTCTTTGGCAAAAACAAGGTGATGATGGTGGCCTTGGGTTCGGAGCCCATCTGATGAATACAAAGACAACCTGCA
CCAGGTCAGCAAAAGGTTGAGGGGTGAGGTGGGTCTCCTGTTCACCAACCGCACAAAGGAAGAGGTGAATGAGTG
GTTACGAAATACACAGAAATGGACTACGCCCAGCTGGTAACAAAGCAGCTTTCACTGTGAGCCTGGATCCAGG
GCCCCGGAGCAGTTCCCCCACTCCATGGAGCCACAGCTCAGGCAGCTGGGCCTGCCACCGCCCTCAAGAGAGG
TGTGGTGAAGTCTGCTGTCTGACTACGAGGTGTGCAAGGAGGGCGATGTGCTGACCCAGAGCAGGCTCGCGTCCT
GAAGCTTTTTGGGTATGAGATGGCTGAATTCAAGGTGACCATCAAATACATGTGGGATTACAGTCGGGAAGGTT
CCAGCAGATGGGAGACGACTTGCCAGAGAGCGCATCTGAGTCCACAGAAGAGTCAGACTCAGAAGATGATGACTG
AAAGGGACTCGGGACTGAAGGTCTCCTGGAAGCTTCTGGGTCTCACTGGACCATCAGGACTGCTGCCGCCCTCT
GGAGAGAGCAGCTTTTTATTTGTCTGTAGACAGGGAACATGATGGGCACTGACCTCCTGTAAAGAATAAACTGT
GGGCCGGGCGCGGTGGCTCACGCCTGGAATCCCAGCACTTTGGGAAGCCGAGGTGGGCAGATCATAAGGTCAGGA
GATTAAGACCATCCTGGCTAACACGGTGAAACCCCGTCTCTACTAAAAATAGAAAAAAAAGTAGTTGGGCATAG
TGGCATGTGCCTGTAGTCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATCACTTGAACCCGGGAGGTGGAGGTTG
CCGTGAGTTGAGATTGGACCACTGCTCTCCAGCCTGGGCAACAGAGTAAACTCTGTCCC

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FIGURE 1102

MPKSKRDKKVS LTKTAKKGLELKQNLIEELRKCVDTYKYLFI FSVANMRNSKLKDIRNAWKHSRMFFGKNKVMV
ALGRSPSDEYKDNLHQVSKRLRGEVGLLFTNRTKEEVNEWFTKYTEM DYARAGNKAAFTVSLDPGPLEQFP HSME
PQLRQLGLPTALKRGVVTL LSDYEVCKEGDVLTP EQARVLKLF GYEMAEFKVTIKYMWDSQSGRFQQMGDDL PES
ASESTEESDSEDD

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FIGURE 1103

GAGGCGGGAGGATGAAGTTGATTGACTATGGTCTCTCCGGCTACCAGGAAGAGTCTGCCGAAGGTGAAGGCCATG
GACTTCATCACCTCCACAGCCATCCTGCCCCCTGCTGTTTCGGCTGCCTGGGCGTCTTCGGCCTCTTCGGCTGCTG
CAGTGGGTGCGCGGGAAGGCCTACCTGCGGAATGCTGTGGTGGTGATCACAGGCGCCACCTCAGGGCTGGGCAA
GAATGTGCAAAAGTCTTCTATGCTGCGGGTGCTAAACTGGTGCTCTGTGGCCGGAATGGTGGGGCCCTAGAAGAG
CTCATCAGAGAACTCACCGCTTCTCATGCCACCAAGGTGCAGACACACAAGCCTTACTTGGTGACCTTCGACCTC
ACAGACTCTGGGGCCATAGTTGCAGCAGCAGCTGAGATCCTGCAGTGCTTTGGCTATGTGACATACTTGTCAAC
AATGCTGGGATCAGCTACCGTGGTACCATCATGGACACCACAGTGGATGTGGACAAGAGGGTCATGGAGACAAAC
TACTTTGGCCCAGTTGCTCTAACGAAAGCACTCCTGCCCTCCATGATCAAGAGGAGGCAAGGCCACATTGTGCGC
ATCAGCAGCATCCAGGGCAAGATGAGCATTCTTTTTCGATCAGCATATGCAGCCTCCAAGCACGCAACCCAGGCT
TTCTTTGACTGTCTGCGTGCCGAGATGGAACAGTATGAAATTGAGGTGACCGTCATCAGCCCCGGCTACATCCAC
ACCAACCTCTCTGTAAATGCCATCACCGCGGATGGATCTAGGTATGGAGTTATGGACACCACCACAGCCCAGGGC
CGAAGCCCTGTGGAGGTGGCCCAGGATGTTCTTGCTGCTGTGGGGAAGAAGAAGAAAGATGTGATCCTGGCTGAC
TTACTGCCTTCCTTGGCTGTTTATCTTCGAACTCTGGCTCCTGGGCTCTTCTTCAGCCTCATGGCCTCCAGGGCC
AGAAAAGAGCGGAAATCCAAGAACTCCTAGTACTCTGACCAGCCAGGGCCAGGGCAGAGAAGCAGCACTCTTAGG
CTTGCTTACTCTACAAGGGACAGTTGCATTTGTTGAGACTTTAATGGAGATTTGTCTCACAAGTGGGAAAGACTG
AAGAAACACATCTCGTGAGATCTGCTGGCAGAGGACAATCAAAAACGACAACAAGCTTCTTCCAGGGTGAGGG
GAAACACTTAAGGAATAAATATGGAGCTGGGGTTTAACACTAAAACTAGAAATAAACATCTCAAACAGTAAGAG
TTGTAGTCTTCCAGGACTAGAACCTTGTGTCCTTTGAATTCTCGCCCTGCCAGCTCCTAGAAATAGTTTCAATCT
TGGAATCAGATGTTATGTCACCTGAAA

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FIGURE 1104

GGCACGAGGGCCAGGAACGCCAGCCGTTACGCGTTCGGTCCTCCTTGGCTGACTCACCGCCCTCGCCGCCGCAC
CATGGACGCCCCCAGGCAGGTGGTCAACTTTGGGCCCTGGTCCCGCCAAGCTGCCGCACTCAGTGTTGTTAGAGAT
ACAAAAGGAATTATTAGACTACAAAAGGAGTTGGCATTAGTGTTCTTGAAATGAGTCACAGGTCATCAGATTTTGC
CAAGATTATTAACAATACAGAGAATCTTGTGCGGGAATTGCTAGCTGTTCCAGACAACATAAGGTGATTTTTCT
GCAAGGAGGTGGGTGCGGCCAGTTCAGTGCTGTCCCCTTAAACCTCATTGGCTTGAAAGCAGGAAGGTGTGCGGA
CTATGTGGTGACAGGAGCTTGGTCAGCTAAGGCCGCAGAAGAAGCCAAGAAGTTTGGGACTATAAATATCGTTCA
CCCTAAACTTGGGAGTTATACAAAATTCAGATCCAAGCACCTGGAACCTCAACCCAGATGCCTCCTACGTGTA
TTATTGCGCAAATGAGACGGTGTCATGGTGTGGAGTTTGACTTTATACCCGATGTCAAGGGAGCAGTACTGGTTTG
TGACATGTCCTCAAACCTTCCTGTCCAAGCCAGTGGATGTTTCCAAGTTTGGTGTGATTTTTGCTGGTGCCAGAA
GAATGTTGGCTCTGCTGGGGTCACCGTGGTGATTGTCCGTGATGACCTGCTGGGGTTTGCCCTCCGAGAGTGCCC
CTCGGTCTTGGAAATACAAGGTGCAGGCTGGAACAGCTCCTTGTAACAACACGCCTCCATGTTTCAGCATCTACGT
CATGGGCTTGGTTCTGGAGTGGATTAAAAACAATGGAGGTGCCGCGGCCATGGAGAAGCTTAGCTCCATCAAATC
TCAAACAATTTATGAGATTATTGATAATTCTCAAGGATTCTACGTTTGTCCAGTGGAGCCCCAAAATAGAAGCAA
GATGAATATTCCATTCCGCATTGGCAATGCCAAAGGAGATGATGCTTTAGAAAAAGATTTCTTGATAAAGCTCT
TGAATCAATATGTTGTCTTGAAAGGGCATAGGTCTGTGGGAGGCATCCGGGCCTCTCTGTATAATGCTGTCAC
AATTGAAGACGTTCAGAAGCTGGCCGCCTTCATGAAAAAATTTTTGGAGATGCATCAGCTATGAAACACATCCTAA
CCAGGATATACTCTGTTCTTGAACAACATACAAAGTTTAAAGTAACTTGGGGATGGCTACAAAAAGTTAACACAG
TATTTTTCTCAAATGAACATGTTTATTGCAGATTCTTCTTTTTTGAAGAACAACAGCAAAACATCCACAACCTCT
GTAAAGCTGGTGGGACCTAATGTCACCTTAATTCTGACTTGAAGTGAAGCATTTTAAGAAATCTTGTTGCTTTT
CTAACAAATTCCCGCGTATTTTGCCCTTGCTGCTACTTTTTCTAGTTAGATTTCAAACCTTGCTGTGGACTTAAT
AATGCAAGTTGCGATTAATTATTTCTGGAGTCATGGGAACACACAGCACAGAGGGTAGGGGGGCCCTCTAGGTGC
TGAATCTACACATCTGTGGGGTCTCCTGGGTTCAGCGGCTGTTGATTCAAGGTCAACATTGACCATTGGAGGAGT
GGTTTAAGAGTGCCAGGCGAAGGGCAAACCTGTAGATCGATCTTTATGCTGTTATTACAGGAGAAGTGACATACTT
TATATATGTTTATATTAGCAAGGTCTGTTTTTAATACCATATACTTTATATTTCTATACATTTATATTTCTAATA
ATACAGTTATCACTGATATATGTAGACACTTTTAGAATTTATTAAATCCTTGACCTTGTCATTATAGCATTCCA
TTAGCAAGAGTTGTACCCCTCCCCAGTCTTCGCCTTCCTCTTTTTAAGCTGTTTTATGAAAAAGACCTAGAAGT
TCTTGATTCATTTTTACCATTCTTTCCATAGGTAGAAGAGAAAGTTGATTGGTTGGTTGTTTTCAATTATGCCA
TTAAACTAAACATTTCTGTAAATTACCCTATCCTTTGTTCTCTACTGTTTTCTTTGTAATGTATGACTACGAGA
GTGATACTTTGCTGAAAAGTCTTTCCCTATTGTTTATCTATTGTCAGTATTTTATGTTGAATATGTAAAGAACA
TTAAAGTCCTAAACATCTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1105

MDAPRQVVNFGPGPAKLPHSVLLEIQKELLDYKGVGISVLEMSHRSSDFAKIINNNTENLVRELLAVPDNYKVIFL
QGGGCGQFSAPVPLNLIGLKAGRCADYVVTGAWSAKAAEEAKKFGTINIVHPKLGSYTKIPDPSTWNLNPDASYVY
YCANETVHGVEFDFIPDVKGAVLVCDMSSNFLSKPVDVSKFGVIFAGAQKNVGSAGVTVVIVRDDLLGFALRECP
SVLEYKVQAGNSSLYNTPPCFSIYVMGLVLEWIKNNGGAAAMEKLSSIKSQTIYEIIDNSQGFYVCPVEFQNRSK
MNIPFRIGNAKGDDALEKRFLDKALELNMLSLKGHRVGGIRASLYNAVTTIEDVQKLAAFMKKFLEMHQL

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FIGURE 1106

GGAGGGCCCGGCGGACAGCGGAGGCAGAGAGGAAGGCGGTTCTGAGAGCTTCAGAGAGCGATGGAAAGCAAAA
TGGGTGAATTGCCTTTAGACATCAACATCCAGGAACCTCGCTGGGACCAAAGTACTTTCTGGGCAGAGCCCGGC
ACTTTTTCACTGTTACTGATCCTCGAAATCTGCTGCTGTCCGGGGCACAGCTGGAAAGCTTCTCGGAACATCGTGC
AGAACTACAGGGCCCGCGTGGTGACCCAGGGATCACCGAGGACCAGCTGTGGAGGGCCAAGTATGTGTATGACT
CCGCCTTCCATCCGGACACAGGGGAGAAGGTGGTCTGATTGGCCGCATGTCAGCCAGGTGCCCATGAACATGA
CCATCACTGGCTGCATGCTCACATTCTACAGGAAGACCCCAACCGTGGTGTCTGGCAGTGGGTGAATCAGTCCT
TCAATGCCATTGTIAACTACTCCAACCGCAGTGGTGACACTCCCATCACTGTGAGGCAGCTGGGGACAGCCTATG
TGAGTGCCACCACCTGGAGCTGTGGCCACGGCCCTGGGACTCAAATCCCTCACCAAGCACCTGCCCCCTTGGTGC
GCAGATTTGTGCCCTTTGCAGCAGTGGCAGCTGCCAACTGCATCAACATCCCCCTGATGAGGCAGAGAGAGCTGC
AGGTGGGCATCCCGGTGGCTGATGAGGCAGGTGAGAGGCTTGGCTACTCGGTGACTGCAGCCAAGCAGGGAATCT
TCCAGGTGGTGAATTTCAAGAATCTGCATGGCGATTCTGCCATGGCCATCCCACCACTGATCATGGACACTCTGG
AGAAGAAAGACTTCCTGAAGCGCCGCCCTGGCTGGGGGCACCCCTGCAGGTGGGACTGGTGGGCTTCTGCCTGG
TATTTGCAACCCCCCTGTGCTGTGCCCTATTCCCCCAGAAGAGCTCCATACACATAAGCAACCTGGAACCAGAGC
TGAGAGCTCAGATCCATGAGCAAAACCCAGCGTTGAAGTGGTCTACTACAACAAGGGGCTTTGAGGAGGGTCAG
CCTCTGTCCCCCTCCCTCACTTCCTTGGGCTGCTGCTTTAGTGGAGTCATGTCACCCCTACCCTTGGCTATCTGC
CTAGCACTGGGCAGGGGCCCTTGGTGGGCAGATGGCAATTGAGGGTAGCAACCTATTAGGGTGGGGGAGGGACCTC
CATAAGGCTTTTCTCCCTTCTCTGTTTTCAAAGATCAGAGCACATAACCCCTCCTGTGCTTGAGTGTCCATGCA
TATACATACATGATACACATGTGTATGTGTACATTGGGTCTGAAAGCTAGAAGCAGGCATGCTAGCCTAGTATG
TTCTGACATCTGGCTTCCCTTCTCAGCCTCATGTCCACCTGCCTGCCAGCCAGGCTACAGGTGTGACTTCTTCT
CTAAACTGTTACACCAGCCAAGTTATTTTTTGATGGCACCTCATCCCTTCTAGAAATAGGAGGAGCCCCAGGATCT
CAGGACAGAGACTTATAGACACTAGTAGGACAAAGCGGGCTGAATCCCTTCAGGTTTCTGATACCTAGCTCCCCAA
GCTGACTGGGCTGGCAGAGGAGAACATGTTGAGACAAGGGAGGCAGGGGACTTATGCATCCCTCAGTGCCATCCC
TTGTATCCTGGAATAGCTCCATTTCCCCTCCTCCTCTCTACCAGACAAAGGAGTGCCTGTGTCCTGTACTGCCCT
CGCTGTCTCCCCCACCACCCTACTTGACAGCGTGGGCATCTTCAGGCACAGCCTTGGGAGTTCCTGGTGTGCTCT
GACATCATGACCTCAAATCTAAATCCTCCAATCCCAACTCCCTTTCCCAAACAAAAAGCCACAGAGGCAGAGCAA
GCATTCCCCTTTAAGAGCTTCCACTGCACCCCTCCCAAGGGACACAGCGGTAGGAATGGTGCTTAAACTCCACA
GGTATCAGAGAGGGTGTAAGTAGGACATCCTCAAGGGCAGCTAGGCCCCGAATGTACAATGTTAAGACAGGGAAT
TTTGTGTTCCATTGACTTTTTTTTTTTTTTTTAAATGGAGTTTCACTATTTTGCCAGGCTGGAGTGCATGGTGC
GATCTTGGCTCACTGCAACCTCTGCCTCCTGGGTTCAAGTGATTCTCTTGCCTCAGTCTCCCGAGTAGTGAAAT
TACAGGTGTGTGCTACCACATCTTGCTAGTTTTGTATTTTAGCAGAGATGGGGGTTTACCATGTTGGCCAGGC
TAGTCTCGAACTCCTGACCTCAGGTGATCCACCTGCCTTGGCCTCCCAAAGCACTGGGATTACAAGCATGAGCCA
CTGTGCCCAGCCTGTTCCACTGACATTTCTTAGACATTGAGCAAAACCCCCACCTTAACCTCTTTTCTTTCTTGA
GGGTGGTCTGTCCCCACCTCCACCCTCCCACCCCTGGAAGAGGAAGGGCCCGGGCATCAGTGGCTAGTCCAA
ATAAAATATGGGCTTGGGGATGGAATGGGTGGTGGTAAGTTCACAGAGTGTAGTTAGATCCCAACTCCCATGACC
TCTGGCTTCAGTGGTGGGTGGGGCAGGGCAGATGAAAGGGCTTCAGTGGGAACCTCTGAGAGCATTTTCTGTTC
CCCCTATCAACCGCCCCCAGTGATAACATCTGTGAAGCCAGCCATTACTCAATAAACTGCAAACTTGTCTAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1107

MGELPLDINIQEPRWDQSTFLGRARHFFTVTDPRNLLLSGAQLEASRNIVQNYRAGVVTPGITEDQLWRAKYVVD
SAFHPDTGEKVVLIGRMSAQVPMNMTITGCMLTFYRKTPTVVFWQWVNQSFNAIVNYSNRSGDTPITVRQLGTAY
VSATTGAVATALGLKSLTKHLPPLVGRFVPFAAVAAAANCINIPLMRQRELQVGIPVADEAGQRLGYSVTAAKQGI
FQVVISRICMAIPAMAIPPLIMDTLEKKDFLKRRPWLGAQLQVGLVGFCCLVFATPLCCALFPQKSSIHISNLEPE
LRAQIHEQNPSVEVVYYNKGL

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FIGURE 1108

GTGCTTTACTGCGCGCTCTGGTACTGCTGTGGCTCCCCGTCTGGTGCGGGACCTGTGCCCCGCGCTTCAGCCCT
CCCCGCACAGCCTACTGATTCCCCTGCCGCCCTTGCTCACCTCCTGCTCGCCATGGAGTCGCTGGTTTTTCGCGCG
GCGCTCCGGCCCCACTCCCTCGGCCGAGAGCTAGCCCCGGCCGCTGGCGGAAGGGCTGATCAAGTCGCCCAAGCC
CCTAATGAAGAAGCAGGCGGTGAAGCGGCACCACCACAAGCACAACCTGCGGCACCCTACGAGTTCCTGGAGAC
CCTGGGCAAAGGCACCTACGGGAAGGTGAAGAAGGCGCGGGAGAGCTCGGGGCGCCTGGTGGCCATCAAGTCAAT
CCGGAAGGACAAAATCAAAGATGAGCAAGATCTGATGCACATACGGAGGGAGATTGAGATCATGTCATCACTCAA
CCACCCTCACATCATTGCCATCCATGAAGTGTGTTGAGAACAGCAGCAAGATCGTGATCGTCATGGAGTATGCCAG
CCGGGGCGACCTTTATGACTACATCAGCGAGCGGCAGCAGCTCAGTGAGCGCGAAGCTAGGCATTTCTTCGGGCA
GATCGTCTCTGCCGTGCACTATTGCCATCAGAACAGAGTTGTCCACCGAGATCTCAAGCTGGAGAACATCCTCTT
GGATGCCAATGGGAATATCAAGATTGCTGACTTCGGCCTCTCCAACCTCTACCATCAAGGCAAGTTCCTGCAGAC
ATTCTGTGGGAGCCCCCTCTATGCCTCGCCAGAGATTGTCAATGGGAAGCCCTACACAGGCCCAGAGGTGGACAG
CTGGTCCCTGGGTGTTCTCTCTACATCCTGGTGCATGGCACCATGCCCTTTGATGGGCATGACCATAAGATCCT
AGTGAAACAGATCAGCAACGGGGCCTACCGGGAGCCACCTAAACCCTCTGATGCCTGTGGCCTGATCCGGTGGCT
GTTGATGGTGAACCCACCCGCCGGGCCACCCTGGAGGATGTGGCCAGTCACTGGTGGGTCAACTGGGGCTACGC
CACCCGAGTGGGAGAGCAGGAGGCTCCGCATGAGGGTGGGCACCCCTGGCAGTGACTCTGCCCCGCGCCTCCATGGC
TGACTGGCTCCGGCGTTCTCCCGCCCCCTCCTGGAGAATGGGGCCAAGGTGTGCAGCTTCTTCAAGCAGCATGC
ACCTGGTGGGGGAAGCACCACCCTGGCCTGGAGCGCCAGCATTGCTCAAGAAGTCCCGCAAGGAGAATGACAT
GGCCAGTCTCTCCACAGTGACACGGCTGATGACACTGCCCATCGCCCTGGCAAGAGCAACCTCAAGCTGCCAAA
GGGCATTCTCAAGAAGAAGGTGTGAGCCTCTGCAGAAGGGGTACAGGAGGACCCTCCGGAGCTCAGCCCAATCCC
TGCGAGCCCAGGGCAGGCTGCCCCGCTGCTCCCCAAGAAGGGCATTCTCAAGAAGCCCCGACAGCGAGTCTGG
CTACTACTCCTCTCCCGAGCCAGTGAACTGAGGGAGCTCTTGACGCGAGCGACGTGTTTGTGAGTGGGGATCC
CAAGGAGCAGAAGCCTCCGCAAGCTTCAGGGCTGCTCCTCCATCGCAAAGGCATCCTCAAACCTCAATGGCAAGTT
CTCCCAGACAGCCTTGAGAGCTCGCGCCCCCACCACCTTCGGCTCCCTGGATGAAGTCAAGCTCGCCCCACCTCGCCCCCT
GGCCCCGGCCAGCCGACCCTCAGGGGCTGTGAGCGAGGACAGCATCCTGTCTCTGAGTCCCTTGACCAGCTGGA
CTTGCTGAACGGCTCCAGAGCCCCCACTGCGGGGCTGTGTGTCTGTGGACAACCTCACGGGGCTTGAGGAGCC
CCCCTCAGAGGGCCCTGGAAGCTGCCTGAGGCGCTGGCGGCAGGATCCTTTGGGGGACAGCTGCTTTCCCTGAC
AGACTGCCAGGAGGTGACAGCGACCTACCGACAGGCACTGAGGGTCTGCTCAAAGCTCACCTTGAGTGGAGTAGGC
ATTGCCCCAGCCCGGTGAGGCTCTCAGATGCAGCTGGTTGCACCCCGAGGGGAGATGCCTTCTCCCCACCTCCC
AGGACCTGCATCCAGCTCAGAAGGCTGAGAGGGTTTGAGTGGAGCCCTGAGCAGGGCTGGATATGGGAAGTAG
GCAAATGAAATGCGCCAAGGGTTGAGTGTCTGTCTTCAGCCCTGCTGAACGAAGAGGATACTAAAGAGAGGGGAA
CGGGAATGCCCGCGACAGAGTCCACATTGCCTGTTCTTGTGTACATGGGGGGGCCACAGAGACCTGGAAAGAGA
ACTCTCCAGGGCCCATCTCCTGCATCCCATGAATACTCTGTACACATGGTGCCTTCTAAGGACAGCTCCTTCCC
TACTATTCCCTGCCAAGTGGGGCCAGACCTCTTTACACACACATTCCCGTTCTTACCAACCACCAGAACTGGA
TGGTGGCACCCTAATGTGCATGAGGCATCCTGGGAATGGTCTGGAGTAACGCTTCGTTATTTTTATTTTTATTT
TTATTTATTTATTTATTTTTTTTGGAGACGGAGTTTCGCTCTTGGTGCCAGGCTAGAGTGCAATGGCGCGATCTCA
GCTCACCTCAACCTCCGCCTCCCGGGTTCAAGCGATTCTCCTGCCTCAGCCTCCCTAGTAGCTGGGATTACAGGC
GCCCCCACCATGCCCGGCTAATTTTGATTTTTAGTAGAGACAGGGTTTCTCCATGTTGGTCAGGCTGGTCTCA
AACTCCCGACCTCAGGTGATCCACCCACCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCGCGCCC
CACCTAACCTTCCTTATTTAGCCTAGGAGTAAGAGAACACAATCTCTGTTTCTTCAATGGTTCTCTTCCCTTTT
CCATCCTCCAAACCTGGCCTGAGCCTCCTGAAGTTGCTGCTGTGAATCTGAAAGACTTGAAAAGCCTCCGCTGC
TGTGTGGACTTCATCTCAAGGGGGCCAGCCTCCTCTGGACTCCACCTTGACCTCAGTGACTCAGAATCTTGCC
TCTAAGCTGCTCTAAAGTCCAGACTATGGATGTGTTCTCTAGGCCTTCAGGACTCTAGAATGTCCATATTTATTT
TTATGTTCTTGGCTTTGTGTTTTAGGAAAAGTGAATCTTGCTGTTTTCAATAATGTGAATGCTATGTTCTGGGAA
AATCCACTATGACATCTAAGTTTTGTGTACAGAGAGATATTTTGAACCTATTTCCACCTCCTCCACAACCCCC
CACACTCCACTCCACACTCTTGAGTCTCTTTACCTAATGGTCTCTACCTAATGGACCTCCGTGGCCAAAAAGTAC
CATTAAAACCAGAAAGGTGATTGGAAAAA

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FIGURE 1109

MESLVFARRSGPTPSAAELARPLAEGLIKSPKPLMKKQAVKRHHHKHNLRHRYEFLETLGKGTYGKVKKARESSG
RLVAIKSIRKDKIKDEQDLMHIRREIEIMSSLNHPHIIAIHEVFENSSKIVIVMEYASRGDLYDYISERQQLSER
EARHFFRQIVSAVHYCHQNRVVHRDLKLENILLDANGNIKIADFGLSNLYHQGKFLQTFCGSPLYASPEIVNGKP
YTGPEVDSWSLGVLLYILVHGTMFPDGHDKILVKQISNGAYREPPKPSDACGLIRWLLMVNPTRRATLEDVASH
WVNVWGYATRVGEQEAPHEGGHPGSDSARASMADWLRRSSRPLENGAKVCSFFKQHAPGGGSTTTPGLERQHSLK
KSRKENDMAQSLHSDTADDTAHRPGKSNLKLPGILKKKVSASAEQVQEDPPELSPIPASPGQAAPLLPKKGILK
KPRQRESGYYSPEPSESSEGLLDAGDVVSVGDPKEQKPPQASGLLLHRKGILKLNGKFSQTALELAAPTTFGSLD
ELAPPRPLARASRPSGAVSEDSILSSESFDQLDLPERLPEPPLRGCVSVDNLTGLEEPPSEPGSGCLRRWRQDPL
GDSCFSLTDCQEVATYRQALRVCSKLT

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FIGURE 1110

GGCACGAGGCCTGGGTCCCGTCACATCCTTCTTGCTCAACCACTGGGTGCACAGGATGGAACTTCTATTCCCTC
TCTGGAAGACAGCGCGTGGCTTGGCTTCACAGAGTTGTGGCTGGAGACCGAAGCAGCCCCCTTCTCAGGCTTACT
GTCACCAGTCTGTCTGTGTTAGGGGAGAGGGGAGTCCGCTCTGTCCTGAAGGCCAGAGATGGAAGGACAAGTGG
TAGGCCGGGTGTTCAAGGCTCTTCCAACGCCGACTGCTTCACTCCGAGCAGGACCACCCAGGACAATTCAAGGGG
AAGCTTTAAAGGAACCAGAAAGGGCCCAGGAGCACTCTTGCCCAACTTTGCTGGGGGGCAGCACTTCTTTGAAT
ACCTTCTTGTGGTTTTCTCTCAAAAAGAAGCGTTCAGAGGATGATTACGAGCCTATAATCACCTACCAATTTCCCA
AGCGGGAGAACCTGCTTCGGGGTCAGCAGGAGGAGGAGCGGCTGCTCAAAGCTATCCCCTTGTTCTGCTTCC
CAGATGGGAATGAGTGGGCATCACTCACCGAGTATCCAGGGAGACCTTCTCCTTCGTTCTGACCAATGTGGATG
GGAGCAGAAAGATTGGATACTGCAGGCGCCTCTTGCCCTGCCGGCCCTGGCCCTCGCCTTCCCAAAGTGTACTGCA
TCATCAGCTGCATCGGCTGCTTCGGCTTGTTCTCCAAGATCCTGGATGAAGTGGAGAAGAGACATCAGATCTCCA
TGGCTGTCACTACCCGTTTCATGCAGGGCCTCCGAGAGGCAGCCTTCCCTGCTCCTGGGAAGACTGTCACTCTCA
AGAGCTTCATCCCCGACTCAGGCACTGAGTTCAATTCAGTACACGGCCCCCTGGACTCCCACCTAGAACATGTGG
ATTTTAGTTCTCTATTGCACTGTCTCAGTTTTGAACAGATACTTCAGATCTTTGCCTCTGCCGTGCTGGAGAGAA
AAATCATCTTCTGCGGAAGGTCTCAGCACCTTGCTCAGTGCATCCATGCTGCTGCCGCACTGCTCTACCCCT
TCAGCTGGGCGCACACCTACATCCCTGTTGTCCCTGAGAGCCTTCTGGCCACCGTCTGCTGCCCCACCCCTTCA
TGGTTGGAGTACAAATGCGCTTCCAGCAGGAGGTGATGGACAGCCCTATGGAAGAGGTCTGCTGGTCAATCTTT
GTGAAGGAACCTTCTTAATGTCGGTTGGTGATGAAAAAGACATCCTGCCACCGAAGCTTCAGGATGACATCTTAG
ACTCTCTTGGTCAGGGGATCAATGAGTTAAAGACTGCAGAACAAATCAACGAGCATGTTTCAGGCCCTTTGTGC
AGTTCTTTGTCAAGATTGTGGGCCATTATGCTTCCTATATCAAGCGGGAGGCAAATGGGCAAGGCCACTTCCAAG
AAAGATCCTTCTGTAAAGGCTCTGACCTCCAAGACCAACCGCCGATTTGTGAAGAAGTTTGTGAAGACACAGCTCT
TCTCACTTTTCATCCAGGAAGCCGAGAAGAGCAAGAATCCTCCTGCAGGCTATTTCCAACAGAAAATACTTGAAT
ATGAGGAACAGAAAGAAACAGAAGAAACCAAGGGAAAAAACTGTGAAAATAAGAGCTGTGGTGAATAAGAATGACTA
GAGCTACACACCATTTCTGGACTTCAGCCCCTGCCAGTGTGGCAGGATCAGCAAACTGTGAGCTCCCAAAATCC
ATATCCTCACTCTGAGTCTTGGTATCCAGGTATTGCTTCAAACCTGGTGTCTGAGATTGGATCCCTGGTATTGAT
TTCTCAGGACTTTGGAGGGCTCTGACACCATGCTCACAGAACTGGGCTCAGAGCTCCATTTTTTGCAGAGGTGAC
ACAGGTAGGAAACAGTAGTACATGTGTTGTAGACACTTGGTTAGAAGCTGCTGCAACTGCCCTCTCCCATCATT
TAACATCTTCAACACAGAACACACTTTGTGGTCGAAAGGCTCAGCCTCTCTACATGAAGTCTGTGGACATGTAAG
GACGAGAGTAAAGAGGAAAATCTTATAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1111

MEGQVVGRVFRLLFQRRLLQLRAGPPQDNSSGEALKEPERAQEHSLPNFAGGQHFFEYLLVVSLKKKRSEDDYEPII
TYQFPKRENLLRGQQEEEEERLLKAIPLECFPDGNEWASLTEYPRETF SFVL TNVDGSRKIGYCRRLLPAGPGPRL
PKVYCIISCIGCFGLFSKILDEVEKRHQISMAVIYPFMQGLREAAFPAPGKTVTLKSFIPDSGTEFISLTRPLDS
HLEHVD FSSLLHCLSFEQILQIFASAVLERKII FLAEGLS TLSCIHAAAALLYPFSWAHTYIPVVPESLLATVC
CPTPFMVGVMRFQQEVMDSPMEEVLLVNLCEGTFLMSVGDEKDILPPKLQDDILD SLGQG INELKTAEQ INEHV
SGPFVQFFVKIVGHYASYIKREANGQGHFQERSFCKALTSKTNRRFVKKFVKTQLFSLFIQEAEKSKNPPAGYFQ
QKILEYEEQKKQKKPREKTVK

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FIGURE 1112

TCCCTGTCCTGCGCCCGCGCGCCCCGGGAGCCTACCCAGCACGCGCTCCGCGCCCACTGGTTCCCTCCAGCCGCC
GCCGTCCAGCCGAGTCCCCACTCCGGAGTCGCGCGTGC CGCGGGGACATGGTCTCTGCGTTCAAGGGTGAGCAC
CCCCTTGTAAGCTCAGGGCTACTGTTGGGTGTCAGGGAACAAAGTTTTAGACTGCTGCGCTCCAAAGCGGGCACA
CACATGTACCTAGAACACACCAGCCACTGTCCCCACCATGATGATGACACAGCCATGGACACACCCCTGCCCAGA
CCTCGTCCTTTGCTGGCTGTGGAGCGGACTGGGCAGCGGCCCTGTGGGCCCCGTCCCTGGAAGTGCCAAGCCA
GTCATGCAGCCCTTGCTGCTGGGGCCTTCCCTCGAGGAGGTGGCAGAGGGTACCCAGCCAGACAGAGAGTGAG
CCAAAGGTGCTGGACCCAGAGGAGGATCTGCTGTGCATAGCCAAGACCTTCTCCTACCTTCGGGAATCTGGCTGG
TATTGGGGTTCCATTACGGCCAGCGAGGCCCCGACAACACCTGCAGAAGATGCCAGAAGGCACGTTCTTAGTACGT
GACAGCACGCACCCAGCTACCTGTTACGCTGTCA GTGAAAACCACTCGTGGCCCCACCAATGTACGCATTGAG
TATGCCGACTCCAGCTTCCGTCTGGACTCCAAGTGTGTCCAGGCCACGCATCCTGGCCTTTCGGGATGTGGTC
AGCCTTGTGCAGCACTATGTGGCCTCCTGCACTGCTGATACCCGAAGCGACAGCCCCGATCCTGCTCCCACCCCG
GCCCTGCCTATGCCTAAGGAGGATGCGCCTAGTGACCCAGCACTGCCTGCTCCTCCACCAGCCACTGCTGTACAC
CTAAAGTGGTGCAGCCCTTTGTACGCAGAAGCAGTGCCCGCAGCCTGCAACACCTGTGCCGCTTGTCAATCAAC
CGTCTGGTGGCCGACGTGGACTGCCTGCCACTGCCCCGGCGCATGGCCGACTACCTCCGACAGTACCCCTTCCAG
CTCTGACTGTACGGGGCAATCTGCCCCACCTCACCCAGTCGCACCCTGGAGGGGACATCAGCCCCAGCTGGACTT
GGGCCCCCACTGTCCCTCCTCCAGGCATCCTGGTGCCTGCATACCTCTGGCAGCTGGCCCAGGAAGAGCCAGCAA
GAGCAAGGCATGGGAGAGGGGAGGTGTCACACAACCTGGAGGTAAATGCCCCAGGCCGCATGTGGCTTCATTAT
ACTGAGCCATGTGTCAGAGGATGGGGAGACAGGCAGGACCTTGTCTACCTGTGGGCTGGGGCCAGACCTCCACT
CGCTTGCCTGCCCTGGCCACCTGAACTGTATGGGCACCTCTCAGCCCTGGTTTTTTCAATCCCCAGGGTCGGGTAGG
ACCCCTACTGGCAGCCAGCCTCTGTTTCTGGGAGGATGACATGCAGAGGAAGTGAATCGACAGTGACTAGTGAC
CCCTTGTTGAGGGGTAAGCCAGGCTAGGGGACTGCACAATTATACACTATTTATTTATTTATTTCTCCTTGGGGTT
GGTGTGAGGGGCGAGCCAACCCACCTCTATGCCCTGAGCCCTGGTAGTCCAGAGACCCCACTCTGCCCTGGCT
TCTCTGGTTCTTCCCTGTGGAAAGCCCATCCTGAGACATCTTGCTGGAACCAAGGCAATCCTGGATGTCCTGGTA
CTGACCCACCCGTCTGTGAATGTGTCCACTCTCTTCTGCCCCAGCCATATTTGGGGAGGATGGACAACACTACAAT
AGGTAAGAAAATGCAGCCGGAGCCTCAGTCCCCAGCAGAGCCTGTGTCTCACCCCTCACAGGACAGAGCTGTAT
CTGCATAGAGCTGGTCTCACTGTGGCGCAGGCCCCGGGGGGAGTGCCTGTGCTGTGTCAGGAAGAGGGGGTGCTGGT
TTGAGGGCCACCAGTGCAGTTCTGCTAGGTCTGCTTCCCTGCCAGGAAGGTGCCTGCACATGAGAGGAGAGAAAT
ACACGTCTGATAAGACTTCATGAAATAATAATTATAGCAAAGAACAGTTTGGTGGTCTTTTCTCTTCCACTGATT
TTTCTGTAATGACATTATACCTTTATTACCTCTTTATTTTATTACCTCTATAATAAAATGATACCTTTTTCATGT
AAAAAAAAAAAAAAAAAA

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FIGURE 1113

MVLCVQGPRPLLAVERTGQRPLWAPSLELPKPVMOPLPAGAFLEEVAEGTPAQTESEPKVLDPEEDLLCIAKTF
YLRESGWYWGSITASEARQHLQKMPEGTF LVRDSTHPSYLF T LSVKTTRGPTNVRIEYADSSFR L DSNCLSRP
LAFPDVVS L VQHYVASCTADTRSDSPDPAPT PALPMPKEDAPSDPALPAPPPATAVHLKL V QPFVRRSSARSLQ
LCRLVINRLVADVDCLPLPRRMADYLRQYPFQL

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FIGURE 1114

GXCCCTCGACGGCXTGCAGCCGGGAGAGCC**ATG**CGGGGGGCCGACGCGGGCGGCAGAGGCGGAGGTGCCTGGGGG
CCGGGGCGCGGAGGGGGCCGGGGGGCTCCGGCGGGGCTGCTCTCCCCAGCCCCCGCGGCTCCCCCGGGCTGGG
CTGCAGCCGCTCAGGGCCACGATCCCCCTTCCAGCTGCAGCAGCCGCACCAGCGCCGGGACGGGGGTGGCCGTGCA
GCCAGCGTCCCATGCTCGGTGGCCCCAGAAAAGTCAGTGTGTAGGCCTCAGCCACTTCAGGTCCGGCGTACATT
TCCCTGGACACCATCCTCAGCTCCTACCTTCTGGGCCAGTGGCCACGAGATGCTGATGGGGCCTTCACCTGCTGC
ACCAATGACAAGGCCACCCAGACGCCCCCTGTCTGGCAAGAGCTAGAAGGTGAGCGTGCCAGTTCCTGTGCACAC
AAGCGCTCAGCATCCTGGGGCAGCACAGACCACCGAAAAGAGATTTCCAAGTTGAAGCAACAACCTGCAGAGGACG
AAGCTGAGCCGAGTGGGAAAGAGAAGGAGCGAGGTTCAACACTCCTAGGGGACCACGCAGTGCGGGGAGCACTG
AGGGCGTCCCCTCCAGCTTCCCCTCAGGGTCCCCTGTCTTGCGACTCAGCCCCGCTGCCTGCACAGGAGCCTGGAA
GGGCTCAACCAAGAGCTGGAGGAGGTATTTGTGAAGGAGCAGGGAGAAGAGGAGCTGCTGAGGATCCTTGATATC
CCTGATGGGCACCGGGCCCCAGCTCCTCCCCAGAGTGGCAGCTGTGATCATCCCCCTCCTCCTCTGGAGCCTGGC
AACCTTGCCAGCTCTCCTTCCATGTCTTGGCATCTCCCCAGCCTTGTGGCCTGGCCAGTCATGAGGAACATCGG
GGTGCCGCCGAGGAGCTGGCATCCACCCCAACGACAAAGCCTCCTCTCCAGGACACCCAGCCTTTCTTGAAGAT
GGCAGCCCATCTCCAGTCTTGCCTTTGCTGCCTCCCCCTCGACCTAATCATAGCTACATCTTCAAACGGGAGCCCC
CCAGAAGGCTGTGAGAAAGTGCCTGTGTTTGAAGAAGCCACGTCTCCAGGTCCTGACCTGGCCTTCTGACTTCC
TGTCTGACAAGAACAAGTCCATTTCAACCCGACTGGCTCAGCCTTCTGCCCCGTCAACCTGATGAAGCCCCCTC
TTCCCCGGCATGGGCTTCATCTTCCGTAAGTCCCCCTCAAACCCGGGATCTCCCCTTCCCCCGGCCAGCCCCAGG
CCACCACCTCGGAAGGATCCGGAAGCCTCCAAGGCCCTCCCCACTGCCATTGAGCCATGGCAGCGCACCCACCA
TCAGAAGAGCCTGTGCTTTTCCAGAGCTCCCTGATGGTCT**GAG**AGGTTCCACCCCTGCCCCACTTTACCATAGAGA
CCAGTGCCTTGGTGGCAGGTCCCTCCCCAGGTCCCCTGAGATGGGGTATGGAGGGGGCCCTTCCCTCTCGGCCTTC
GAGCACTTTCTTTCACTTACTGTGTCAAAGCCCTGGGTCTCTTTTTGATGGGCACCGGGCCCTCTGAACGTGAT
GGGACCTGCCTTCTCCACTAGTAGCTGGGCAGCTCACAATTCACACCTGTGTACCTGCCACATCCCTCACTTGGT
GGAAAACACCCAGAAGGTCTTGAGTCCCCCACCCTGGGTGTGAGTCCAAATGACTGTATAGGAGGCCCTTATTT
TTGTACAGAGCAAGCTGGCCATGAACGAAGGAGAGAAGACGCCACAGATTTCTTCCCTCTCCTCCAGGAGACC
ATAAGATAGATCCCCCATCCTCTCAGCCCTATTCCCATGCCTCCCTCTCATTGGAGGAGCTGACCAAAGCAGCCC
TAACGGGGCCATAACACTTGACCAATTCAGCTGCTGGCAGAGGGAGGAAACAAGTGTTTTCCCAAGTGGCATTTC
ATCTCGCTTTCACCCTGACTAAAGATTGTCTTAAGTAGCAGCCAGCCCGCCAGCCCCAGGTGGGTAGTGGGGA
GGAGAGCTGGCATTCTCCAGGTGGCAAATGGCGACTCTATACTCTCCGCCCGCCCCAGGGCTGGATGGATTAGA
AAAATCCCTATTTTTCTTGTATCGATGTAGAGACTCTATTTTCTCCAAAGACACTATTTTTGCAGCTGTTTGAA
GTTTGTATATTTTCCGTACTGCAGAGCTTACACAAAATTGAAGAATGTTAATGTTTCGAGTTTTCTTATCTTGTGT
TTAGAGGTTGTTTTTGCAGATCTTGGTGTAAATAGACCAAATAAATAAATAAATATTCCAGCAAAAAAAAAAAG
TCGAC

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FIGURE 1115

MAGAAAGGRGGGAWGPGRGGAGGLRRGCSPAPAGSPRAGLQPLRATIPFQLQQPHQRRDGGGRAASVPCSVAPE
KSVCRPQPLQVRRTFSLDTILSSYLLGQWPRDADGAFTCCTNDKATQTPLSWQELEGERASSCAHKRSASWGSTD
HRKEISKLKQQLQRTKLSRSGKEKERGSPLLGDHAVRGALRASPPSFPSGSPVLRLSPCLHRSLEGLNQEELEEVF
VKEQGEEELLRILDIPDGHRAAPPQSGSCDHPLLLLEPGNLASSPSMSLASPQPCGLASHEEHRGAAEELASTP
NDKASSPGHPAFLEDGSPSPVLAF AASPRPNHSYIFKREPPEGCEKVRVFEEATSPGPDLAFLTSCPDKNKVHFN
PTGSAFCPVNLMKPLFPGMGFI FRNCPSNPGSPLPPASPRPPPRKDPEASKASPLPFEPWQRTPPSEEPVLFQSS
LMV

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FIGURE 1116

GTCATGTTCTTCGCGCCCTGGTGTGGACACTGCCAGCGGCTGCAGCCGACTTGGAATGACCTGGGAGACAAATAC
AACAGC**ATG**GGAAGATGCCAAAGTCTATGTGGCTAAAGTGGACTGCACGGCCCACTCCGACGTGTGCTCCGCCAG
GGGGTGCAGGATACCCACCTTAAAGCTTTTCAAGCCAGGCCAAGAAGCTGTGAAGTACCAGGGTCCCTCGGGAC
TTCCAGACACTGGAAACTGGATGCTGCAGACACTGAACGAGGAGCCAGTGACACCAGAGCCGGAAGTGGAACCG
CCCAGTGCCCCCGAGCTCAAGCAAGGGCTGTATGAGCTCTCAGCAAGCAACTTTGAGCTGCACGTTGCACAAGGC
GACCACTTTATCAAGTTCTTCGCTCCGTGGTGTGGTCACTGCAAAGCCCTGGCTCCAACCTGGGAGCAGCTGGCT
CTGGGCCCTTGAACATTCCGAAACTGTCAAGATTGGCAAGGTTGATTGTACACAGCACTATGAACTCTGCTCCGGA
AACCAGGTTTCGTGGCTATCCCACTCTTCTCTGGTTCCGAGATGGGAAAAAGGTGGATCAGTACAAGGGAAAGCGG
GATTTGGAGTCACTGAGGGAGTACGTGGAGTCGCAGCTGCAGCGCACAGAGACTGGAGCGACGGAGACCGTCACG
CCCTCAGAGGCCCGGTGCTGGCAGCTGAGCCCGAGGCTGACAAGGGCACTGTGTTGGCACTCACTGAAAATAAC
TTCGATGACACCATTGCAGAAGGAATAACCTTCATCAAGTTTTATGCTCCATGGTGTGGTCATTGTAAGACTCTG
GCTCCTACTTGGGAGGAACCTCTCTAAAAAGGAATTCCCTGGTCTGGCGGGGTCAAGATCGCCGAAGTAGACTGC
ACTGCTGAACGGAATATCTGCAGCAAGTATTCGGTACGAGGCTACCCACGTTATTGCTTTTCCGAGGAGGGGAA
AAAGTCAGTGAGCACAGTGGAGGCAGAGACCTTGACTCGTTACACCGCTTTGTCCTGAGCCAAGCGAAAAGACGAA
CTTT**AG**GGAACACAGTTGGAGGTACCTCTCTGCCAGCTCCCGCACCTGCGTTTTAGGAGTTCACTCCACAGA
GGCCACTGGGTTCCCACTGGTGGCTGTTTCAGAAAAGCAGAACATACTAAGCGTGAGGTATCTTCTTTGTGTGTGTG
TTTTCCAAGCCAACACACTCTACAGATTCTTTATTAAATGTGTAACATCATGGTCACTGTGTAAACATTTTCAGTG
GCGATATATCCCTTTGACCTTCTCTTGATGAAATTTACATGGTTTCTTTGAGACTAAAATAGCGTTGAGGGAA
ATGAAATTGCTGGACTATTTGTGGCTCCTGAGTTGAGTGATTTTGGTGAAAGAAAGCACATCCAAAGCATAGTTT
ACCTGCCCACGAGTTCTGGAAAGGTGGCCTTGTGGCAGTATTGACGTTCTCTGATCTTAAGGTCACAGTTGACT
CAATACTGTGTTGGTCCGTAGCATGGAGCAGATTGAAATGCAAAAACCCACACCTCTGGAAGATACCTTCACGGC
CGCTGCTGGAGCTTCTGTTGCTGTGAATACTTCTCTCAGTGTGAGAGGTTAGCCGTGATGAAAGCAGCGTTACTT
CTGACCGTGCTGAGTAAGAGAATGCTGATGCCATAACTTTATGTGTGATACTTGTCAAATCAGTTACTGTTCA
GGGGATCCTTCTGTTTCTCACGGGGTGAAACATGCTCTTTAGTTTCTCATGTTAACACGAAGCCAGAGCCCACATG
AACTGTTGGATGTCTTCTTAGAAAGGGTAGGCATGGAAAATTCCACGAGGCTCATTCTCAGTATCTCATTAAC
CATTGAAAGATTCCAGTTGTATTTGTACCTGGGGTGACAAGACCAGACAGGCTTTCCAGGCCTGGGTATCCAG
GGAGGCTCTGCAGCCCTGCTGAAGGGCCCTAACTAGAGTTCTAGAGTTTCTGATTCTGTTTCTCAGTAGTCCTTT
TAGAGGCTTGCTATACTTGGTCTGCTTCAAGGAGGTCGACCTTCTAATGTATGAAGAATGGGATGCATTGATCT
CAAGACCAAAGACAGATGTCAGTGGGCTGCTCTGGCCCTGGTGTGCACGGCTGTGGCAGCTGTTGATGCCAGTGT
CCTCTAACTCATGCTGTCTTGTGATTAAACACCTCTATCTCCCTTGGGAATAAGCACATAACAGGCTTAAGCTCT
AAGATAGATAGGTGTTTGTCTTTTACCATCGAGCTACTTCCATAATAACCACTTTGCATCCAACACTCTTCAC
CCACCTCCCATACGCAAGGGGATGTGGATACTTGGCCCAAAGTAACTGGTGGTAGGAATCTTAGAAACAAGACCA
CTTATACTGTCTGTCTGAGGCAGAAGATAACAGCAGCATCTCGACCAGCCTCTGCCTTAAAGGAAATCTTTATTA
ATCACGTATGGTTCACAGATAATTCTTTTTTTAAAAAAACCCAACCTCCTAGAGAAGCACAACTGTCAAGAGTCT
TGACACACAACCTCAGCTTTGCATCACGAGTCTTGATTTCCAAGAAAATCAAAGTGGTACAATTTGTTTGTGTTA
CACTATGATACTTTCTAAATAAACTCTTTTTTTTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAC

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FIGURE 1117

MEDAKVYVAKVDCTAHS DVCSAQGV RGYPTLKL FKPGEAVKYQGPRDFQTLENWMLQTLNEEPVTPEPEVEPPS
APELKQGLYELSASN FELHVAQGDHF IKFFAPWCGHCKALAPTWEQLALGLEHSETVKIGKVDCTQHYELCSGNQ
VRGYPTLLWFRDGGKVDQYKGKRDLES LREYVESQLQRTETGATETVTPSEAPVLAAEPEADKGTVLALTENNFD
DTIAEGITFIKFYAPWCGHCKTLAPTWEELSKKEFPGLAGVKIAEVDCTAERNICSKYSVRGYPTLLLFRGGKKV
SEHSGGRDLDLH RFLVLSQAKDEL

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FIGURE 1118

GCGGAGGGACCGACGGACGCACGGGCGGGCGGCCGGGAGCCATGGAGCGCGGCCCTGGGGCCCCGGGGCGCGGGC
CGGGGTGGGCTTCCACGGGCACGACATGGAGACCTGTGGTTGCGAGGCTCCCTGGGGCTCGGCTTGGACCGCGAT
GGGGCTGGGCCCTGGCCTCCTAACGGGGCTGCTGTCTGGGGCGGTAGCTGGGGGGGCGCTCTCCCCCTGCCCGC
GACTCGGAGCACCCCCACCCCTCCCCTGCCGGGGCCAGGCCGGGCGGCGTTGTTGGCGGGGGCCCCGGTGGAGGCC
CGGCCTGGGGCGGCGCCCCGCAATGAATGGGCTGTCTGCTGAGTGAGCTCTGCTGCCCTCTTCTGCTGCCCGCCCTGCC
CCGGCCGCATCGCTGCCAAGCTCGCCTTCCTGCCGCCGAGGCCACCTACTCCCTGGTGCCTGAGCCCCGAGCCGG
GGCCTGGTGGGGCCGGGGCCGCCCCCTTGGGGACCCCTGAGAGCCTCCTCGGGCGCACCCGGGCGCTGGAAGCTGC
ACCTGACGGAGCGTGCCGACTTCCAGTACAGCCAGCGCGAGCTGGACACCATCGAGGTCTTCCCCACCAAGAGCG
CCCGCGGCAACCGCGTCTCCTGCATGTATGTTTCGCTGCGTGCCCTGGTGCCAGACAAGGACACCAGGCTCAGGGAG
GCCATCCCCAGCTGGCATGGGTGGGCAGGCTGGGCGACTCCAACAACCCAGCGCCTGGTGGTTGCCTGCTGGGCG
AGAGCTGGGGCACAGGGGCTGCCCTGGCCTGCGGGTACATCCACCTTCTCGCCAGGTACACGGTCTCTTCTCGC
ACGGCAATGCCGTGGACCTGGGCCAGATGAGCAGCTTCTACATTGGCCTGGGCTCCCGCCTCCACTGCAACATCT
TCTCCTACGACTACTCCGGCTACGGTGCCAGCTCGGGCAGGCCTTCCGAGAGGAACCTCTATGCCGACATCGACG
CCGCCTGGCAGGCCCTGCGCACCAAGGTACGGCATCAGCCCGGACAGCATCATCCTGTACGGGCAGAGCATCGGCA
CGGTGCCCCACCGTGGACCTGGCCTCGCGCTACGAGTGTGCCGCGGTGGTGTGCACTCGCCGCTCACCTCGGGCA
TGCGCGTCGCCCTTCCCCGACACCAAGAAGACCTACTGCTTCGACGCCCTCCCTAACATCGAGAAGGTGTCCAAGA
TCACGTCTCCCGTGCTCATCATCCACGGCACGGAGGACGAGGTGATCGACTTCTCGCACGGGCTGGCGCTCTACG
AGCGCTGCCCCAAGGCGGTGGAGCCGCTGTGGGTGGAGGGCGCCGGGCGACAACGACATCGAGCTCTACAGCCAGT
ACCTGGAGCGCCTGCGTCGCTTCATCTCCAGGAGCTGCCCAGCCAGCGCGCCTAGCGGGCGGCCCAACCGGCCG
GACCTCAGCAATAAGGCGGGCCCCCGACCTCACCCCGCGCCGGCCCCCACCAGGGGCTGCATGTGGACCCCCCG
GGCGGCCCAAGGGGACCCCGCCCCGACCCAGGGGCTGTGGACGATGTACAGGCAACAGAGCTACGCACTCCTTTCC
TTTTGGAAGCAAGAAGAAAATACGTGAAAACGGAAATTAAAGATTAAAAATTTTAAAAAAAAAAAAAAAAA

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FIGURE 1119

MNGLSLSELCCCLFCCPPCPGRIAAKLAFLPPEATYSLVPEPEPGPGGAGAAPLGTLRASSGAPGRWKLHLTERAD
FQYSQRELDTIEVFPTKSARGNRVSCMYVRCVPGARQGHQAQGHPQLAWVGRLGDSNNPAPGGCLLGESWGTGA
ALACGYIHLLARYTVLF SHGNAVDLGQMSSFYIGLGSRLHCNIFSYDYSYGASSGRPSEPNLYADIDAAWQALR
TRYGISPDSIIILYGQSIGTVPTVDLASRYECAAVVLHSPLTSGMRVAFPDTKKTYCFDAFPNIEKVSKITSPVLI
IHGTEDEVIDFSHGLALYERCPKAVEPLWVEGAGHNDIELYSQYLERLRRFISQELPSQRA

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FIGURE 1120

GCGCGGCCCCATGAGTTCGGGGCTGCTGCGGCCGGCGCCGGTGAGCGAGGTCATCGTCCTGCATTACAACCTACACC
GGCAAGCTCCGCGGTGCGCGCTACCAGCCGGGTGCCGGCCTGCGCGCCGACGCCGTGGTGTGCCTGGCGGTGTGC
GCCTTCATCGTGCTAGAGAATCTAGCCGTGTTGTTGGTGCTCGGACGCCACCCGCGCTTCCACGCTCCCATGTTT
CTGCTCCTGGGCAGCCTCACGTTGTGCGATCTGCTGGCAGGCGCCGCTACGCCGCCAACATCCTACTGTCTGGGG
CCGCTCACGCTGAAACTGTCCCCGCGCTCTGGTTCGCACGGGAGGGAGGCGTCTTCGTGGCACTCACTGCGTCC
GTGCTGAGCCTCCTGGCCATCGCGCTGGAGCGCAGCCTCACCATGGCGCGCAGGGGGGCCGCGCCCGTCTCCAGT
CGGGGGCGCACGCTGGCGATGGCAGCCGCGGCCCTGGGGCGTGTCGCTGCTCCTCGGGCTCCTGCCAGCGCTGGGC
TGGAATTGCCCTGGGTGCGCTGGACGCTTGCTCCACTGTCTTGCCGCTCTACGCCAAGGCCTACGTGCTCTTCTGC
GTGCTCGCCTTCGTGGGCATCCTGGCCGCGATCTGTGCACTCTACGCGCGCATCTACTGCCAGGTACGCGCCAAC
GCGCGGCGCCTGCCGGCACGGCCCGGACTGCGGGGACCACCTCGACCCGGGCGCGTGCAGAGCCGCGCTCGCTG
GCCTTGCTGCGCACGCTCAGCGTGGTGCTCCTGGCCTTTGTGGCATGTTGGGGCCCCCTCTTCTGCTGCTGTG
CTCGACGTGGCGTGCCCGGCGCGCACCTGTCTGTACTCCTGCAGGCCGATCCCTTCTGGGACTGGCCATGGCC
AACTCACTTCTGAACCCCATCATCTACACGCTCACCAACCGCGACCTGCGCCACGCGCTCCTGCGCCTGGTCTGC
TGCGGACGCCACTCCTGCGGCAGAGACCCGAGTGGCTCCAGCAGTCGCGGAGCGCGGCTGAGGCTTCCGGGGGC
CTGCGCCGCTGCCTGCCCCGGGCCCTTGATGGGAGCTTCAGCGGCTCGGAGCGCTCATGCCCCAGCGCGACGGG
CTGGACACCAGCGGCTCCACAGGCAGCCCCGGTGACCCACAGCCGCCCGGACTCTGGTATCAGAACCGGCTGCA
GACTGACACCCTCGGCCCACGACTGTCTTCCCAAGTTTACAGACTTGTTCTTTTACATAAAGGAATTTGTAGG
AAATGCAGCCAAAGGTGCAGTCGGAAGATGCAGGGGAAATGTATTTATGCAGCGACACCCACAATGTGAACA
AACAGACAAAAAATCTGTGCCCTCGTGGAATTGACGTTCTGCTTGGGAACACAGAAAAGAACTCGGTGATGAAAT
AATGGAGATGATTCCAGTGACAAACGACAGAGATGGTGATGGTGGTCAGGGAAGACCTCTCTGCAGAGGTAGTGA
CTTGATGATGTGAGCTGAGACCTCTGTCTTGGGAAGACCAAAAGAAAAGCATTTAGGATGAGGGAATGGCATGCG
CAAAGGCCCTGAGGCTGAAATGTGCCCATGTGTTCTAAGAAATGCAGCGATGCTGGTGTGCCTGGAGCAGGGACG
GAGGGGGAGAATGGGAGGAGACAAGGAGCTGAAGGAGTAGTTCCCGAAGGACCTTGTGGGTGATATAGAGGACTT
CGCTTTTGCTCTGAGTGAGGTGGGAGCCATAGAAGCTTCTAAGCAGAAGAGGGACTTGCCCTAATTCAGGTGATC
ACAGGTGTCTTGTGGCCTCCATGGGAGGTTGAAAACACAGAAGGTGAAGGGGGGCTGCACTGAGCCACAGGAAC
AATGATGGAGATTCCAGCTAAGCCCAGACCCCGTGGATTCTAGATAGATTTTAGAGGCAGCAGACAGAATTACTG
AGGAATTGAGTGTAAGAGTGGAATAAAGTTATCAAGGACAAATGCCAAGGGTGGGGCACCCCAAATTTGACTTTG
GGAGACTCAGCCAAATCCTATCTGGTAATAAAATTTCTTTTTTATTTTTCTTTTCTTTCTTTCTTTCTTTCTTT
TTTTTTTTTTTTTTGAGTTGGGATCTTGCTCTGTCAACCAGGCTGGAGTGCAATGGGCACAATTATAGCTCACT
GCAGCCTGGAACCTCCTGGGATCAAGCCTGGAGTTCTGCTTCAGCCTCCCTAGTAGCTGGGACTACAGGCATGCA
CCACCATGCCAGTTAATAAAATTTCTTCAAATGCAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1121

MESGLLRPAPVSEVIVLHNYTGKLRGARYQPGAGLRADAVVCLAVCAFIVLENLAVLLVLGRHPRFHAPMFLLL
GSLTSLDLLAGAAYAANILLSGPLTLKLSPALWFAREGGVFVALTASVLSLLAIALERSLTMARRGPAPVSSRGR
TLAMAAAAGVSLLLGLLPALGWNCLGRLDACSTVLPLYAKAYVLFVLAFAVGILAAICALYARIYCQVRANARR
LPARPGTAGTTSTRARRKPRSLALLRTL SVVLLAFVACWGPFLLLLLDVACPARTCPVLLQADPFLGLAMANS
LNPIIYTLTNRDLRHALLRLVCCGRHSCGRDPSGSQQSASAAEASGGLRRCLPPGLDGSFSGSERSSPQRDGLDT
SGSTGSPGAPTAARTLVSEPAAD

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FIGURE 1122A

GGGGGCAGAAAAGGGGGCGGCGGACTCGGCTTGTTGTGTTGCTGCCTGAGTGCCGGAGACGGTCCTGCTGCTGCC
GCAGTCCTGCCAGCTGTCCGACGATGTCGTCCCACCTAGTCGAGCCGCCGCCGCCCTGCACAACAATAACAACA
ACTGCGAGGAAAAATGAGCAGTCTCTGCCCCCGCCGGCCGGCCTCAACAGTTCCTGGGTGGAGCTACCCATGAACA
GCAGCAATGGCAATGATAATGGCAATGGGAAAAATGGGGGGCTGGAACACGTACCATCCTCATCCTCCATCCACA
ATGGAGACATGGAGAAGATTCTTTTGGATGCACAACATGAATCAGGACAGAGTAGTTCAGAGGCAGTTCTCACT
GTGACAGCCCTTCGCCACAAGAAGATGGGCAGATCATGTTTGATGTGGAAATGCACACCAGCAGGGACCATAGCT
CTCAGTCAGAAGAAGAAGTTGTAGAAGGAGAGAAGGAAGTCGAGGCTTTGAAGAAAAGTGGGACTGGGTATCAG
ACTGGTCCAGTAGACCCGAAAACATTCCACCCAAGGAGTTCCACTTCAGACACCCCTAACGTTCTGTGTCTTTAA
GCATGAGGAAAAGTGGAGCCATGAAGAAAGGGGGTATTTTCTCCGCAGAATTTCTGAAGGTGTTCAATCCATCTC
TCTTCCTTTCTCATGTTTGGCTTTGGGGCTAGGCATCTATATTGAAAGCGACTGAGCACACCCTCTGCCAGCA
CCTACTGAGGGGAAAGGAAAAGCCCTGGAAATGCGTGTGACCTGTGAAGTGGTGTATTGTACAGTAGCTTATTT
GAACTTGAGACCATTGTAAGCATGACCCAACCTACCACCCTGTTTTTACATATCCAATTCCAGTAACCTCTCAAT
TCAATATTTTATTCAAACCTCTGTTGAGGCATTTTACTAACCTTATACCCTTTTTGGCCTGAAGACATTTTAGAAT
TTCCTAACAGAGTTTACTGTTGTTTAGAAATTTGCAAGGGCTTCTTTTCCGCAATGCCACCAGCAGATTATAAT
TTTGTGAGCAATGCTATTATCTCTAATTAGTGCCACCAGACTAGACCTGTATCATTTCATGGTATAAATTTTACTC
TTGCAACATAACTACCATCTCTCTCTTAAACGAGATCAGGTTAGCAAAATGATGTAAAAGAAGCTTTATTGTCTA
GTTGTTTTTTTTTCCCCAAGACAAAGGCAAGTTTCCCTAAGTTTGAGTTGATAGTTATTAAAAAGAAAACAAAAC
AAAAAAAAAAGGCAAGGCACAACAAAAAATATCCTGGGCAATAAAAAAATATTTTAAACCAGCTTTGGAGCCA
CTTTTTTGTCTAAGCCTCCTAATAGCGTCTTTTAAATTTATAGGAGGCAAACTGTATAAATGATAGGTATGAAATA
GAATAAGAAGTAAAATACATCAGCAGATTTTCTACTAGTATGTTGTAATGCTGTCTTTTCTATGGTGTAGAATC
TTTCTTTCTGATAAGGAACGTCTCAGGCTTAGAAATATATGAAATTGCTTTTTGAGATTTTTGCGTGTGTGTTG
ATATTTTTTACGATAATTAGCTGCATGIGAATTTTTTCATGACCTTCTTTACATTTTTTATTTTTTATTTCTTTAT
TTTTTTTTCTCTAAGAAGAGGCTTTGGAATGAGTTCCAATTTGTGATGTTAATACAGGCTTCTGTTTTAGGAAG
CATCACCTATACTCTGAAGCCTTTAACTCTGAAGAGAATTGTTTCAGAGTTATTCCAAGCACTTGTGCAACTTG
GAAAAACAGACTTGGGTGTGGGAACAGTTGACAGCGTTCTGAAAAGATGCCATTTGTTTCTTCTGATCTCTCA
CTGAATAATGTTTACTGTACAGTCTTCCCAAGGTGATTCTGCGACTGCAGGCACTGGTCAATTTCTCATGTAGC
TGCTTTTTCAGTTATGGTAACTCTTAAAGTTTCAAGACACTCAACAGATTCCTTCAGTGATATACTTGTTCGTTT
ATTCTAAAATGTGAAGCTTTAGGACCAAAATTGTTAGAAAGCATCAGGATGACCAGTTATCTCGAGTAGATTTTC
TTGATTTTCAGAACATCTAGCATGACTCTGAAGGATACCACATGTTTTATATATAAATAATTACTGTTTATGATA
TAGACATTGATATTGACTATTTAGAGAACCGTTGTTAATTTTAAACTAGCAATCTATAAAGTGCACCAGGTCAA
CTTGAATAAAAACACTATGACAGACAGGTTTGCCAGTTTGCAGAACTAACTCTTTTCTCACATCAACATTTGTA
AAATTGATGTGTTATAGTGGAAAATAACATATAGATTAAACAAAATTTTATCTTTTTTCAAGAATATAGCTGGC
TATCTTTAAGAAAGATGATATATCCTAGTTTTGAAAGTAATTTCTTTTTTCTTTCTAGCATTTGATGTCTAAAT
AATTTGGACATCTTTTCTTAGACCATGTTTCTGTCTTACTCTTAAACCTGGTAACACTTGATTGTCCTTCTAT
AACCTATTTATTTCAAGTGTTTCAATTTGAATTTCTTTGGGAAGAAAGTAAATCTGATGGCTCACTGATTTTGA
AAAGCCTGAATAAAATTGGAAGACTGGAAGTTAGGAGAACTGACTAGCTAACTGCTACAGTATGCAATTTCT
ATTACAATTGGTATTACAGGGGGGAAAAGTAAAATTACACTTTACCTGAAAGTGACTTCTTACAGCTAGTGCATT
GTGCTCTTTCCAAGTTCAGCAGCAGTTCTATCAGTGGTGCCACTGAACTGGGTATATTTATGATTTCTTTTACAGC
GTTAAAAAGAAAACATAGTGTGCCCCTTTTTCTTAAAGCATCAGTGAAATTATGGAAAATTACTTAAACCGTGAAT
ACATCATCACAGTAGAATTTATTATGAGAGCATGTAGTATGTATCTGTAGCCCTAACACATGGGATGAACGTTTT
ACTGCTACACCCAGATTTGTGTTGAACGAAAACATTGTGGTTTTGGAAGGAGAATTCACAATTAATAGTTGAAA
TTGTGAGGTTAATGTTTTAAAAGCTTTACACCTGTTTACAATTTGGGGACAAAAGGCAGGCTTCATTTTTTATA
TGTTTGATGAAAACCTGGCTCAAGATGTTTGTAAATAGAATCAAGAGCAAACTGCACAACTTGACATTGGAAA
GTGCAACAAGTTCCCGTGATTGCAGTAAAAATATTTACTATTCTAAAAAATGAGAATTGAAGACTTAGCCAGTC
AGATAAGTTTTTTCATGAACCCGTTGTGGAATTTATTGGAATTAAGTGAAGTGAATTATGCATTCTTCATC
TATTTTAGTTAGCACTTTGTATCGTTATATACAGTTTACAATACATGTATAACTTGTAGCTATAAACATTTTGTG
CCATTAAAGCTCTCACAAAACCTTTCTGTGTCAGTATATCATTTTTCTGTGCGACCTGTTGCCTGGGAGTTTCAGG
CGATGAGGCTCCTCGCCTACACACAGCCTTCCAGTCATCTGGCTTCCCCAGCAGTGGAGTTCCTAACAGTGCTC

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FIGURE 1122B

AGGGTGTGAACGGTGTTCCTGTGGGGACAGTCACCGCAGTGTGAGCATTCTGTGAGTGCCTCGGGACTGTGGCATT
AGAGCATTTGCCTCCAGGTAGTGGCAGGAGGGCGCTCACGGGAGGAGTGCTCAGGAAGTACAGGAGAGAAGAAGA
GTGTGCCCTGATGGAAATGACAGTGGGACACCAAGTGAAGTGGATCCAGAAGGAAGTGAAGTTCACGTGCCTG
GAAACAGGATGGATACAGAGGAACTGAAAAATGTAGGTTAGTACTGAACCTAATTGAAATGTGTGTGCCCTCC
CAGGGGTACACTTCATCATATAGTTAGCTGGGTTTACTTCTTTTAAACCAGGAGGTGATTTAAGATGTAAATTT
TAGACAGTCAAGCCATCTGGTGAGAGAGTACCAGAGGAGATCAATCAGTTCTCTAGGCGAGGAGCTAGGGCCTGT
CCTGGGCTGTCAACCTGAGGTTGGCAGTGGTGGGCCAGGATACGTATGAGAAACAAAGCGGAAGTAACTGGTCA
GAAAGTGACTTAGAGACGAAGGCGTGTGTATTCTTTGTGTGTGTGGCCCGTAAACATGGGTTGATCCCATTAG
TTAAAGGAGGACAGGAGAAGAAATGGGGTGGTAGGAGCAAAGAGGGAGGATTTTCAGTTTTGAGTGCCTTGAACAT
GAAATGTCTGAGGGCCTTCTGATTGGACACTTACTCC

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FIGURE 1123

GQKRGRRLVLLPECRRRSCCRSPASCPTMSSHLVEPPPPLHNNNNNCEENEQSLPPPAGLNSSWVELPMNS
SNGNDNGNGKNGGLEHVPSSSSIHNQDMEKILLDAQHESGQSSSRGSSSHCDSPSPQEDGQIMFDVEMHTSRDHSS
QSEEEVVEGEKEVEALKKSADWVSDWSSRPENIPPKEFHFRHPKRSVLSMRKSGAMKKGGIFSAEFLKVFIPSL
FLSHVLALGLGIYIGKRLSTPSASTY

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FIGURE 1124

GCGGCGGACTCGGCTTGTTGTGTTGCTGCCTGAGTGCCGGAGACGGTCCTGCTGCTGCCGAGTCCTGCCAGCTG
TCCGACGATGTCGTCCCACCTAGTCGAGCCGCCGCCGCCCTGCACAACAACAACAACACTGCGAGGAAAATGA
GCAGTCTCTGCCCCCGCCGGCCGGCCTCAACAGTTCTTGGGTGGAGCTACCCATGAACAGCAGCAATGGCAATGA
TAATGGCAATGGGAAAAATGGGGGGCTGGAACACGTACCATCCTCATCCTCCATCCACAATGGAGACATGGAGAA
GATTCTTTTGGATGCACAACATGAATCAGGACAGAGTAGTTCCAGAGGCAGTTCTCACTGTGACAGCCCTTCGCC
ACAAGAAGATGGGCAGATCATGTTTGATGTGGAAATGCACACCAGCAGGGACCATAGCTCTCAGTCAGAAGAAGA
AGTTGTAGAAGGAGAGAAGGAAGTCGAGGCTTTGAAGAAAAGTGCGGACTGGGTATCAGACTGGTCCAGTAGACC
CGAAAACATTCCACCCAAGGAGTTCCACTTCAGACACCCCTAAACGTTCTGTGTCTTTAAGCATGAGGAAAAGTGG
AGCCATGAAGAAAGGGGGTATTTTCTCCGCAGAAATTTCTGAAGGTGTTCAATTCATCTCTCTTCCTTTCTCATGT
TTTGGCTTTGGGGCTAGGCATCTATATTGGAAAGCGACTGAGCACACCCTCTGCCAGCACCTACTAGGGGAAAGG
AAAAGCCCCTGGAAATGCGTGTGACCTGTGAAGTGGTGTATTGTACAGTAGCTTATTTGAACCTTGAGACCATTG
TAAGCATGACCCAACCTACCACCCTGTTTTTACATATCCAATTCCAGTAACCCTCAAATTCATATTTTATTCAA
ACTCTGTTGAGGCATTTTACTAACCTTATACCCTTTTGGCCTGAAGACATTTTAGAATTTCTTAACAGAGTTTA
CTGTTGTTTAGAAATTTGCAAGGGCTTCTTTTCCGCAAATGCCACCAGCAGATTATAATTTGTGCGCAATGCTA
TTATCTCTAATTAGTGCCACCAGACTAGACCTGTATCATTCATGGTATAAATTTTACTCTTCCAACATAACTACC
ATCTCTCTCTTAAACGAGATCAGGTTAGCAAATGATGTAAAAGAAGCTTTATTGTCTAGTTGTTTTTTTTTCCCC
CAAGACAAAGGCAAGTTTCCCTAAGTTTGAGTTGATAGTTATTAAAAAGAAAACAAAACAAAAAAAAGGCAAG
GCACAACAAAAAATATCCTGGGCAATAAAAAAATATTTTAAACCAAAAAAAAAAAAAA

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FIGURE 1125

MSSHLVEPPPPLHNNNNNCEENEQSLPPPAGLNSSWVELPMNSSNGNDNGNGKNGGLEHVPSSSSSIHNGDMEKIL
LDAQHESGQSSSRGSSHCDSPSPQEDGQIMFDVEMHTSRDHSSQSEEEVVEGEKEVEALKKSADWVSDWSSRPEN
IPPKEFHFRHPKRSVLSMRKSGAMKKGGIFSAEFLKVFIPSLFLSHVLALGLGIYIGKRLSTPSASTY

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FIGURE 1126

GCGGCCGGCGGCGTCTCCTCCCGGGACGCTGAGGGGCCCCGAGGAGACCGTGAGGCTCTGGCCTGCAGCTCGCGCC
GCCATGGACGCTGCCGAGGTCTGAATTCCTCGCCGAGAAGGAGCTGGTTACCATTATCCCCAACTTCAGTCTGGAC
AAGATCTACCTCATCGGGGGGGACCTGGGGCCTTTTAAACCTGGTTTACCCGTGGAAGTGCCCTGTGGCTGGCG
ATTAACCTGAAACAAAGACAGAAATGTCGCCTGCTCCCTCCAGAGTGGATGGATGTAGAAAAGTTGGAGAAGATG
AGGGATCATGAACGAAAGGAAGAAACTTTTACCCCAATGCCAGCCCTTACTACATGGAACCTACGAAGCTCCTG
TTAAATCATGCTTCAGACAACATCCCGAAGGCAGACGAAATCCGGACCCTGGTCAAGGATATGTGGGACACTCGT
ATAGCCAACTCCGAGTGTCTGCTGACAGCTTTGTGAGACAGCAGGAGGCACATGCCAAGCTGGATAACTTGACC
TTGATGGAGATCAACACCAGCGGGACTTTCTCACACAAGCGCTCAACCACATGTACAACTCCGCACGAACCTC
CAGCCTCTGGAGAGTACTCAGTCTCAGGACTTCTTAGAGAAAAGGCCTGGTGCAGGCGGCTTGCTGGGGGATGTGAG
CGCTCAGGATGTGATGAGGTACTCGTGGTTCTGGAGCTCTAGAAACACTTCTGATGCATGAAAAATGTGTGATGG
TGCAAGGAATGGATTGAGGATGTTGTTGGAGAAACAAGTTTGTGATTAGTCCTTAAACTTAGCTCCCTGGGACA
TTCTTCAATTCCACATCTGTTTCTAGAAACCAGCCCTTTTCCCCCACTTTTGAGAAATAAAAAAGCCTTAGGT
AAATAAGTCATTCTCCCTAGCAGAGCCACTTGGGTCTCCTGCATGGAAGCCGTCACACTTGGGCAGGTGTTTCACT
GACTGGTAGGTGTAGATACAGCAGGAGTGGCCATGTGGTCCACGGCTTTTACCCCTTCTTGATCCTGATTTCTT
GGGCTGAATTTAGACTCTCTCACAGAGGTGGCTCACAGAGAAGGATGGCAGATGGTGCAGCCAACAATGCTGACC
GGTGCTTATCCTCTAAGCCCTGATCCACAATAAAAAATGGACCCAACTCAAAAAAAAAA

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FIGURE 1127

MDAAEVEFLAEKELVTIIPNFSLDKIYLIIGGDLGPFNPGLPVEVPLWLAINLKQRQKCRLLPPEWMDVEKLEKMR
DHERKEETFTPMPSPYMEITKLLLNHASDNIPKADEIRTLVKDMWDTRIAKLRVSADSFVRQQEAHAKLDNLTL
MEINTSGTFLTQALNHMYKLRTNLQPLESTQSQDF

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FIGURE 1128

CTCGCCGAGATGACCTGGGCACCTCTGCGTTGAATCGGCAAATACTGATCAAGCCGCATTTATTCTGCTCTCAGG
AACTCTAAGTCTAGCAGAGAAGATGAGGCGGTAGAAGTTCATCAATGGCTTGGCTGGAGGACAAGCAAATTGAGG
ACATTGGCAACGGAGTGATCAAAATGATAGATCATGAGGCCTAAAATGAATAAGGAAAGAAGAGAAAGTGGCAGAG
GCTGAGAACAGAAAGAGAGGGTGGAGGGGCTGTAAATCTTGAAGATTAGGGTATAATATGAGTATATGGGTAAAG
ATTGGAAGAATTGTGTAGGAGGCAGTAGTCAAAAAGTAGAAGCAGTTTGGAAAGAGTAGTTACAAATATCAAGAGC
CAGGTGGCTAAAAGGTGGAGCTATAGGTCAATTGAAGCTCAAGAACTGAGTCTCTAGGGCATTGGTTAAGTCATC
TGTCTAGACTTCAAAGTTGTCTAGGATGATAATTCAGAAGACTGATCTGTGCCAAAGTCACAGGTTTTTCACGAC
TGAAAACAACATAGCAAAATAAGCCAAGATGCTGTGGATCCAATGACCTACGAGGCCAGTTCTTTGGCTTCAC
GCCACAAACGTGCATGCTTCGGATCTACATTGCATTTCAAGACTACCTATTTGAAGTGATGCAGGCCGTTGAACA
GGTTATTCTGAAGAAGCTGGATGGCATCCAGACTGTGACATTAGCCCAGTGCAGATTTCGCAATGCACAGAGAA
GTTTCTTTGCTTCATGAAAGGACATTTTGATAACCTTTTTAGCAAATGGAGCAACTGTTTTTGACGTGATTTT
ACGTATTCCTCAAACATCTTGCTTCCTGAAGATAAATGTAAGGAGACACCTTATAGTGAGGAAGATTTTCAGCA
TCTCCAGAAAGAAATTGAACAGTTACAGGAGAAGTACAAGACTGAATTATGTACTAAGCAGGCCCTTCTTGACAG
ATTAGAAGAGCAAAAAATTGTTACAGGCCAACTCAAACAGACGTTGACTTTCTTTGATGAGCTTCATAATGTTGG
CAGAGATCATGGGACTAGTGATTTTAGGGAGAGTTTAGTATCCCTGGTTCAGAACTCCAGAAAACACAGAACAT
TAGAGACAATGTGAAAAGGAATCGAAACGACTGAAAATATCTTAATTGCTCAGTAGTCAAAAGGAGGAGCCTGT
CAAAAAGTAGAATCATAAGGACTGTTCAAACCATAAGGACTGTTCAAATCATAACAGTGACTGTTCAAACCAACC
ATACTTTTTATTAGATTTGCTTTGTCAACTCTTTCTGTATTCTGTGTTTTCTCTTTTTTGGTCCACTTTGCTG
AGGTATGAAGTGTACTACTTTGAACTAGGCTGAAGCATCTGAGTCTTCTAATAAGTGGGAAGGGATCCAACAAAG
AAGCCATGACCAGTTAAAGATATTTGCAGAGTTACACCTTGGTCATAAGTCCTTTGTGACCTTGATTATTTTGGC
TTACTCTTTGGATGAGACCAGACAAGAAAAGGATTAAACGGGTGGCTCCTTTAATATTATTATTATTGTTTTGA
GACAAGGTCCCTTTCTGTACCCAGGTTAGAGTAGATTTAGTGGCACAATCTTGGCTCACTGCAACCTCTGTGT
CCTGGGCTCAAGTGATCCTCCTGCCTCAGCCTCCCAAGTAGCTAGGACCACAGGTGCGTGTACCATGCTTGGCT
AATTTTTTTGCAGAAACGAGGCCTCACTATATTGTCCAGGCTGAGTGGCTCTTTTATTAACCAGTCATTACACTG
CGGAACAGCCAACATAGAGTACTTGCTCTCGTCCTGTGAATTTTCTTTCATGAGGGAGTCAATATGTAGTGGA
GAAGCATGTAGCAAAAAAGACAACCTTGATCTTTAATAAAAAAGAAGTTGGTTTATTTCCAAAATAAATCCCCTG
ACAAAAAACCTGGTGATGTTAAGCAATTGACTGTCTTAGAGTCCAGCAGAAGACCTTAGACAAAAAAGCAGAAC
CCACTGGAGTAGAAAAGGAAGCATGTAGCATATACTCAGTAGTGAAATTTAATTTTACTGACTGTTAGGTATCTA
TGCCAATTTGTTTTCTACTTTCAGTTGGTTTTGGAATCTGCCTTATACCTAATATTTATTTATTCACACTCATAA
GCATCAAATATTTAATGCCCTCAGTGGGAAATTTGTGTTTAACTCAATGGAATCTAATATTTCTTTATGTCGTT
AGTCCCTGTAAAATGTTAGGTACCCAAGGAAAGGGGAGAAATAGCAATGGTTGTTCTTAAGGTATTGCTTGCCC
TCCATGCTTTCCTAAAGAGCAGAACTTGAGTTCCTTTATGTAGAGAAGAAGTAACCTAGGGTGTATTGCA
ATGAAATATTCATAGATATTGAAAGCTTGTGTTTACATGAAATATGTTTATTATCAAGAAGTCCTTTTTCCAATT
CTGTACATTAAATATATGTGTTTTAAAAA

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FIGURE 1129

MSVDPMTYEAQFFGFTPQTCMLRIYIAFQDYLFQVEVMQAVEQVILKKLDGIPDCDISPVQIRKCTEKFLCFMKGHF
DNLFSKMEQLFLQLILRIPSNILLPEDKCKETPYSEEDFQHLQKEIEQLQEKYKTELCTKQALLAELEEQKIVQA
KLKQTLTFFDELHNVGRDHGTSDFRESLVSLVQNSRKLQNIRDNVEKESKRLKIS

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FIGURE 1130

GTGGGACTGGGATCATCAGTCTCTTCTGTGCACACTATGCGCGGCCTAGAGCGGTGTACGCGGTGGAGGCCAGTG
AGATGGCACAGCACACGGGGCAGCTGGTCCTGCAGAACGGCTTTGCTGACATCATCACCGTGTACCAGCAGAAGG
TGGAGGATGTGGTGTCTGCCCCGAGAAGGTGGACGTGCTGGTGTCTGAGTGGATGGGGACCTGCCTGCTGTTTGAGT
TCATGATCGAGTCCATCCTGTATGCCCCGGGATGCCTGGCTGAAGGAGGACGGGGTCATTTGGCCCCACCATGGCTG
CGTTGCACCTTGTGCCCTGCAGTGTCTGATAAGGATTATCGTAGCAAGGTGCTCTTCTGGGACAACGCGTACGAGT
TCAACCTCAGCGCTCTGAAGTAAGTGTCCACAGCTGGGACTGGCACCCTCTTGTGGGGCCTCCTGGTCCACAGTC
TGCAGGTGGGCCAAGGCCCTGGGAGATCCCATACGACGGTTGGATAAATGAGGGTACCTGTGCACCCAGATAGGA
CAATCTGTTGTAGCATTGGAGTAATTAAAGCAGTATGGTGTCTATAACAAGACAGATGGGCAGAGCAGGGTAGAAT
GCAAGGAACAAAAATTTTCGTATGTGAAAAAGGTGGCATTACGATTAGGAGGGAGTGAGGGCCAAGTCAGCAAAT
TATTCTGGAGCAGTTGATTAGCCCTTGTCTCTCACGCCATACGTGAAAACCTAATTCTGCATGGAATCAGCGTC
AGCGACAGACATCCATGGGGGCCTGTGTGCACCATCTTAGGTGGAGAAATGAGCAGCAACAATGGATGGAATGGA
CCCTGGGCTAGATAGAATCTGGCAGTCTATGTGGCAGAAATCAGCAAAAACACGATTGTAAAAGCAAACAAGTAA
TTAGAGAAATCACGTGCTGTGAGGTCTTGGAATCAATTAGAAAGAGATGACTAGCCAGATGGAATTGCAGCCCCAA
TCATGTGAACAGGCAAACCGCAAAAAATAAATAAAATTACCAATAAATACATGAAAAATTATAATGTTGTTAGTA
GTTAAATGCGAATTAAAATACATGCTGTTTTCCCTACCAGACAAGCAAAGAGTAAATTAAAATAGTAGCCCAGG
CTTGCCTGGCAGTGGCAGGGAGGTGTGGCTGCCAGGGCCTTAGAGGTTGGCATCAGGCTGCCACCCCAGTCACT
GCCAGAGCCTCCCACCTGAGTGTTCCCTCCCGGCACTGGAAGCCAGTGGCCGTCCAGAGGAACGTGATTGAATTGC
TGTATATCCATCTGGTGGAGCACTGCTGTGTGTCTGTTAAAAAAGAAACCATAGGTTTTTAGGGATATGTAATGA
TATTTAGAAAGGGTTTAAGAGACAGTAAAGCTTGGCAGAATAAACCGTGTATACAGAATGGATGTTTGCTTGCA
AAATAAATTTATATAAATATGTCTGGGGGATAAAAAATAAGTATATCACAATGCTAAGACAGGCATATGGGGAATT
TAAGCTTTTCTTTATACTTGTCCATAGTTTCCAATTTTTAAATTTGTAATTTTTTATCAGAAAAATAAATGTGTA
AATATAGTGAATCTTTATTAAAACATTCACTTTTATTGCTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1131

GGCACGAGGATTTCTCATCGTCAAGCTTTGTTCCCTCGTGGGGGGCTAGAAATCTCTTTCCAGTTCCAGATTGTGA
AGGGTTCCTGAGTAAGCAGCGTGTCTCCATCCCCCTCTCTAGGGGCTCTTGGATGGACCTTGCACTCTAGAAGGG
ACAATGGACTTCTGGCTTTGGCCACTTTACTTCCTGCCAGTATCGGGGGCCCTGAGGATCCTCCCAGAAGTAAAG
GTAGAGGGGGAGCTGGGCGGATCAGTTACCATCAAGTGCCCACTTCCTGAAATGCATGTGAGGATATATCTGTGC
CGGGAGATGGCTGGATCTGGAACATGTGGTACCGTGGTATCCACCACCAACTTCATCAAGGCAGAATACAAGGGC
CGAGTTACTCTGAAGCAATACCCACGCAAGAATCTGTTCCCTAGTGGAGGTAACACAGCTGACAGAAAGTGACAGC
GGAGTCTATGCCTGCGGAGCGGGCATGAACACAGACCGGGGAAAGACCCAGAAAGTCACCCTGAATGTCCACAGT
GAATACGAGCCATCATGGGAAGAGCAGCCAATGCCTGAGACTCCAAAATGGTTTCATCTGCCCTATTTGTTCCAG
ATGCCTGCATATGCCAGTTCTTCCAAATTCGTAACCAGAGTTACCACACCAGCTCAAAGGGGCAAGGTCCCTCCA
GTTCCACACTCCTCCCCACCACCCAAATCACCCACCGCCCTCGAGTGTCCAGAGCATCTTCAGTAGCAGGTGAC
AAGCCCCGAACCTTCTGCCATCCACTACAGCCTCAAAAATCTCAGCTCTGGAGGGGCTGCTCAAGCCCCAGACG
CCCAGCTACAACCACCACACCAGGCTGCACAGGCAGAGAGCACTGGACTATGGCTCACAGTCTGGGAGGGAAGGC
CAAGGATTTACATCCTGATCCCGACCATCCTGGGCCCTTTTCTGCTGGCACTTCTGGGGCTGGTGGTGAAGG
GCCGTTGAAAGGAGGAAAGCCCTCTCCAGGCGGGCCCGCCGACTGGCCGTGAGGATGCGCGCCCTGGAGAGCTCC
CAGAGGCCCCGCGGGTTCGCCGCGACCGCGCTCCCAAAACAACATCTACAGCGCCTGCCCGCGGCGCGCTCGTGGA
GCGGACGCTGCAGGCACAGGGGAGGCCCCGTTCCCGGCCCGGAGCGCCGTTGCCCCCGCCCCGCTGCAGGTG
TCTGAATCTCCCTGGCTCCATGCCCCATCTCTGAAGACCAGCTGTGAATACGTGAGCCTCTACCACCAGCCTGCC
GCCATGATGGAGGACAGTGATTGAGATGACTACATCAATGTTCCCTGCCCTGACAACCTCCCCAGCTATCCCCAACC
CCAGGCTCGGACTGTGGTGCCAAGGAGTCTCATCTATCTGCTGATGTCCAATACCTGCTTCATGTGTTCTCAGAG
CCCTCATCACTTCCCATGCCCCATCTCGACTCCCATCCCCATCTATCTGTGCCCTGAGCATGGCTCTGCCCCAG
GTCGTCTTGACACCTTGGCAGCCCCCTGTAGTTGACAGGTAAGCTGTAGGCATGTAGAGCAATTGTCCCAATGC
CACTTGCTTCTCTTTCCAAGCCGTGGAACAGACTGTGGGATTTGCAGAGTGTCTTCTCCATGTCTTTGACCACAGG
GTTGTTGCTGCCAGGCTCTAGATCACATGGCATCAGGCTGGGGCAGAGGCATAGCTATTGTCTCGGGCATCCTT
CCCAGGGTTGGGTCTTACACAAATAGAAGGCTCTTGCTCTGAGTTATGTGACATGCCTCAGCCCCATGGACTAAG
CAGGGGTCTGGTATAAAACACTCCTGGAACGCCTTTGCCCTGATCCAAATGTTAGCACTTGCTAGTGAACGTC
TACTTATCTCAAGTTCTATGCTAAAGGCAATTTATCTTGATGTGATGATAAACCAAACTTATTAGCAAGATATGC
ATATATATCAAAAAAAAAAAAAAAAAA

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FIGURE 1132

MDFWLWPLYFLPVSGALRILPEVKVEGELGGSVTIKCLPEMHVRIYLCREMAGSGTCGTVVSTTNFIKAEYKGR
VTLKQYPRKNLFLVEVTQLTESDSGVYACGAGMNTDRGKTQKVTLNVHSEYEPSWEEQPMPETPKWFHLPYLFQM
PAYASSSKFVTRVTTPAQRGKVPPVHHSSPTTQITHRPRVSRASSVAGDKPRTFLPSTTASKISALEGLLKPQTP
SYNHHTRLHRQRALDYGSQSGREGQGFHILIPTILGLFLLALLGLVVKRAVERRKALSRRARRLAVRMRALESSQ
RPRGSPRPRSQNNIYSACPRRARGADAAGTGEAPVPGPGAPLPPAPLQVSESPWLHAPSLKTSCEYVSLYHQPAA
MMEDSDSDDYINVPA

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FIGURE 1133

GGCACGAGGATTTCTCATCGTCAAGCTTTGTTTCCTCGTGGGGGCTAGAAATCTCTTTCCAGTTCCAGATTGTGA
AGGGTTTCCTGAGTAAGCAGCGTGTCTCCATCCCCCTCTCTAGGGGCTCTTGGATGGACCTTGCACTCTAGAAGGG
ACA**ATG**GACTTCTGGCTTTGGCCACTTTACTTCCTGCCAGTATCGGGGGCCCTGAGGATCCTCCCAGAAGTAAAG
GTAGAGGGGGAGCTGGGCGGATCAGTTACCATCAAGTGCCCACTTCCTGAAATGCATGTGAGGATATATCTGTGC
CGGGAGATGGCTGGATCTGGAACATGTGGTACCGTGGTATCCACCACCAACTTCATCAAGGCAGAATACAAGGGC
CGAGTTACTCTGAAGCAATACCCACGCAAGAATCTGTTCCTAGTGGAGGTAACACAGCTGACAGAAAGTGACAGC
GGAGTCTATGCCTGCGGAGCGGGCATGAACACAGACCGGGGAAAGACCCAGAAAGTCACCCTGAATGTCCACAGT
GAATACGAGCCATCATGGGAAGAGCAGCCAATGCCTGAGACTCCAAAATGGTTTCATCTGCCCTATTTGTTCCAG
ATGCCTGCATATGCCAGTTCTTCCAAATTCGTAACCAGAGTTACCACACCAGCTCAAAGGGGCAAGGTCCCTCCA
GTTCAACCACTCCTCCCCACCACCCAAATCACCCACCGCCCTCGAGTGTCCAGAGCATCTTCAGTAGCAGGTGAC
AAGCCCCGAACCTTCTGCCATCCACTACAGCCTCAAAAATCTCAGCTCTGGAGGGGCTGCTCAAGCCCCAGACG
CCCAGCTACAACCACCACACCAGGCTGCACAGGCAGAGAGCACTGGACTATGGCTCACAGTCTGGGAGGGAAGGC
CAAGGATTTACATCCTGATCCCGACCATCCTGGGCCTTTTCTGCTGGCACTTCTGGGGCTGGTGGTGAAAAGG
GCCGTTGAAAGGAGGAAAGCCCTCTCCAGGCGGGCCCGCCGACTGGCCGTGAGGATGCGCGCCCTGGAGAGCTCC
CAGAGGCCCCGCGGTCGCCGCGACCGCGCTCCCAAAACAACATCTACAGCGCCTGCCCGCGGCGCGCTCGTGGA
GCGGACGCTGCAGGCACAGGGGAGGCCCCGTTCCCGGCCCGGAGCGCCGTTGCCCGCGGCGCGCTCGTGGA
TCTGAATCTCCCTGGCTCCATGCCCCATCTCTGAAGACCAGCTGTGAATACGTGAGCCTCTACCACCAGCCTGCC
GCCATGATGGAGGACAGTGATTGAGATGACTACATCAATGTTCTGCTGCT**AGACA**ACTCCCCAGCTATCCCCCAACC
CCAGGCTCGGACTGTGGTGCCAAGGAGTCTCATCTATCTGCTGATGTCCAATACCTGCTTCATGTGTTCTCAGAG
CCCTCATCACTTCCCATGCCCCATCTCGACTCCCATCCCATCTATCTGTGCCCTGAGCATGGCTCTGCCCCCAG
GTCGTCTTGACACCTTGGCAGCCCCCTGTAGTTGACAGGTAAGCTGTAGGCATGTAGAGCAATTGTCCCAATGC
CACTTGCTTCTCTTTCCAAGCCGTGGAACAGACTGTGGGATTTGCAGAGTGTTTCTTCCATGTCTTTGACCACAGG
GTTGTTGCTGCCCAGGCTCTAGATCACATGGCATCAGGCTGGGGCAGAGGCATAGCTATTGTCTCGGGCATCCTT
CCCAGGGTTGGGTCTTACACAAATAGAAGGCTCTTGCTCTGAGTTATGTGACATGCCTCAGCCCCATGGACTAAG
CAGGGGTCTGGTATAAAAACACTCCTGGAAAACGCCTTTGCCCTGATCCAAATGTTAGCACTTGCTAGTGAACGTC
TACTTATCTCAAGTTCTATGCTAAAGGCAATTTATCTTGATGTGATGATAAACCAAACCTATTAGCAAGATATGC
ATATATATCAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1134

MDFWLWPLYFLPVSGALRILPEVKVEGELGGSVTIKCPLPEMHVRIYLCREMAGSGTCGTVVSTTNFIKAEYKGR
VTLKQYPRKNLFLVEVTQLTESDSGVYACGAGMNTDRGKTQKVTLNVHSEYEPSWEEQPMPEPKWFHLPYLFQM
PAYASSSKFVTRVTTPAQRGKVPPVHHSSPTTQITHRPRVSRASSVAGDKPRTFLPSTTASKISALEGLLKQPOT
SYNHHTRLHRQRALDYGSQSGREGQGFHILIPTILGLFLLALLGLVVKRAVERRKALSRRARRLAVRMRALESSQ
RPRGSPRPRSQNNIYSACPRRARGADAAGTGEAPVPGFAPLPPAPLQVSESPWLHAPSLKTSCEYVSlyHQPA
MMEDSDSDDYINVPA

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FIGURE 1135

AGGGGCGGGCCCGCGCGCGGGGAAGTCTCTGTAGGGCGGCCGGCTACCCTCAGCCGCCGCGCGCTC**ATG**GCCCT
TTCGGTGCCCGGCTACTCACCGGGCTTCCGAAAAGCCGCCGAGGTAGTGCGGCTCCGACGGAAAAGGGCCCGGAG
CCGTGGAGCTGCCGCCTCCCCGCCCGTGAGCTGACGGAGCCGGCGGCCCGCCGAGCCGCCCTGGTGGCGGGGGCT
GCCTCTTCGCCCTTTCCCTGCTGCGGGGGGCGAGAGCGGTGGCAGCGGCCGGCGGCCCGGCCGCTGCTCGGAGGAA
CCCCTCGCCCGCCTGGACAACCGACCGCGGGTTCGCCGCGGAGCCCCCGACGGGCCGGCCCGCGAGCAGCCGGA
GGCCCCGGTCCCGTTTTTAGATTCTAATCAAGAAAATGATTGCTATGGGAAGAGAAGTTTCCTGAAAGAACAAC
TGTTACTGAATTACCTCAGACTTCACATGTATCATTCTCCGAGCCTGATATTCCGTCCTCAAAAAGTACTGAGTT
ACCTGTGGACTGGAGTATTAAACGCGACTCCTTTTACCTCTTCTCAACCCTTTACCTGGGCAGATCATTTGAA
AGCACAGGAAGAAGCTCAAGGTCTTGTCAGCATTGTAGGGCAACAGAAGTTACTTTGCCTAAAAGTATACAGGA
TCCCAAACCTCTCCTCTGAGCTCCGTTGTACCTTCCAGCAGAGCCTTATCTATTGGCTCCACCCTGCTTTGTCTTG
GCTACCACTGTTCCCTCGTATTGGAGCTGATAGAAAATGGCTGGAAAGACAAGTCCTTGGTCAAATGATGCAAC
CCTGCAGCATGTTTTAATGAGTGAAGTGGTCTGTGAGCTTTACTTCTCTATATAATTTGCTGAAGACAAAACCTTTG
CCCCTATTTCTACGTTTGTACCTATCAGTTTACTGTCTGTTCCGAGCAGCAGGATTAGCTGGAAGTGAAGTAAAT
CACAGCTCTCATATCTCCAACAACCTCGAGGTTTAAAGAGAAGCTATGAGAAATGAAGGTATTGAATTTTCTCTGCC
TTTAATAAAAAGAAAGTGGCCATAAGAAGGAGACAGCATCTGGAACAAGCTTGGGATATGGGGAGGAGCAAGCCAT
CAGTGATGAGGATGAAGAGGAAAGTTTTTCTGGCTGGAAGAGATGGGTGTGCAAGATAAAATTAAGGAGCCAGA
CATACTTTCTATCAAGCTGCGTAAAGAGAAACATGAAGTACAAATGGATCACAGACCTGAATCTGTTGTGTTGGT
AAAAGGAATCAACACCTTTACATTGCTCAATTTTTTGTATTAAGTCTAAGAGTTTAGTTGCTACCTCAGGTCCACA
GGCAGGACTTCCTCCAACCCTCTTGTCCCCTGTTGCTTTCCGAGGTGCCACAATGCAAATGCTTAAGGCACGGAG
TGTGAATGTGAAGACACAAGCTCTTTCTGGATACAGAGACCAATTTAGTTTGGAGATTACAGGTCTTATCATGCC
TCATTCTCTGCATTCACTGACCATGCTGCTCAAAATCTTACAGAGTGGATCTTTCTCTGCAGTACTGTATCCACA
CGAGCCAACTGCTGTATTTAACATCTGCCTGCAAATGGACAAAGTACTTGATATGGAGGTTGTTTATAAGGAGCT
TACTAACTGTGGTTTGCACCCTAACACTCTGGAGCAACTTAGTCAAATACCGTTACTTGGGAAATCATCTTTACG
GAATGTGGTGCTGAGAGACTACATTTATAATTGGAGATCCT**TGA**ACACCAAAGTAAGCCTAAAAGGAATCTTTGAG
GAAAAAGCCTTCTAGCAAGGAAATTCAAGATTCTTGAAGTTGAAGGAATATACTGAAATGTTTATAAACATAAC
TTTTACTACAGTAGCATCTAAGGTTTTAAATGTGTTTTACTATTTTCAGATTAGATTTTATAGATATAAAGATGAA
AAACTCAGATAACTCAAATGAGATATCTATATCCCTACAACCTAATTGTATATTGAGCAGAACTGAATTAATAT
GCTTCCTTGCAAATGGGAAATCACATAGCAGTTACCCCATGGCATTGTGACTAATGGCATCAGGGCAAAATATG
TTACTTTACGATTTACCTGTTAGCAGGTTCTTGTTCATAAAGGTAGAAAATAAATACAGACAACATCTAAAAAA
AAAAAAAAAAAAAA

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FIGURE 1136

MALSVPGYSPGFRKPPEVVRLRRKRARSRGAAASPPRELTEPAARRAALVAGLPLRPFPAAGGRGGGSGGGPAAA
RRNPFARLDNRPRVAAEPPDGPAREQPEAPVPFLDSNQENDLLWEEKFPERTTVTELPQTSHVSFSEPDIPSSKS
TELPVDWSIKTRLLFTSSQPFTWADHLKAQEEAQGLVQHCRATEVTLPKSIQDPKLSSELRCCTFQQSLIYWLHPA
LSWLPLFPRIGADRKMAGKTSPWSNDATLQHVLMDSWSVSFTSLYNLLKTKLCPYFYVCTYQFTVLFRAAGLAGS
DLITALISPTTRGLREAMRNEGIEFSLEPLIKESGHKKETASGTS LGYGEEQAISDEDEEEESFSWLEEMGVQDKIK
KPDILSIKLRKEKHEVQMDHRPESVVLVKGINTFTLLNFLINSKSLVATSGPQAGLPPTLLSPVAFRGATMQMLK
ARSVNVKTQALSGYRDQFSLEITGPIMPHSLHSLTMLLKSSQSGSFSVLYPHEPTAVFNICLQMDKVLDMEVVH
KELTNCGLHPNTLEQLSQIPLLKGSSLRNVVLRDYIYNWRS

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FIGURE 1137

CGGACGCGTGGGGAGAGGCTGTTTACCAGAACAGCATAACAAGGGCAGGTCTGACTGCAAGGCTGGGACTGGGAG
GCAGAGCCGCCGCCAAGGGGGCCTCGGTAAACACTGGTCGTTCAATCACCTGCAAGACGAAGGAGGCAAGGATG

CTGTTGGCCTGGGTACAAGCATTCTCGTCAGCAACATGCTCCTAGCAGAAGCCTATGGATCTGGAGGCTGTTTC
TGGGACAACGGCCACCTGTACCGGGAGGACCAGACCTCCCCCGCGCCGGGCTCCGCTGCCTCAACTGGCTGGAC
GCGCAGAGCGGGCTGGCCTCGGCCCCCGTGTGCGGGGGCCGGCAATCACAGTTACTGCCGAAACCCGGACGAGGAC
CCGCGCGGGCCCTGGTGCTACGTCAGTGGCGAGGCCGGCGTCCCTGAGAAACGGCCTTGCGAGGACCTGCGCTGT
CCAGAGACCACCTCCCAGGCCCTGCCAGCCTTCACGACAGAAATCCAGGAAGCGTCTGAAGGGCCAGGTGCAGAT
GAGGTGCAGGTGTTTCGCTCCTGCCAACGCCCTGCCGCTCGGAGTGAGGCGGCAGCTGTGCAGCCAGTGATTGGG
ATCAGCCAGCGGGTGGGATGAACCTCAAGGAGAAAAAGGACCTGGGAACCTCTGGGCTACGTGCTGGGCATTACC
ATGATGGTGATCATCATTGCCATCGGAGCTGGCATCATCTTGGGCTACTCCTACAAGAGGGGGAAGGATTTGAAA
GAACAGCATGATCAGAAAGTATGTGAGAGGGAGATGCAGCGAATCACTCTGCCCTTGCTGCCTTCACCAACCCC
ACCTGTGAGATTGTGGATGAGAAGACTGTCGTGGTCCACACCAGCCAGACTCCAGTTGACCTCAGGAGGGGCAGC
ACCCCCCTTATGGGCCAGGCCGGGACTCCTGGGGCCTGAGCCCCCAGTGGGCAGGAGCCCATGCAGACACTGG
TGCAGGACAGCCCACCCTCCTACAGCTAGGAGGAATACTACTTTGTGTTCTGGTTAAACCTTACCCTCCCCC
GCTTTTTTGGCGAATCCTAGTAAGAGTGACAGAAGCAGGTGGCCCTGTGGGCTGAGGGTAAGGCTGGGTAGGGTC
CTAACAGTGCTCCTTGTCCATCCCTTGGAGCAGATTTTGTCTGTGGATGGAGACAGTGGCAGCTCCACAGTGAT
GCTGCTGCTAAGGGCTTCCAAACATTGCCTGCACCCCTGGAACCTGAACCAGGGATAGACGGGGAGCTCCCCCAGG
CTCCTCTGTGCTTTACTAAGATGGCCTCAGTCTCCACTGTGGGCTTGAGTGGCATACTGTTATTTCATGGTTAA
GGTAAAGCAGGTCAAGGGATGGCATTGAAAAAATATATTTAGTTTTTAAATATTTGGGATGGAACTCCCTACTG
ACCTCTGAGAACTGGAAACGAGTTTGTACAGAAGTCAGAACTTTGGGTTGGGAATGAGATCTAGGTTGTGGCTGC
TGGTAIGCTTCAGCTTGCTGGCAATGATGTGCCTTGACAACCGTGGGCCAGGCCTGGGCCCAGGGACTCTTCCTG
TTTCATAAGGAAAGGAAGAATTGCACTGAGCATTCCACTTAGGAAGAGGATAGAGAAGGATCTGCTCCGCCTTG
GCCACAGGAGCAGAGGCAGACCTGGGATGCCCCAGTTTCTCTTCAGGGATGGATAGTGACCTGTCTTCATTTTGC
ACAGGTAAGAGAGTAGTTAGCTAACCTATGGGAATTATACTGTGGGGCCTTGTGAGCTGCTTCTAAGAGGCTAAC
CTGGAAACTAAGCTCAGAGGCAAGGTAATAAAGCACTTCAGGGCTTGCTCCCCAAGTGGGCCTGATTTAGCAGGT
GGTCTGCGGGCGTCCAGGTGAGCACCTTCCTGTAGGGCACTGGGGCTAGGGTCACAGCCCCCTAACTCATAAAGC
AATCAAAGAACCATTAGAAAGGGCTCATTAAGCCTTTTGGACACAGGACCCAGAGAGGAAAAAGTGACTTGCCC
AAGGTCGTAAGCAAGCTACTGGCATGGCAAGAGCCCAGCTTCCTGACGGAGCGCAACATTTCTCCACTGCACTGT
GCTAGCAGCTCAGCAGGGCCTCTAACCTGTGATGTCACACTCAAGAGGCCTTGGCAGCTCCTAGCCATAGAGCTT
CCTTTCCAGAACCCTTCCACTGCCCAATGTGGAGACAGGGGTTAGTGGGGCTTTCTATGGAGCCATCTGCTTTGG
GGACCTAGACCTCAGGTGGTCTCTTGGTGTTAGTGATGCTGGAGAAGAGAATATTACTGGTTTCTACTTTTCTAT
AAAGGCATTTCTCTATATACATGTTTTATATACCTCATTCTGACACCTGCATATAGTGTTGGGAAATTGCTCTGCA
TTTGACTTAATTAATAAAAAAAAAAAAAA

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FIGURE 1138

MLLAWVQAFLVSNMLLAEAYGSGGCFWDNGHLYREDQTSPAPGLRCLNWLDASGLASAPVSGAGNHSYCRNPDE
DPRGPWCYVSGEAGVPEKRPCEDLRCPETTSQALPAFTTEIQEASEGPGADEVQVFAPANALPARSEAAAVQPVI
GISQVRMNSKEKKDLGTLGYVLGITMMVIIIAIGAGIILGYSYKRGKDLKEQHDQKVCEREMQRITLPLSAFTN
PTCEIVDEKTVVVHTSQTPVDPQEGSTPLMGQAGTPGA

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FIGURE 1139

CGGACGCGTGGGGAGAGGCTGTTTACCAGAACAGCATAACAAGGGCAGGTCTGACTGCAAGGCTGGGACTGGGAG
GCAGAGCCGCCGCCAAGGGGGCCTCGGTAAACACTGGTCGTTCAATCACCTGCAAGACGAAGGAGGCAAGGATG

CTGTTGGCCTGGGTACAAGCATTCTCGTCAGCAACATGCTCCTAGCAGAAGCCTATGGATCTGGAGGCTGTTTC
TGGGACAACGGCCACCTGTACCGGGAGGACCAGACCTCCCCCGCGCCGGGCTCCGCTGCCTCAACTGGCTGGAC
GCGCAGAGCGGGCTGGCCTCGGCCCGCTGTGCGGGGCCGGCAATCACAGTTACTGCCGAAACCCGGACGAGGAC
CCGCGCGGGCCCTGGTGCTACGTCAGTGCGGAGGCCGGCGTCCCTGAGAAACGGCCTTGCGAGGACCTGCGCTGT
CCAGAGACCACCTCCCAGGCCCTGCCAGCCTTCACGACAGAAATCCAGGAAGCGTCTGAAGGGCCAGGTGCAGAT
GAGGTGCAGGTGTTGCTCCTGCCAACGCCCTGCCCGCTCGGAGTGAGGCGGCAGCTGTGCAGCCAGTGATTGGG
ATCAGCCAGCGGGTGCGGATGAACTCCAAGGAGAAAAAGGACCTGGGAACCTCTGGGCTACGTGCTGGGCATTACC
ATGATGGTGATCATCATTGCCATCGGAGCTGGCATCATCTTGGGCTACTCCTACAAGAGGGGGAAGGATTTGAAA
GAACAGCATGATCAGAAAGTATGTGAGAGGGAGATGCAGCGAATCACTCTGCCCTTGCTGCCTTCACCAACCCC
ACCTGTGAGATTGTGGATGAGAAGACTGTCGTGGTCCACACCAGCCAGACTCCAGTTGACCCCTCAGGAGGGCAGC
ACCCCCCTTATGGGCCAGGCCGGGACTCCTGGGGCTTGAGCCCCCCCCAGTGGGCAGGAGCCCATGCAGACACTGG
TGCAGGACAGCCCACCCTCCTACAGCTAGGAGGAATACTACTTTGTGTTCTGGTTAAAAACCTACCCTCCCCC
GCTTTTTTGGCGAATCCTAGTAAGAGTGACAGAAGCAGGTGGCCCTGTGGGCTGAGGGTAAGGCTGGGTAGGGTC
CTAACAGTGCTCCTTGTCCATCCCTTGGAGCAGATTTTGTCTGTGGATGGAGACAGTGGCAGCTCCCACAGTGAT
GCTGCTGCTAAGGGCTTCCAAACATTGCCCTGCACCCCTGGAACCTGAACCAGGGATAGACGGGGAGCTCCCCAGG
CTCCTCTGTGCTTTACTAAGATGGCCTCAGTCTCCACTGTGGGCTTGAGTGGCATACTGTTATTTCATGGTTAA
GGTAAAGCAGGTCAAGGGATGGCATTGAAAAAATATATTTAGTTTTTAAAAATATTTGGGATGGAACCTCCCTACTG
ACCTCTGAGAACTGGAACGAGTTTGTACAGAAGTCAGAACTTTGGGTTGGGAATGAGATCTAGGTTGTGGCTGC
TGGTATGCTTCAGCTTGCTGGCAATGATGTGCCTTGACAACCGTGGGCCAGGCCTGGGCCAGGGACTCTTCCTG
TTTCATAAGGAAAGGAAGAATTGCACTGAGCATTCCACTTAGGAAGAGGATAGAGAAGGATCTGCTCCGCCCTTG
GCCACAGGAGCAGAGGCAGACCTGGGATGCCCCAGTTTCTCTTCAGGGATGGATAGTGACCTGTCTTCATTTTGC
ACAGGTAAGAGAGTAGTTAGCTAACCTATGGGAATTATACTGTGGGGCCTTGTGAGCTGCTTCTAAGAGGCTAAC
CTGGAAACTAAGCTCAGAGGCAAGGTAATAAAGCACTTCAGGGCTTGCTCCCCAAGTGGGCCTGATTTAGCAGGT
GGTCCTGCGGGCGTCCAGGTGAGCACCTTCCTGTAGGGCACTGGGGCTAGGGTCACAGCCCCTAACTCATAAAGC
AATCAAAGAACCATTAGAAAGGGCTCATTAAGCCTTTTGGACACAGGACCCAGAGAGGAAAAAGTGAATTGCC
AAGGTCGTAAGCAAGCTACTGGCATGGCAAGAGCCCAGCTTCCTGACGGAGCGCAACATTTCTCCACTGCACTGT
GCTAGCAGCTCAGCAGGGCCTCTAACCTGTGATGTCACTCAAGAGGCCCTTGGCAGCTCCTAGCCATAGAGCTT
CCTTTCCAGAACCCTTCCACTGCCCAATGTGGAGACAGGGGTTAGTGGGGCTTTCTATGGAGCCATCTGCTTTGG
GGACCTAGACCTCAGGTGGTCTCTTGGTGTTAGTGATGCTGGAGAAGAGAATATTACTGGTTTCTACTTTTCTAT
AAAGGCATTTCTCTATATACATGTTTTATATACCTATTCTGACACCTGCATATAGTGTGGGAAATTGCTCTGCA
TTTGACTTAATTAATAAAAAAAAAAAAAA

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FIGURE 1140

MLLAWVQAF LVSNMLLAEAYGSGGCFWDNGHLYREDQTSPAPGLRCLNWLD AQSGLASAPVSGAGNHSYCRNPDE
DPRGPWCYVS GEAGVPEKRPCEDLRCPETTSQALPAFTTEIQEASEGPGADEVQVFAPANALPARSEAAAVQPVI
GISQVRMNSKEKKDLGTLGYVLGITMMVIIIAIGAGIILGYSYKRGKDLKEQHDQKVCEREMQRITLPLSAFTN
PTCEIVDEKTVVVHTSQTPVDPQEGSTPLMGQAGTPGA

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FIGURE 1141

GCGGAGCGCGCAGCGGGGGCTGCAGATTCTTTCCACCATGGCCAGACGCCCCGGAACAGCAGGGCCTGGCACTT
CGTCCTGAGTGCAGCCCGCCGAGACGCAGATGCCCCGGGCGGTGGCTCTAGCAGGCTCCACTAACTGGGGCTACGA
CTCTGATGGGCAGCACAGCGACTCGGACTCCGACCCCGAGTACTCCACGCTGCCGCCATCCATCCCCAGTGCGGT
GCCCCGTGACCGGCGAGTCCTTCTGTGACTGTGCTGGGCAGAGCGAGGCCTCCTTCTGTAGCAGCCTGCACTCGGC
CCACCGGGGGCAGGGACTGCCGCTGCGGAGAGGAAGACGAGTATTTGCACTGGGTCTGGGATGACTTAAATAAGTC
ATCAGCCACCCTGCTGAGCTGTGACAACCGTAAGGTCAGCTTCCACATGGAGTACAGCTGCGGCACAGCGGCCAT
CCGGGGCACCAAGGAGCTGGGGGAGGGCCAGCACTTCTGGGAGATCAAGATGACCTCTCCCGTCTACGGCACCGA
CATGATGGTGGGCATCGGGACGTCGGATGTGGACCTGGACAAATACCGCCACACGTTCTGCAGCCTGCTGGGCAG
GGATGAGGACAGCTGGGGCCTCTCCTACACGGGCCTCCTCCACCACAAGGGCGACAAGACCAGCTTCTCGTCGCG
GTTTCGGCCAGGGCTCCATCATTGGCGTGCACCTGGACACCTGGCACGGCACACTCACCTTTTTCAAGAACAGGAA
GTGTATAGGTGTGGCAGCCACCAAGCTGCAGAACAAAGAGATTCTACCCGATGGTGTGCTCCACGGCGGGCCCGGAG
CAGCATGAAGGTCACCCGCTCCTGTGCCAGCGCCACTTCCCTCCAGTACCTGTGCTGCCACCGCCTGCGCCAGCT
GCGGCCAGACTCGGGAGACACGCTGGAGGGTCTGCCGCTGCCGCCGGGCCTCAAGCAGGTGCTACACAACAAGCT
GGGCTGGGTCTTGAGCATGAGTTGCAGCCGCCGCAAGGCTCCAGTGTCCGATCCCCAGGCAGCGACCTCCGCCCCA
CCCCAGCAGTCGCGAGCCTCGGCCCTGCCAGAGGAAGCGCTGCCGCCGGACCTGACTGACTTCCCAGTGGAAGT
CCTTCTTGGGCTGGGACAGCCCCCTTTCCTCTGTCCCTTCTTTCTCTGTCCCTTCCTTCCAGCCACACTCCAGGGC
GGAGTTGGATGAGGCCCGTCCGGAGGGAGCCATCTCTTGCTCCCGAGGCTGGGACAGTCCTTTCTGTGGGGGCTC
TAGGGCCCCCTCTGCTGCTGTGCTGGGTGGGGAAGCGGCTGCCCTGAGCCCCAGGTCTTGTGGGAGGCTGCGAGGA
CGAGAGCCTGGCTGGAGCCCGGTTGCTGTTCCACAGGGCCTCGGTTTTTTCCTAACTTGCTCTGCATGCTGTCA
GCGGCTGCCCCGCCGTCATAGACTTAAAGGACTGCAATAAATGTAGAGTTGATGTCTAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAA

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FIGURE 1142

GTTGTGAGCTGCGGCAGAGACTGGTGGCTGGAGGAGACGCCGGCGCTGGAGAGTGGCTGCGCCGCCCGCCGCTG
AGGGACCGCGGGGTTAGCCACTGCTGGCTGCTTCCAGTGTTTCGCCGAGAGGTACCGGGGGTGACAGCTCCGGGAC
CGGCCGAAAGGCGAGGAACCGGTGTGGAAATTAAAAAGAACACACATATTTTACTGGGGCTTTGATCAACCAAAT
GCTAAAAAGCCACACAAAGAAGATCCCTAATAGTCATTTCTCAACAATTATATAGTCAACTGATGTAACAATGGT
ACTAATATTGGGACGCAGACTAAACAGAGAGGATCTTGGGGTGCGTGATTCCCCAGCAACTAAGCGAAAAGTTTT
TGAAATGGACCCCAAATCTCTGACAGGTCATGAGTTTTTTGACTTCTCTTCAGGATCATCCCATGCCGAAAACAT
ACTCCAGATATTTAATGAATTTTCGTGATAGCCGCTTATTCACAGATGTTATCATTGTGTGGAAGGAAAAGAATT
TCCTTGCCATAGAGCTGTGCTCTCAGCCTGTAGCAGCTACTTCAGAGCTATGTTTTGTAATGACCACAGGGAAG
CCGAGAAATGTTGGTTGAGATCAATGGTATTTTAGCTGAAGCTATGGAATGTTTTTGCAGTATGTTTATACTGG
AAAGGTGAAGATCACTACAGAGAATGTACAGTATCTCTTGAGACATCAAGCCTCTTCAGATTAGTGTCTCCG
TGATGCATGTGCCAAGTTCTTGAGGAGCAACTTGATCCTTGTAATTGCTTAGGAATCCAGCGCTTGCTGATAC
CCATTCACTCAAAACACTCTTCACAAAATGCAAAAATTTTGCCTTACAGACTTTTGAGGATGTATCCCAGCACGA
AGAATTTCTTGAGCTTGACAAAGATGAACTTTATGTTGTCGGTGGCTATGATGGGCAAAACAGACTTAGCAGCGT
AGAATGTTATGATTCCTTTTCAAATCGATGGACTGAAGTTGCTCCCCTTAAGGAAGCCGTGAGTTCTCCTGCAGT
GACTAGCTGTGTAGGCAAACGTGTTGTGATTGGTGGAGGACCTGATGATAATACTTGTCTGATAAGGTTCAATC
TTATGATCCAGAAACCAATTCTTGCTACTTCGTGCAGCTATCCCAATTGCCAAAAGGTGTATAACAGCTGTATC
CCTAAACAACCTGATCTATGTTGCCGGTGGACTGACCAAGGCAATATGCTGTTACGATCCAGTTGAAGATTACTG
GATGCACGTACAGAATACATTCAGCCGTCAGGAAAACGTGGTATGTCTGTGTGTAATGGTAAAAATATATATCCT
GGGCGGAAGACGGGAAAATGGAGAAGCCACAGACACTATTCCTGTTATGATCCTGCAACAAGTATCATCACAGG
GGTAGCTGCAATGCCAGGCCAGTGTCTATCATGGCTGTGTGACTATTCATAGATACAATGAGAAATGCTTTAA
ACTCTGAAGACAGGATACCTCACCGAAGAAGCCACACTGATCCAAGATGGGAGGTTTTTAAAACTCTACAGTGGG
AACTTCACATATCTCCTTTGTGCCATATGCAAAAAATAGTAAAAATAATAATTTGGTGCCTTTCTCCTCAAAATA
TCAATCTTTCAACTATAATAAAGCCTTCTCTATAATTGAAAAAAAAAAAAAAAAA

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FIGURE 1143

MVLILGRRLNREDLGVRDSPATKRKVFEMDPKSLTGHEFFDFSSGSSHAENILQIFNEFRDSRLFTDVIICVEGK
EFPCHRAVLSACSSYFRAMFCNDHRESREMLVEINGILAEAMECFLOQYVYTGKVKITTENVQYLFETSSLFQISV
LRDACAFLFEEQLDPCNCLGIQRFADTHSLKTLFTKCKNFALQTFEDVSQHEEFLELDKDELYVVGGYDGNRLS
SVECYDSFSNRWTEVAPLKEAVSSPAVTSCVGKLFVIGGGPDDNTCSDKVQSYDPETNSWLLRAAIPIAKRCITA
VSLNNLIYVAGGLTKAICCYDPVEDYWMHVQNTFSRQENCGMSVCNGKIYILGGRRENGEATDTILCYDPATSII
TGVAAMP RPVS YHGCVTIHRYNEKCFKL

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FIGURE 1144

GATCAATGGTATTTTAGCTGAAGCTATCGAATGTTTTTGCAGTATGTTTATACTGGAAAGGTGAAGATCACTAC
AGAGAAATGTACAGTATCTCTTTGAGACATCAAGCCTCTTTCAGATTAGTGTTCTCCGTGATGCATGTGCCAAGTT
CTTGGAGGAGCAACTTGATCCTTGTAATTGCTTAGGAATCCAGCGCTTTGCTGATACCCATTCACTCAAAACACT
CTTCACAAAATGCAAAAATTTTGC GTTACAGACTTTTGAGGATGTATCCCAGCACGAAGAATTTCTTGAGCTTGA
CAAAGATGAAC TTATTGATTATATTTGTAGTGATGAAC TTGTTATTGGTAAAGAGGAGATGGTTTTTGAAGCCGT
CATGCGTTGGGTCTATCGTGCCGTTGATCTGAGAAGACCAC TGTACACGAGCTCCTGACACATGTGAGACTCCC
TCTGTTGCATCCCAACTACTTTGTTCAAACAGTTGAAGTGGACCAATTGATCCAGAATTCTCCTGAGTGTTATCA
GTTGTTGCATGAAGCAAGACGGTACCACATACTTGGGAATGAAATGATGTCCCAAGGACTAGGCCACGCAGGTC
CACTGGCTATTCTGAGGTGATAGTTGTCGTTGGAGGATGTGAGCGAGTTGGAGGATTTAATCTTCCATACTGA
GTGCTACGATCCTGTAACAGGAGAATGGAAGTCTTTGGCTAAGCTTCCAGAATTTACCAAATCAGAGTATGCAGT
CTGTGCTCTAAGGAATGACATTCTTGTTTCAGGTGGAAGAATCAACAGCCGTGATGTCTGGATTTATAACTCACA
GTTAAATATTTGGATCAGAGTTGCCTCTCTCAATAAAGGCAGATGGCGTCACAAAATGGCTGTCTCTCCTTGGTAA
AGTATATGTTGTCGGTGGCTATGATGGGCAAAACAGACTTAGCAGCGTAGAATGTTATGATTCTCTTTCAAATCG
ATGGACTGAAGTTGCTCCCCTTAAGGAAGCCGTGAGTTCTCCTGCAGTGA CTAGCTGTGTAGGCAAACTGTTTGT
GATTGGTGGAGGACCTGATGATAATACTTGTCTGATAAGGTTCAATCTTATGATCCAGAAACCAATTCTTGGCT
ACTTCGTGCAGCTATCCGAATTGCCAAAAGGTGTATAACAGCTGTATCCCTAAACAACCTGATCTATGTTGCCGG
TGGACTGACCAAGGCAATATACTGTTACGATCCAGTTGAAGATTACTGGATGCACGTACAGAATACATTACAGCCG
TCAGGTAATAACA TGAAGCAGTACAAAAGAAAAATAAATCTAAGAGGGACCAAGTACATAATCATTATTAATACA
CTGGAATTTCAATTTTAAAATATTTCAGGCTGGGCGTGGTGGCTCACGCCTGTGGTCCCAGCACTTTGGGAGGCC
GAGGTGGATAGATCACTTGAGGTCAGGAGTTCAAGACCAGCCTGGCTAATATGGTGAAACCCCGTCTCTACTAAA
AAATTATGGCCAGGCGTGGTGGTT CATGCCTGTAATCCCAGCACTTTGGGAGGCTGAGGCAGGCCAATCACCTGA
GGTCGGGAGTTTCGAGACCAGCCTGACCAACATGGAGAAACCCCGTCTCTGCTAAAAATACAAAATTAGCTGGGCG
TGGTGGCGCATTGCCTGTAATCCCAGCTACTAGGGAGGCTGCGGCAGGAGAATTGCTTGAACCCGGGAGGTGGAG
GTCGCGGTGAGCCGAGATCGAGCCATTGCACTCCAGCCTGGACAGCAGGAGCGAAACTCCGTCTCAAAAATAAAT
AAAAAAAAAAAAAAAAAAAA

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FIGURE 1145

MECFLOQVYTGKVKITTENVQYLFETSSSLFQISVLRDACAKFLEEQLDPCNCLGIQRFADTHSLKTLFTKCKNFA
LQTFEDVSQHEEFLELDKDELIDYICSDELVIGKEEMVFEAVMRWVYRAVDLRRPLLHELLTHVRLPLLHPNYFV
QTVEVDQLIQNSPECYQLLHEARRYHILGNEMMSPRTRPRRSTGYSEVIVVVGGCERVGGFNLPTYECYDPVTGE
WKSLAKLPEFTKSEYAVCALRNDILVSGGRINSRDVWIYNSQLNIWIRVASLNKGRWRHKMAVLLGKVYVVGGYD
GQNLSSVECYDSFSNRWTEVAPLKEAVSSPAVTSCVGKLEFVIGGGPDDNTCSDKVQSYDPETNSWLLRAAIRIA
KRCITAVSLNNLIYVAGGLTKAIYCYDPVEDYWMHVQNTFSRQVIT

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FIGURE 1146

GCAGAGGTGCGGCCGGGGAGGCGCGCGGAGGCTGGAGCTGGAGGCGCGGCCGGGTGAGCTGAGAAACCATGTGTG
CTCAGTATTGCATCTCCTTTGCTGATGTTGAAAAAGCTCATATCAACATTCGAGATTCTATCCACCTCACACCAG
TGCTAACAAAGCTCCATTTTGAATCAACTAACAGGGCGCAATCTTTTCTTCAAATGTGAACTCTTCCAGAAAACAG
GATCTTTTAAAGATTGCTGGTGCTCTCAATGCCGTGAGAAGCTTGGTTTCTGATGCTTTAGAAAGGAAGCCGAAAG
CTGTTGTTACTCACAGCAGTGGAACCATGGCCAGGCTCTCACCTATGCTGCCAAATTGGAAGGAATTCTTGCTT
ATATTGTTGGTGCCCCAGACAGCTCCAGACTGTAAAAAAGCTTGAATACAAGCCTACGGAGCGTCAATTGTATACT
GTGAACCTAGTGATGAGTCCAGAGAAAATGTTGCAAAAAGAGTTACAGAAGAAACAGAAGGCATCATGGTACATC
CCAACCAGGAGCCTGCAGTGATAGCTGGACAAGGGACAATTGCCCTGGAAGTGCTGAACCAGGTTCTTTTGGTGG
ATGCACTGGTGGTACCTGTAGGTGGAGGAGGAATGCTTGCTGGAATAGCAATTACAGTTAAGGCTCTGAAACCTA
GTGTGAAGGTATATGCTGCTGAACCCTCAAATGCAGATGACTGCTACCAGTCCAAGCTGAAGGGGAAACTGATGC
CCAATCTTTATCTCCAGAAACCATAGCAGATGGTGTCAAATCCAGCATTGGCTTGAACACCTGGCCTATTATCA
GGGACCTTGTGGATGATATCTTCACTGTACAGAGGATGAAATTAAGTGTGCAACCCAGCTGGTGTGGGAGAGGA
TGAAACTACTCATTGAACCTACAGCTGGTGTGGAGTGGCTGCTGTGCTGTCTCAACATTTTCAAAGTGTTCCTCC
CAGAAGTAAAGAACATTTGTATTGTGCTCAGTGGTGGAAATGTAGACTTAACCTCCTCCATAACTTGGGTGAAGC
AGGCTGAAAGGCCAGCTTCTTATCAGTCTGTTTCTGTTTAAATTTACAGAAAAGGAAATGGTGGGAATTCAGTGTCT
TTTAGATACTGAAGACATTTTGTTCCTAGTATTGTCAACTCTTAGTTATCAGATTCTTAATGGAGAGTGGCTAT
TTCATTAAGATTTAATAGTTTTTTTTTGGACTAAGTAGTGGAAAACTTTTATACTTAACTGAGACATTTTGTCAA
GGCTAAAAAAAAGTCTTGCAAAATGGGGCAGTGGACTGACAGGCTGACATAGAAAATAAACTTTGCCCAATCACA
ACTTGTGCCTCCCATCCCTGGAGTACTGACTGGCACCGGTAAGACAGAATCTCTCTGAATCCATTACTCCATGCC
CCCTTGAGGCACGTGTTGAAGAAATCTCACTTTTCAGCCAGGGTACTGGTTCTGGTACATATGGATCATAAGTCCA
TTTGGGGAAGACTCGTTTATACAGGTTTATCAGTACTGTGTCTTGAGATTTTAGCTTCCCATCAAAGCTGCATTT
CATGTGGCCATGGGTACCTAGAAAGACATCAGAAACAAGTCGGTCAAATTTAAAGTAGAAAATTTTAAAGCAATGA
CTTCCAACCCAACAGTCATTTAGCAAACTGCAGAAATGCAGACATGGTCTCAAATCCCGTGTTCCTTACCTAA
AGGTTCCCTTGATATGTCCTCTCCGGCCCCACTTCGTTCTCAGTTCCACTGGTTTAAACCACAGCACATCCTCTTA
GAATCAAACACATTTAAAGACCAAGATGAAACATTTACCCACAAAATGTAAACCCAACCTTTATACCACAAAGGCA
ATCAGATCCCATCCTCCTCCTTCATACCCACCTCTGTTGAAGAACATGTAACGTACTACTGCCATCTTAGTAAAA
ATTTTGAAAGGATGACCACTCAGAACAACCTCTCTTGATGACCATTCTGTCTGGATCTACTGACATAAGATGGCCT
GTAGCAATGAGGCTGTGCATTCTTAAAGGACAAAAGCAAAGAAGCTATTTAGGAATTTACAGGCCAAAGTCTTCA
TTTATTGCCAGTCCATTTTAAAGACCCATGCAAGAGCCTGGTTTGTCTATCCCTAGCCCAATCTGAGGCTA
AGATTGGTAAACTGTAAAGCCACACTTAACCTTGTCATAGGTTCTTGAAAACCTGTACTTCAAGAGAAATGATG
TATAACAAAACCATACTTTTTCTCATCAGTTGTTACAAGGAAAGGATGTTGAACAAAAGGCAGTTATTTGAGGAC
TGGCTATACACTGTTTCACGTAAAAGTTGGAGTTTTCAATGTTCTATTAACAATGTTAAATGAAGACTTACTGTA
TTTTGAAAACCATATTACCTTCTCCATACCATTTGGCTCCCAAATTTAAATAAACAAGAGAAAACGGTGTTCAT
CT

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FIGURE 1147

MCAQYCISFADVEKAHINIRDSIHLTPVLTSSILNQLTGRNLFFKCELFQKTGSFKIRGALNAVRSLVPDALERK
PKAVVTHSSGNHGQALTYAAKLEGIPAYIVVPQTAPDCCKLAIQAYGASIVYCEPSDESRENVAKRVTEETEGIM
VHPNQEPAVIAGQGTIALEVLNQVPLVDALVVPVGGGGMLAGIAITVKALKPSVKVYAAEPSNADDCYQSKLK GK
LMPNLYPPETIADGVKSSIGLNTWPIIRD LVDDIFTVTEDEIKCATQLVWERMKLLIEPTAGVGVAAVLSQHFQT
VSPEVKNICIVLSGGNVDLTSSITWVKQAERPASYQSVSV

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FIGURE 1148

GGTTTTXTGGXXGGGGGTTTTCAACXCXGGCTCTTGTTCTTTTTGCAGGACCCATCGATTCTGAATTCGGCACGAG
CATCAGTATGCTTATGGATTTGATGACAGGCATAGCCTGGGCATATCACCTCATTGGTAAAGGGCTAGAGCCTTT
CTTTTTTATGGCACTTCTTTTTTTGAGATAGGGTCTTACTCTGTACCCTGGCTAGAGTACACTGGTACAATCAC
GGCTCAATGTAGGCTTAACCTCCTGGGCTCAGGTGTAIGTCACTATGCCCGGCTACTTTTTGTATTTTTTGGTAG
AGACGGCTTCGCCACGTTGCCCAGGCTGCAAGCGATATGCCTAGGCTCAAGCGATCTGCCACCTCAACTTCCGG
AAGTGCTGAGATTACAGGTGTGAGCCACTGCACCCAGCCTTTGCTTTATTTTTTATTTTTTGAGAGGTATGATTC
TTTCTAGAGATTTTTTCTCATGGCTACTATTAGATCAGGAATGGGTGATTGGAGATTATTAGATTCTAGGTTAAC
TTCTACCACTTTACCCTAATACATAAACTTTTTCCCTAAATXAATGATGGAAGGAATXAAXXXXAXCXXCCXCXT
XXCCXCTAXTACAAAAXCXCTAGCCCTTAXAACXTTXXGXXAGCTXXXTTXXCCTXXXTXTCCCXTXXTCXXXCC
CCXXCCTXXTTXTXCCXXXCTXXCTCXAXCCCCACXAXTXXCXXTXXXXCTXCXXAATAXATTXCXCXCXTXXC
TCCTCAXXXXCTXXTCXXXXCTCXX

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FIGURE 1149

ATTCCCTCCATCATTATTTAGGAAAAAGTTTTATGTATTAGGGTAAAGTGGTAGAAGTTAACCTAGAATCTAAT
AATCTCCAATCACCCATTCTGATCTAATAGTAGCCATGAGAAAAATCTCTAGAAAGAATCATACCTCTCAAAA
AATAAAAAATAAAACAAAGGCTGGGTGCAGTGGCTCACACCTGAGCCCAGGAGGTTAAGCCTACATTGAGCCGTG
ATTGTACCAGTGTACTCTAGCCAGGGTGACAGAGTAAGACCCTATCTCAAAAAAGAAGTGCCATAAAAAAGAAA
GGCTCTAGCCCTTTACCAATGAGGTGATATGCCCAGGCTATGCCTGTCTCATCAATCCATTACCTTCCTGGTGAT
GGCCATGAGAAAGTCCAGCACACAAACCATGCCCCAGACTGCATCTGTGCATACACAGAGTAAAAGCCCTGCTGC
TATACTATAAAATGGCACCTGAAAATAATCTCTACGGTATGTTTGAAAATTGGCAG

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FIGURE 1150

GCGAAGTGAAGGGTGGCCCAGGTGGGGCCAGGCTGACTGAATGTATCTCTAGCTATGGACTAAATAATACATGG
GGGGAAATAACAAGTATTCATGAGGGTGAAAATGTGACCCAGCAGGAAAATTACAACATTTTTCAATTGACGTT
GAATAGGATGAGTCATGGAATTTAAGTGATTACTGAAGATTATACTACTGGTAGATAGAAGAGCTAAAGAAAGA
TGGATACTATGATGCTGAATGTGCGGAATCTGTTTGAGCAGCTTGTCGCCGGGTGGAGATTCTCAGTGAAGGAA
ATGAAGTCCAATTTATCCAGTTGGCGAAGGACTTTGAGGATTTCCGTAAAAAGTGGCAGAGGACTGACCATGAGC
TGGGGAAATACAAGGATCTTTTGATGAAAGCAGAGACTGAGCGAAGTGCTCTGGATGTTAAGCTGAAGCATGCAC
GTAATCAGGTGGATGTAGAGATCAAACGGAGACAGAGAGCTGAGGCTGACTGCGAAAAGCTGGAACGACAGATTC
AGCTGATTTCGAGAGATGCTCATGTGTGACACATCTGGCAGCATTCAACTAAGCGAGGAGCAAAAATCAGCTCTGG
CTTTTCTCAACAGAGGCCAACCATCCAGCAGCAATGCTGGGAACAAAAGACTATCAACCATTGATGAATCTGGTT
CCATTTTATCAGATATCAGCTTTGACAAGACTGATGAATCACTGGATTGGGACTCTTCTTTGGTGAAGACTTTCA
AACTGAAGAAGAGAGAAAAGAGGCGCTCTACTAGCCGACAGTTTGTGATGGTCCCCCTGGACCTGTAAAGAAAA
CTCGTTCCATTGGCTCTGCAGTAGACCAGGGGAATGAATCCATAGTTGCAAAAACACTACAGTGACTGTTCCCAATG
ATGGCGGGCCCATCGAAGCTGTGTCCACTATTGAGACTGTGCCATATTGGACCAGGAGCCGAAGGAAAACAGGTA
CTTTACAACCTTGAACAGTGACTCCACCCTGAACAGCAGGCAGCTGGAGCCAAGAAGTGAACAGACAGAGTGTTG
GCACGCCACAGAGTAATGGAGGGATGCGCCTGCATGACTTTGTTTCTAAGACGGTTATTAACCTGAATCCTGTG
TTCCATGTGGAAAGCGGATAAAATTTGGCAAATTATCTCTGAAGTGTGAGACTGTCTGTGGTCTCTCATCCAG
AATGTCGGGACCGCTGTCCCTTCCCTGCATTCCCTACCTGATAGGAACACCTGTCAAGATTGGAGAGGGAATGC
TGGCAGACTTTGTGTCCAGACTTCTCCAATGATCCCCCTCCATTGTTGTGCAATTGTGTAAATGAGATTGAGCAAA
GAGGTCTGACTGAGACAGGCCTGTATAGGATCTCTGGCTGTGACCGCACAGTAAAAGAGCTGAAAGAGAAATTC
TCAGAGTGAAAACCTGTACCCCTCCTCAGCAAAGTGGATGATATCCATGCTATCTGTAGCCTTCTAAAAGACTTTC
TTGAAACCTCAAAGAACCTCTTCTGACCTTTGCGCTTAACAGAGCCTTTATGGAAGCAGCAGAAATCACAGATG
AAGACAACAGCATAGCTGCCATGTACCAAGCTGTTGGTGAAGTGGCCAGGCCAACAGGGACACATTAGCTTTCC
TCATGATTCACTTGCAGAGAGTGGCTCAGAGTCCACATACTAAAATGGATGTTGCCAATCTGGCTAAAGTCTTTG
GCCCTACAATAGTGGCCATGCTGTGCCCAATCCAGACCCAGTGACAATGTTACAGGACATCAAGCGTCAACCCA
AGGTGTTTGAGCGCTGCTTTTCCCTCTGGAGTATTGGAGTCAGTTCATGATGGTGGAGCAAGAGAACATTG
ACCCCTACATGTCAATTGAAAACCTCAAATGCCTTTTCAACACCACAGACACCAGATATTAAAGTGAGTTTACTGG
GACCTGTGACCACTCCTGAACATCAGCTTCTCAAGACTCCTTCATCTAGTTCCCTGTACAGAGAGTCCGTTCCA
CCCTCACCAAGAACACTCCTAGATTTGGGAGCAAAAGCAAGTCTGCCACTAACCTAGGACGACAAGGCAACTTTT
TTGCTTCTCCAATGCTCAAGTGAAGTCACATCTGCCTGTTACTTCCCAGCATTGACTGACTATAAGAAAGGACAC
ATCTGTACTCTGCTCTGCAGCCTCCTGTACTCATTACTACTTTTAGCATTCTCCAGGCTTTTACTCAAGTTTAAAT
TGTGCATGAGGGTTTTATTAAAACTATATATATCTCCCTTCCCTTCTCCTCAAGTCACATAATATCAGCACTTTG
TGCTGGTCATTGTTGGGAGCTTTTAGATGAGACATCTTCCAGGGGTAGAAGGGTTAGTATGGAATTGGTTGTGA
TTCTTTTGGGGAAGGGGTTATTGTTCCCTTTGGCTTAAAGCCAAATGCTGCTCATAGAATGATCTTTCTCTAGT
TTCATTTAGAACTGATTTCCGTGAGACAATGACAGAAACCTACCTATCTGATAAGATTAGCTTGTCTCAGGGTG
GGAAGTGGGAGGGCAGGGCAAAGAAAGGATTAGACCAGAGGATTTAGGATGCCTCCTTCTAAGAACCAGAAGTTC
TCATTCCCCATTATGAACTGAGCTATAATATGGAGCTTTTCAAAAAATGGGATGCATTGAGGACAGAAGTGTGA
TGGGAGTATGCGTAGCTTTGATTTGGATGATTAGGTCTTTAATAGTGTTGAGTGGCACAACTTGTAAATGTGAA
AGTACAACCTCGTATTTATCTCTGATGTGCCGCTGGCTGAACTTTGGGTTTCAATTTGGGGTCAAAGCCAGTTTTCT
TTTAAATGAATTCATTCTGATGCTTGGCCCCCATACCCCCAACCTTGTCAGTGGAGCCCACTTCTAAAGGT
CAATATATCATCCTTTGGCATCCCAACTAACAATAAAGAGTAGGCTATAAGGGAAGATTGTCAATATTTTGTGGT
AAGAAAAGCTACAGTCATTTTTTCTTTGCACTTTGGATGCTGAAATTTTTCCCATGGAACATAGCCACATCTAGA
TAGATGTGAGCTTTTTCTTCTGTTAAAATTATTCTTAATGTCTGTAAAACGATTTTCTTCTGTAGAATGTTTGA
CTTCGTATTGACCCTTATCTGTAAAACACCTATTTGGGATAATATTTGGAAAAAAGTAAATAGCTTTTTTCAAAA
TGAAAAA

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FIGURE 1151

MDTMMLNVRNLFEQLVRRVEILSEGNEVQFIQLAKDFEDFRKKWQRTDHELKGYKDLLMKAETERSALDVKLKHA
RNQVDVEIKRRQRAEADCEKLERQIQLIREMLMCDTSGSIQLSEEQKSALAFLNRGQPSSSNAGNKRLSTIDESG
SILSDISFDKTDESLEDWSSSLVKTFKLKKREKRRSTSRQFVDGPPGPVKKTRSIGSAVDQGNESIVAKTTVTVPN
DGGPIEAVSTIETVPYWTRSRRTGTLPWNDSSTLNSRQLEPRTE TDSVGT PQSNGGMRLHDFVSKTVIKPESC
VPCGKRIKFGKLSLKCRDCRVVSHPECRDRCPLPCIPTLIGTPVKIGEGMLADFVSQTSPMIPSIVVHCVNEIEQ
RGLTETGLYRISGCDRTVKELKEKFLRVKTVPLLSKVDDIHAICSLKDFLRNLKEPLLTFRLNRAFMEAAEITD
EDNSIAAMYQAVGELPQANRDTLAFMLIHLQ RVAQSPHTKMDVANLAKVFGPTIVAHAVPNPDPVTMLQDIKRQP
KVVERLLSLPLEYWSQFMMVEQENIDPLHVIENSNAFSTPQTPDIKVSLLGPVTTPEHQLLKTPSSSSLSQRVRS
TLTKNTPREFGSKSKSATNLGRQGNFFASPMLK

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FIGURE 1152A

GAGATGGTGCCATTGCACTCCAGCCTGAGCGACAAGAGCGAAACTCTCTCTCAAAAAAAAAAAAAAAAAATCCAAT
CCTGGCTGGGCGCAGTGGTTTCATGCCTGTCATCACAACTTTGGAAGGCCAAGGTTAGAGGATTGCTTGAGCCC
AGAAGTTCAAGACCAGCCTACGCAACATGGCAAGAACTTTCTCTACAAAAAACAAAAAAAAATTTTTTTTTTG
AGACAGGGTTTTCACTCTGTCAACCAGGCTGGAGAGCAGTGGCAGGATCTCAGCTCACTGCAACCTCTGCCTCCTGG
GCTTAAGTGTCTTGCTGCCTCAGCCTCCCAGGTAGCTGGGATTATAGGCACGTGCCACCACGCTCAGCTAATTT
TTGTACTTCTTAGTAGAGACTGTGTTTCACCATGTTAGCCAGGCTGGTCTCCAACCTCTTGACCTCAGATAATCCA
CCTGCCTTGGCGTGAGCCACAGCTCCTGGCCAAAAAAAAATTTTTTTTAAATTAGGCAGGTGTGGTGGCACATG
CTTCAAGTCCAAGCGATTTGAGAGGCTGAGGTGGGAGGATTGCTTATGCCAGGAGATCGATGATGCAGTGAGCT
ATTGTAGTGCCACTGCCCTCCAGCATGGGCAACAGAGTAAGACCCTGTCTCAAAAAATAAAAAATAAAATAAATC
CAAGCCTTTTGACTCCACAGCCACTCTTTGTATTGTACGTCAAGGGACAGGAGGAGCTTGCCGTTAATTGCTTCC
GGGAACCTAGATACTAGGTTACACTGTCTTTAAATTTAATTTTCTCTGTTCTTGCTCTTACAGGATAACTATAA
TGGGATGAGCTTTGTCTGTATTGGGGCTATCTTGGTCTTTGTAGCCTTCTTTGAAATTGGACCAGGCCCATTC
CTGGTTTTATTGTGGCCGAACCTCTTCAGCCAGGGCCCCGCCAGCTGCGATGGCAGTGGCCGGCTGCTCCAACCTG
GACCTCCAACCTTCTAGTCGGATTGCTCTTCCCCTCCGCTGCTGTAAGTAACTCACCTTATCTTAAAACCAGCC
TATGTAAGCTGACATGAAGATACTCCTTAATAACAGTAGTCTGGGCCTGGCATGGTGGCTCATGCCGTGAATC
CTAGCACTGTGGGAGGCTGAGGCAGGTGGATCACCTGAGGTGAGGAGTTCAAGACCAGCCTGGCCAACATGGTGA
AATTCAAAAATTAGCTGGGCATGGTGGTGCATGCCTGTAATTCAGCTACTTGGGAGATCGAGGAAGGAGAATCG
CTTAAACCTGGGAGGTGGAGGTTGCAGCGAGCTGAGATCGCGCTACTGCACTCTAGCCTGCTCGATGGAAGCAAG
ACTCCATCCCTAAATAAATAAAAAAATACAGCAGTCCCTCCTCTTCTTCAGTTTCAGTTACCTGTAGTCTAAAA
TATTAAATGGAATTTGCAGAAATAAATAATTCATAAAGTTTAATTTGCGGCCAGACACAGTGGCTCAAGCCTGT
AATTCCAGCACTTTGAGAGGCCTAGGCGGGTGGATAACTTGAGGTGAGGAGTTGGGGACCAACCTGACTATCATG
GTGAAACCTGTTTTCTACAATAAATACAAAAAATTAGGCCGGGTGTCGTGGCTCATGACTGTAATCCAGTGAGCG
AGATCACACCATTTGCGGTAGACACACCTGTAGTCCTAGCTACTCAGAAGACTGAGGCAAGAGAATCACTTAAAC
CCAGGAGGTGTTTCATGGTGAGCTGTGATCAACCTTCTGCTCTCCAGCCTGGGTGACAGAGCGAGATCCGCTCTCA
AAAAAAAAAAAAATTCATAAATAGAGATGGAGTTGCCAGGTTAGTCTCAAACTGCTGGGTTCCAGTGATCCTCCC
ACCTTGACCTCCCAAAGTGCTGGGATTATGGGCGTGAGCCACCGCACTCGGCCAGAAACACAGATTTTAAAAAT
AATACTCAAAAGTCCAAAAATACTCAGTAGACATTTGGAAGCATCTAACTGTAATGAAATGGAATGACAGAAAGA
AACTAGAGAGAATACTACAGTAAGTTAGCAATGGAATCATAAGCGAATCTGAAGAAACCTGTTTTATTAAATATG
GAAGGTTATAGCTTGAAGCCTATTGGAATATGAATGTGAAGGAAATTGACTTTGTCAATGACCAGATTTTTAT
ATCAACCTTCTTTTTCTGTCTTTCTCTAGCACTATTAGGAGCCTACGTTTTTATTATCTTACCCGGCTTCC
TCATTACCTTCTTGGCTTTTACCTTCTTCAAAGTCCCTGAGACCCGTGGCAGGACTTTTGAGGATATCACACGGG
CCTTTGAAGGGCAGGCACACGGTGCAGATAGATCTGGAAAGGACGGCGTCATGGAGATGAACAGCATCGAGCCTG
CTAAGGAGACCACCACCAATGTCTAAGTCGTGCCTCCTTCCACCTCCCTCCGGCATGGGAAAGCCACCTCTCCC
TCAACAAGGGAGAGACCTCATCAGGATGAACCCAGGACGCTTCTGAATGCTGCTACTTAATTCCTTTCTCATCCC
ACGCACTCCATGAGCACCCCAAGGCTGCGGTTTGTGGATCTTCAATGGCTTTTTAAATTTTATTTCTTGACAT
CCTCTTCTGCTTAGGAGAGACCGAGTGAACCTACCTTCATTTAGGAGGGATTGGCCGCTTGGCACATGACAACT
TTGCCAGCTTTTCTCCTTGGGTTCTGATATTGCCGCACTAGGGGATATAGGAGAGGAAAAGTAAGGTGCAGTT
CCCCAACCTCAGACTTACCAGGAAGCAGATACATATGAGTGTGGAAGCCGAGGGTGTATGTAAGAGCACCT
TCTCACTTCCATACAGCTCTACGTGGCAAATTAACCTGAGTTTTATTATTTTATCCTCTGGTTTAAATTACATA
ATTTTTTTTTTTTACTTTAAGTTTCAGGATACATGTGCCGAATGTGCAGGTTTGTACATAGGTATATATATGCC
ATGATGGAATATTTATTTTTTTAAGCGTAATTTTGCCAAATAATAAAAACAGAAGGAAATTGAGATTAGAGGGA
GGTGTTTAAAGAGAGGTTATAGAGTAGAAGATTTGATGCTGGAGAGGTTAAGGTGCAATAAGAATTTAGGGAGAA
ATGTTGTTTATTATTGGAGGGTAAATGATGTGGTGCCTGAGGTCTGTACGTTACCTCTTAACAATTTCTGTCTT
CAGATGGAACTCTTTAACTTCTCGTAAAAGTCATATACCTATATAATAAAGCTACTGATTTCTTTGGAGCTTT
TTTCTTTAAGATAATAGTTTACATGTAGTAGTACTTGAAATCTAGGATTATTAATAATATGGGCATTGTAGTTA
ATGATGGTTGATGGGTTCTAATTTTGGATGGAGTCCAGGGAAGAGAAAGTGATTTCTAGAAAGCCTGTTCCCCCTC
ACTGGATGAAATAACTCCTTCTGTAGTAGTCTCATTACTTTTGAAGTAATCCCGCCACCTATCTCGTGGGAGAG
CCATCCAAATAAGAAACCTAAATAATTGGTTCTTGGTAGAGATTCATTATTTTTCCACTTTGTTCTTTAGGAGA

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FIGURE 1152B

TTT TAGGTGTTGATTTTCTGTTGTATTTTAACTCATACCTTTAAAGGAATCCCCAAAGAATGTTTATAGCAAAC
TTGGAATTTGTAACCTCAGCTCTGGGAGAGGATTTTTTCTGAGCGATTATTATCTAAAGTGTTGTTGCTTTA
GGCTCACGGCACGCTTGCGTATGTCTGTTACCATGTCACGTGGTCTATGCCGAATGCCCTCAGGGGACTTGAA
TCTTTCCAATAAACAGGTTTAGACAGTATGAGTCAATGTGCAGTGTAGCCCACACTTGAGAGGATGAATGTATG
TGCACTGTCACTTTGCTCTGGGTGGAAGTACGTTATTGTTGACTTATTTTCTCTGTGTTTGTTCCCTACAGCCCCCT
TTTTCATATGTTGCTCAGTCTCCCTTTCCCTTCTTGGTGCTTACACATCTCAGACCCCTTTAGCCAAACCCTTGTC
AGTGACAGTATTTTGGTTCTTAGTTCTCACTGTTCCCTCTGCTCCTGGAGCCTTTGAATAAAAAATGCACGTAGCT
GAGGCCGGATGCGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCTAGGCGGGCGGTGAGGGGTTTCGAGA
CCAGTCTGGCCAACATCGTGAAACCCTGTCTCTACTAAAAATGCAAAAATTAGCCGGGCGTGGTGGCGGGCGCCT
GTAATCCCAGCTACTTGGGAAGCTGAGGCGGGAGAATCATGTGAACCCGGGACGCAGGGGTTGCAGTGAGCGGAG
ATCGCATCATTGCACTCTAGCCTGGGCCACAGGGCGAGACTCCGTCTCAAAAAAAAAAAAAATGCACATAGCTATC
GAGTGTGCTTTAGCTTGAAAAGGTGACCTTGCAACTTCATGTCAACTTCTGGCTCCTCAAACAGTAGGTTGGCAG
TAAGGCAGGGTCCCATTTCTCACTGAGAAGATTGTGAATATTTCCATATGGATTTTCTATTGTTACTCTGGTTCT
TTGTTTTAAATAAAAAATTCTGAATGTACACGACATTATGGGCTTATTTACTTTTTGTCTTCCTGTACCACAAA
ATGAGCTCTAAATCCTGACTTGGCTACTC

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FIGURE 1153

ATAATCTTCATTCTGCGTTCTCCACTTCAATAGTCGTGGCAGTGCTGCTGAATTTGCAGTTTTTCACATCATGA
CCAGGATTCTGGAAGCTACAAACAGTTTGTTTTTACCTCTGCCTCCTGGTTTTTCATACTCTGCACACCATCCTCG
GGGTCCAGTGCTCTCCCTTTGCATAACCTGCTGCATTGCATTGACAGTGGAGTGTTGCTTCTCACTGAAACAGCTG
TCATAAGGCTCATGAAAGATCTGGATAATACAGAGAAAAATGAAAACTGAAATTCAGTATCATTGTGCGGCTTC
CTCCGCTTATTGGGCAGAAGATTTGTAGACTTTGGGATCATCCTATGAGTTCTAACATCATTTTCGCGGAACCACG
TGACGCGACTGCTTCAGAACTATAAGAAACAGCCTCGGAATTCATGATTAACAAGTCATCGTTCAGTGTAGAAT
TTCTGCCTCTGAACTACTTCATTGAAATTCGTACAGATATAGAGTCCTCCAATCAAGCCCTGTATCCTTTTGAAG
GACATGACAATGTGGATGCAGAATTTGTAGAGGAAGCAGCTCTGAAACACACCGCGATGCTTTTAGGCTTATGAA
AAAGAAAACGCAATTGGATCTGCTGCTGCCATTTTAATCTTGCTCATTAACTTACTCCTCTGAGAATTCCTTAA
CAATATTTAAAATTGGTAACAAAAATAGTTTAGCCATAATTGTTTAGCCATGTGAGTTTCAGGTTGGTACACGTT
CAGACAGAACTGCTGTATCACATTCCAATTTTGAATAGCCAGTGAGCAATCAAGTGTAGAGAAATGATAAATGGC
CTAAGAAGGCATACAGTGGCATAAACGATGCTCTTCCTAGTAGCTTAATAGGCCCAAGCTAGTTTCTGTTGCA
CTCTGAAATAAAATATGCTTTAAAAATGTAGGGAACAGTGCTTAGAAAAGCAAAAAGCTAGGTGTGTCATTGAAAT
AATAGGCATAAAAATTAAATGTTACATAAGAACACTATTTGGAAAGAGGGTCCTTTTAAAAAGCTGAATTTGTACT
AAATCAGATTTGCCATGTCCAGTACAGAATAATTTGTACTTAGTATTTGCAGCAGGGTTTGTCTTTGTGAATTCA
GATGAAACATATTTATTTTTTTTTTATTTATAAAAGGTTGATTTAGGAATATTTTGTGAGTCATTAAAAAACCTGA
AAACATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1154A

CTCTCAGTGTCTCCAACCTTTGCGCTGGAAGAAAACTTCCCGCGCGCCGGCAGAACTGCAGCGCCTCCTTTTAGT
GACTCCGGGAGCTTTCGGCTGTAGCCGGCTCTGCGCGCCCTTCCAACGAATAATAGAAATTGTTAATTTTAAACAAT
CCAGAGCAGGCCAACGAGGCTTTGCTCTCCCGACCCGAATAAGCTCCCTCGCTCCGTGCGCTGCTACGAGCGG
TGTCTCCTGGGGCTCCAATGCAGCGAGCTGTGCCGAGGGGTTTCGAAGGCGCAAGCTGGGCAGCGACATCGGGA
ACGCGGAGCGGGCTCCGGGGTCTCGGAGCTTTGGGCCCGTACCCACGCTGCTGCTGCTCGCCGCGGCGCTACTGG
CCGTGTGCGACGCACTCGGGGCGCCCTCCGAGGAGGACGAGGAGCTAGTGGTGCCGGAGCTGGAGCGCGCCCCGG
GACACGGGACCACGCGCCTCCGCCTGCACGCCTTTGACCAGCAGCTGGATCTGGAGCTGCGGCCGACAGCAGCT
TTTTGGCGCCCGGCTTCACGCTCCAGAACGTGGGGCGCAAATCCGGGTCCGAGACGCCGCTTCCGGAAACCGACC
TGGCGCACTGCTTCTACTCCGGCACCGTGAATGGCGATCCAGCTCGGCTGCGCCCTCAGCCTCTGCGAGGGCG
TGCGCGGCGCCTTCTACCTGCTGGGGGAGGCGTATTTTCATCCAGCCGCTGCCCGCCGCCAGCGAGCGCTTCGCCA
CCGCCGCCCCAGGGGAGAAGCCGCCGGCACCACTACAGTTCCACCTCCTGCGGCGGAATCGGCAGGGCGACGTCG
GCGGCACGTGCGGGGTGCTGGACGACGAGCCCCGGCCGACTGGGAAAGCGGAGACCAGAGCAGAGGGA
CTGAGGGCGAGGACGAAGGGGCTCAGTGGTGCAGGACCCGGCACTGCAAGGCGTAGGACAGCCACAGGAA
CTGGAAGCATAAGAAAGAAGCGATTTGTGTCCAGTCACCGCTATGTGGAAACCATGCTTGTGGCAGACCAGTCGA
TGGCAGAATTCCACGGCAGTGGTCTAAAGCATTACCTTCTCAGTTGTTTTCGGTGGCAGCCAGATTGTACAAAC
ACCCACGATTTCGTAATTCAGTTAGCCTGGTGGTGGTGAAGATCTTGGTCATCCACGATGAACAGAAGGGGCCGG
AAGTGACCTCCAATGCTGCCCTCACTCTGCGGAACCTTTTGCAACTGGCAGAAGCAGCACAACCCACCCAGTGACC
GGGATGCAGAGCACTATGACACAGCAATTCCTTTTACCAGACAGGACTTGTGTGGGTCCCAGACATGTGATACTC
TTGGGATGGCTGATGTTGGAACGTGTGTGTGATCCGAGCAGAAGCTGCTCCGTCATAGAAGATGATGGTTTACAAG
CTGCCTTACCACAGCCCATGAATTAGGCCACGTGTTTAACATGCCACATGATGATGCAAAGCAGTGTGCCAGCC
TTAATGGTGTGAACCAGGATTCCACATGATGGCGTCAATGCTTTCCAACCTGGACCACAGCCAGCCTTGGTCTC
CTTGCACTGCCTACATGATTACATCATTTCTGGATAATGGTCATGGGGAATGTTTGATGGACAAGCCTCAGAATC
CCATACAGCTCCCAGGCGATCTCCCTGGCACCTCGTACGATGCCAACCGGCAGTGCCAGTTTACATTTGGGGAGG
ACTCCAAACACTGCCCCGATGCAGCCAGCACATGTAGCACCTTGTGGTGTACCGGCACCTCTGGTGGGGTGCTGG
TGTGTCAAACCAAACACTTCCCGTGGGCGGATGGCACCAGCTGTGGAGAAGGGAAATGGTGTATCAACGGCAAGT
GTGTGAACAAAACCGACAGAAAGCATTTTGATACGCCTTTTCATGGAAGCTGGGGAATGTGGGGGCCTTGGGGAG
ACTGTTTCGAGAACGTGCGGTGGAGGAGTCCAGTACACGATGAGGGAATGTGACAACCCAGTCCCAAAGAATGGAG
GGAAGTACTGTGAAGGCAAACGAGTGCGCTACAGATCCTGTAACTTTGAGGACTGTCCAGACAATAATGGAAAAA
CCTTTAGAGAGGAACAATGTGAAGCACACAACGAGTTTTCAAAGCTTCCTTTGGGAGTGGGCCTGCGGTGGAAT
GGATTTCCAAAGTACGCTGGCGTCTACCAAAGGACAGGTGCAAGCTCATCTGCCAAGCCAAAGGCATTGGCTACT
TCTTCGTTTTGACGCCAAAGGTTGTAGATGGTACTCCATGTAGCCAGATTCCACCTCTGTCTGTGTGCAAGGAC
AGTGTGTAAAAGCTGGTTGTGATCGCATCATAGACTCCAAAAGAAGTTTGATAAATGTGGTGTGTGCGGGGAA
ATGGATCTACTTGTAAAAAATATCAGGATCAGTTACTAGTGCAAAACCTGGATATCATGATATCATCACAATTC
CAACTGGAGCCACCAACATCGAAGTGAAACAGCGGAACCAGAGGGGATCCAGGAACAATGGCAGCTTTCTTGCCA
TCAAAGCTGCTGATGGCACATATATTCTTAATGGTGACTACACTTTGTCCACCTTAGAGCAAGACATTATGTACA
AAGGTGTTGTCTTGAGGTACAGCGGCTCCTCTGCGGCATTGGAAAGAATTCGCAGCTTTAGCCCTCTCAAAGAGC
CCTTGACCATCCAGGTTCTTACTGTGGGCAATGCCCTTCGACCTAAAATTAAATACACCTACTTCGTAAAGAAGA
AGAAGGAATCTTTCAATGCTATCCCCACTTTTTTCAGCATGGGTCAATTGAAGAGTGGGGCGAATGTTCTAAGTCAT
GTGAATTGGGTGGCAGAGAAGACTGGTAGAATGCCGAGACATTAATGGACAGCCTGCTTCCGAGTGTGCAAAGG
AAGTGAAGCCAGCCAGCACCAGACCTTGTGCAGACCATCCCTGCCCCAGTGGCAGCTGGGGGAGTGGTCATCAT
GTTCTAAGACCTGTGGGAAGGGTTACAAAAAAGAAGCTTGAAGTGTCTGTCCCATGATGGAGGGGTGTTATCTC
ATGAGAGCTGTGATCCTTTAAAGAAACCTAAACATTTTCATAGACTTTTGCACAATGGCAGAATGCAGTTAAAGTGG
TTTAAGTGGTGTAGCTTTGAGGGCAAGGCAAAGTGAGGAAGGGCTGGTGCAGGGAAAGCAAGAAGGCTGGAGGG
ATCCAGCGTATCTTGCCAGTAACAGTGAGGTGTATCAGTAAGGTGGGATTATGGGGGTAGATAGAAAAGGAGTT
GAATCATCAGAGTAAACTGCCAGTTGCAAATTTGATAGGATAGTTAGTGAGGATTATTAACCTCTGAGCAGTGAT
ATAGCATAATAAAGCCCCGGGCATTATTATTATTATTCTTTTGTACATCTATTACAAGTTTAGAAAAAACA
GCAATTGTCAAAAAAAGTTAGAACTATTACAACCCCTGTTTCTGGTACTTATCAAATAACTTAGTATCATGGGG
GTTGGGAAATGAAAAGTAGGAGAAAAGTGAGATTTTACTAAGACCTGTTTTACTTTACCTTCACTAACAATGGGG

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FIGURE 1154B

GGAGAAAGGAGTACAAATAGGATCTTTGACCAGCACTGTTTATGGCTGCTATGGTTTCAGAGAATGTTTATACAT
TATTTCTACCGAGAATTAAACTTCAGATTGTTCAACATGAGAGAAAGGCTCAGCAACGTGAAATAACGCAAATG
GCTTCCTCTTTCCCTTTTTTGGACCATCTCAGTCTTTATTTGTGTAATTCATTTTGAGGAAAAACAACCTCCATGT
ATTTATTCAAGTGCATTAAAGTCTACAATGGAAAAAAGCAGTGAAGCATTAGATGCTGGTAAAAGCTAGAGGAG
ACACAATGAGCTTAGTACCTCCAACCTTCCTTTCTTCTTACCATGTAACCCTGCTTTGGGAATATGGATGTAAAG
AAGTAACTTGTGTCTCATGAAATCAGTACAATCACACAAGGAGGATGAAACGCCGGAACAAAAATGAGGTGTGT
AGAACAGGGTCCACAGGTTTGGGGACATTGAGATCACTTGTCTTGTGGTGGGGAGGCTGCTGAGGGGTAGCAGG
TCCATCTCCAGCAGCTGGTCCAACAGTCGTATCCTGGTGAATGTCTGTTTCTGAGCTCTTCTGTGAGAATATGATTTT
TTCCATATGTATATAGTAAATATGTTACTATAAATTACATGTACTTTATAAGTATTGGTTTGGGTGTTCCCTTCC
AAGAAGGACTATAGTTAGTAATAAATGCCTATAATAACATATTTATTTTTATACATTTATTTCTAATGAAAAAAA
CTTTTAAATTATATCGCTTTTGTGGAAGTGCATATAAAATAGAGTATTTATACAATATATGTTACTAGAAATAAA
AGAACACTTTTGGAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1155

MGNAERAPGSRSGPVP TLLLLAAALLAVSDALGRP SEEDEELVPELERAPGHGTTRLRLHAFDQQLDLELRPD
SSFLAPGFTLQNVGRKSGSETPLPETDLAHC FYSGTVNGDPSSAAALSLCEGVRGAFYLLGEAYFIQPLPAASER
LATAAPGEKPPAPLQFHLLRRNRQGDVGGTCGVVDDEPRPTGKAETEDEDEGTEGEDEGAQWSPQDPALQGVGQP
TGTGSIRKKRFVSSHRYVETMLVADQSMAEFHGSLKHYLLTLFSVAARLYKHPSIRNSVSLVVVKILVIHDEQK
GPEVTSNAALT LRNFCNWQKQHNPPSDRDAEHYDTAILFTRQDL CGSQTCDTLGMADVGTVC DPSRSCSVIEDDG
LQAAFTTAHELGHVFNMPHDDAKQCASLNGV NQDSHMMASMLSNLDHSQPWSPCSAYMITSF LDNGHGEC LMDKP
QNP IQLPGLPGTSYDANRQCQFTFGEDSKHCPDAASTCSTLWCTGTSGGVLVCQTKHFPWADGTSCGEGKWCIN
GKCVNKTD RKHFDTPFHGSGWMWGPWGDCSRTC GGGVQYTMRECDNPVPKNGGKYCEGKRVRYRSCNLED CPDNN
GKTFREEQCEAHNEFSKASFGSGPAVEWIPKYAGVSPKDRCKLICQAKGIGYFFVLQPKVVDGTPCSPDSTSVCV
QGQCVKAGCDRIIDS KKKFDKCGVCGGNGSTCKKISGSVTS AKPGYHDIITIPTGATNIEVKQRNQRGSRNNGSF
LAIKAADGTYILNGDYTLSTLEQDIMYKGVVLRYS GSSAALERIRSF SPLKEPLTIQVLT VGNALRPKIKYTYFV
KKKKESFNAIPTFSAWVIEEWGECSKSCELGWQRRLVECRDINGQPASECAKEVKPASTRPCADHPCPQWQLGEW
SSSKTCGKG YKKRSLKCLSHDGGVLSHESCDPLKKPKHFIDFCTMAECS

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FIGURE 1156

GGCGGGCAGAAGTTGGAAACATGCGGCTGTCGGTCGCTGCAGCGATCTCCCATGGCCGCGTATTTGCGCGTATGG
GCCTCGGTCCCGAGTCCCGCATCCATCTGTTGCGGAACTTGCTCACAGGGCTGGTGCGGCACGAACGCATCGAGG
CACCATGGGCGCGTGTGGACGAAATGAGGGGCTACGCGGAGAAGCTCATCGACTATGGGAAGCTGGGAGACACTA
ACGAACGAGCCATGCGCATGGCTGACTTCTGGCTCACAGAGAAGGATTTGATCCCAAAGCTGTTTCAAGTACTGG
CCCCTCGGTACAAAGATCAAACCTGGGGGCTACACAAGAATGCTGCAGATCCCAAATCGGAGTTTGGATCGGGCCA
AGATGGCAGTGATCGAGTATAAAGGGAATTGCCTCCACCCCTGCCTCTGCCTCGCAGAGACAGCCACCTTACAC
TCCTAAACCAGCTGCTGCAGGGTTTGCGGCAGGACCTCAGGCAAAGCCAGGAAGCAAGCAACCACAGCTCCACA
CAGCTCAAACACCAGGGATTTAACTGGATCTGAAGAGTCTGCAGCCCTTAATCAGTACCCATGATCACAGGCCTT
TGGAGCACTTTTACTCTCTGAGAAGAACTGGAGCTAGAGATGTAAAATGGACAGTCTTGATGGGGTTGAGAACCT
TCTGGGGAGCCAGATGACCCTCTCTTTGCACAATAGATAAAAGTCTTTATATGAATATATATAAATTTATTTATT
TTTTCTTCTGTGGGATTTCTGGAGAATGAGAATTATCCAAATGCTCAGTCTACCTGAGATAGTAAATTCATGG
CTTATGCTTCTGGTCCTTAAATTTGGGTTATTTTGGTTAGTG

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FIGURE 1157

MRLSVAAAISHGRVFRRMGLGPESRIHLLRNLLTGLVRHERIEAPWARVDEMRYAEKLIDYGKLGDTNERAMRM
ADFWLTEKDLIPKLFQVLAPRYKDQTGGYTRMLQIPNRSLDRAKMAVIEYKGNCLPPLPLPRRDSHLTLNQLLQ
GLRQDLRQSQEASNHSSHTAQTPGI

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FIGURE 1158

GGGGGGAAACGGAAGTGAGCGGCGGGGTCGACTGACGGTAACGGGGCAGAGAGGCTGTTTCGCAGAGCTGCGGAAG
ATGAATGCCAGAGGACTTGGATCTGAGCTAAAGGACAGTATTCCAGTTACTGAACTTTCAGCAAGTGGACCTTTT
GAAAGTCATGATCTTCTTCGGAAAGGTTTTCTTGTGTGAAAAATGAACTTTTCCTAGTCATCCCCTTGAATTA
TCAGAAAAAAATTTCCAGCTCAACCAAGATAAAATGAATTTTTCCACACTGAGAAACATTCAGGGTCTATTTGCT
CCGCTAAAATTACAGATGGAATTCAAGGCAGTGCAGCAGGTTTCAGCGTCTTCCATTTCTTTCAAGCTCAAATCTT
TCACTGGATGTTTTGAGGGGTAATGATGAGACTATTGGATTTGAGGATATTCTTAATGATCCATCACAAAGCGAA
GTCATGGGAGAGCCACACTTGATGGTGGAATATAAACTTGGTTTACTGTAATAGTGTGCTGTTTCATGGAAACCGA
GGGCTGCATCTTGTATATAGTCATCTTTGTACTGTAATTTGATGTACACAACATTAAAAGTACTGACACCTGAGA
ATTTCTGCTCAAGTAGTATCAGTGATCATTTAAAATTTGGAGGGGTCTTTGGTTTACAGCCATGTGACAATTAAA
AGCACTAAAGGGAGATCATGTTAAAGCTCTTAATTTATATTAACAGTAGCCTTTGTCTTTAAAAAAGTTGTTG
CTCATGAATATTATAAAATGATCTACAGGTTTCAATTCAACCTGTTTCTAGGTTTTTTTGTAATTTAGTTTTGA
TTAAGCATTATAAGCATTGAGTCTATAAACTTTATAGTAGCATCTTTCAGAATAAACATTTTAAATTGATTTC
GTGGCAACTCTCAAATTGATTACAATATGAGATATATCAGTGTCGTCCATTAACTCATAAGAATAATATTAC
TGTGTCAGTGCTATTTTAGGATTATAGTTATTGTTTGATTATTTTCAGGTTGAAAAGTAGAAGTTCCAAGGTTTTG
ATTTTGGTCTGGTCTTTAAGTGAAAAATTAAAGCAACCAGTAGATGTAGGTTAACTTTTACTTCATAGACTTAA
TATGTGATTAAATATATTGCCAAGCAACACTGTTAAAGAAAAGTAAACTCATTTTTTCTTGTCTTAATTTATAT
ATTACAAGATACTGTAAGGTATTCTTTATGAAGTTGATATATAAAATTTACATTTTTTAGAACATTAGTGAATGG
ATCATCTTTTACAATTAAAAGTATATTTTGATTATCAGTTTCTTAGCAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AA

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FIGURE 1159

MNARGLGSELKDSIPVTELSASGPFESHDLRLKGFSCVKNELLPSHPLELSEKNFQLNQDKMNFSTLRNIQGLFA
PLKLQMEFKAVQQVQRLPFLSSSNLSLDVLRGNDETIGFEDILNDPSQSEVMGEPHLMVEYKLGLL

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FIGURE 1160A

TGAGGCGCGGGAGGCCCCGCGCCCCGCGGCTCGCTGTGCGTGGGAGGGCGCGAGCGAACGCGGGCGAGGAGCGGCC
GAGCCGCTGAAGAGGAGCTGGGCGCCGCGCCCGCCGCGCTCGGCCCCGCGGATCGCCTCCGCCCCGTCTTCGC
CGGCCCCGGCCCCCTGGCGAGATGCCGCTGTGGGGAGGATTGGCTCAGCCACCCGCTGGGAATCGTGCAGGGATTCT
TCGCCCCAAAATGGAGTTAATCCTGACTGGGAGAAGAAAGTAATTGAGTATTTTAAGGAAAAGCTGAAGGAAAATA
ATGCTCCTAAGTGGGTACCATCACTGAACGAAGTTCCCTTCATTATTTGAAACCTAATAGTTTTGTGAAATTTT
GTTGCATGATTGAGGATATGTTTGACCCTGAGTTTTACATGGGAGTTTATGAAACGGTTAACCAAAACACAAAAG
CACATGTTCTTCATTTTGGAAAATATAGAGATGTAGCAGAGTGTGGGCCTCAACAAGAACTTGATTTAAACTCTC
CACGAAATACCACTTTGGAAAGACAGACTTTCTATTGTGTTCCGGTGCCTGGGGAATCTACGTGGGTAAAAGAAG
CCTATGTTAATGCAAACCAAGCTCGAGTCAGTCCCTCAACATCCTACACTCCTAGTCGCCACAAGAGGAGTTATG
AAGATGATGACGATATGGACCTACAGCCCAATAAGCAGAAAAGACCAACATGCAGGTGCCAGACAAGCAGGGAGTG
TTGGTGGTCTTCAATGGTGTGGAGAGCCAAAACGTTTAGAACTGAAGCTTCTACTGGGCAACAGCTGAACTCTC
TGAAGTTGCTCTCTCTCTTTTGATTTGAATTTTCCATTGCCAGGAGAGAAGGGCCCTGCATGCCTTGTGAAGGTTT
ATGAAGATTGGGATTGTTTCAAAGTAAATGACATTCTTGAGCTATATGGCATACTGTCTGTGGATCCTGTGCTGA
GTATACTGAATAATGATGAAAGGGATGCCTCTGCACTGCTGGATCCGATGGAGTGCACAGACACAGCAGAGGAGC
AGAGAGTACACAGTCCCTCTGCTTCATTAGTGCCGAGAATTCATGTGATCTTAGCCAGAAGTTGCAACACATCA
ACCCATTATTGCCTGCCTGCCTTAACAAAGAGGAGAGCAAAACCTGTAAGTTTGTTCAGTTTCATGTCCGAAT
TGTCTCCAGTCAGAGCAGAACTTCTTGGGTTCCCTTACTCATGCCCTTCTGGGGGATAGTTTGCTGCTGAATACC
TTATATTACATCTCATCTCCACAGTATATACAAGAAGAGATGTCTTCCACTAGGAAAATTTACAGTTAACTTGA
GTGGTTGCCACGGAATAGTACCTTCACAGAACACTTGTATCGAATTATTCAACATCTTGTTCAGCATCTTTTC
GTCTGCAGATGACTATAGAGAACATGAACCAATTGAAATTCATTCCCCACAAAGACTACACAGCCAATCGCTTGG
TCAGTGGGCTCCTCCAGCTGCCAGCAATACTTCCCTGTAAATCGATGAGACTCTCCTGGAACAGGGGCAGCTGG
ATACCCAGGTGTTTCATAATGTGACAGCCCTGAGCAACCTCATAACGTGGCAGAAGGTGGATTATGACTTCAGCT
ACCATCAGATGGAATTCCCCTGCAATATTAACGTTTTCATTACTTCGGAGGGGAGGTCACTCCTCCCGGCAGACT
GCCAGATTCACTTACAGCCCCAGCTAATTCACCAACATGGAGGAGTACATGAACAGCCTTCTCTCAGCGGTGC
TGCTTCCGTGCTGAACAAATTCCGCATTTATCTAACTCTTTTGAGATTCTTGGAATATAGCATATCTGATGAAA
TAACCAAGGCAGTTGAAGATGACTTTGTGGAATGCGGAAGAACGACCCTCAGAGCATCACTGCTGATGATCTTC
ACCAGCTGCTCGTGGTGGCTCGGTGTCTGTCTCTCAGTGCTGGTCAGACAACGCTGTCAAGAGAACGATGGCTGA
GAGCAAAGCAGCTAGAGTCTTTAAGAAGAACGAGGCTTCAGCAGCAAAAATGTGTGAATGGAAATGAACTTTAA
GATGTAATACCTATGAAGAGTAATGGGCAAACTGTAGCCACATAATTGTAAAATTCAGATATTCATTTATACCAC
ATTGTTTTATAGGTAATTTCTATCACAACCAAGTGACATTTCCCTGAAATCAAGCCTGGTAACACCTGATGTTTAT
ATGATATTCAGTAAGGACTTTTACCTTACTGATTTTCATGGAGCTTTTGAAGTTTGTGTTTATAATAATTATATAAA
TTAGTAATGATGTAAAAAAGTATTTGATATTAAAAAGTTAATATTGATAATGTTGCTGATTGTACCATTTCCCTT
AGCTTCAGCTGAGTCATAGGCCAGACTGTTGAAATGCTGAAATGAAGAAGGTTGTTGCAGTTTCAAAGTCAGAGG
AATCGTGCTTCGGATTTCTTATGTTTTCTAGTTCTCTGTTTTTCCAGTTCACAGTGGGTTGGGGTGCATTTCAGTA
GTCCATCTTTGGGGAACGGAGGCGTACTTGCCATTGATTACATGACTACATGAAATTCGTACTGTCAATTTCCC
AGATGTTTGGCCACAGAACTTTTTCCCACTTAACATTTGTTAACAGCCTGCAAACTAAACTTGTACATGGCAG
TGGTTCCCAGACTTTTGTATTTTATGGACCGGTAGTAATATTTCCAAAATCTGGGGTACTATAAGGTTGCCAAT
TTACCTTGCCAAGTAATCCGAATAAATCACTGTATTATCACCATTTTTTTCATAAAAGGAAAGGACAATCTATCT
CTGAATAAGAGGAGTCCTTTAAACGGAATGAATGTGGCTTTTGGGGGCAAAAGAAACCAAGACACTACATTGTCT
TTATTTTCTCCTATCCCAGTGCATTTGAGAACCATGCATAAGGGAATGCTGTGCTACAAAGCTGTGCCAAATAT
GAAAACAAAATAGGAACTTAAAAAGCAATACCCCTTTAGAAAGTTTTTATTTTCTTAAATGTCATTGAGTTGC
TTTGATTCTATTGGATTTTTTGGCATTTTTTATGGGATCATCAGTTGGTTCCAAGTATGTTAGATCAGCTAACATC
TGCTACTCCAGTAACAGCCTCGTACAACCTGCAGGTAGGTTTTCTCCAGACCAATTAGTTTTAATAGAGCAAACTA
ACAACAGACTGTAGTAGCATGGTTATGGCAACCAGAATCTTCAGAAAGGTTAGGACATTACTTTTTAAGCTGTCA
GTGGTATCAAATAACTTACCTAGTTGGAGGCAGATAAAGGATCCCTTACGTTTTTCTATAAGGCCTAAATTGA
AATTGTTAACCAAGGAAACAGGTCAGCCTTGAAAAATCAAGGAATTCATTGTACCTAATAACTGAAGTAAAAAT
AACTAGTTGTTCAACTTTTTCTAACTCAAATCTATTTTTATAAACAAATGTAAATAATGTTTATATTAGAGTTG
AACTGGTTTTCATTTTTATAACTGGTAGACTAGACCTTCCTTAACTTTTAGAAATAAAATGAAGGCTTCACTGG

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FIGURE 1160B

ATTTGTGAGGATAAAATACATTTTCTTTAATTGTCCTAGAGCAAAGTACATTAGTCACCATGTGTTTTTTGTGCC
AATGTAACCTTGTAAATTTACCAAAGAAAAATACATACATTGCTTGGTCTTGCAGAAAAGTTCCCTTGAAAGAACCT
TTCCAATAAATAAAACGTCCCAAATTAGCAGTACCTTGGGCTGTTTTTCATGAGTAAGAAGATTCACCATCCCAT
GTGATCTGTGTGGAAAAAGACCATGTCCTCTTGGTGGAAGACATGAGAGAGCTGAACTGAAGTGGAGGAGGTGGT
GCAAGAGGGACCTTCCTGCTCAAGGCCCCGCCAGGCAGCGGAATAGAGTGCAGTGCTTGGCTGCAGAAACCCTTT
GTCCCTCACCTATATATACACGGACAGTCAAGTTTGTGCTCTAACGTAAGGCACAGCGTTAATCCTGTATGGCC
AGGAAACTGAGTAGACTCCTGTGTAACCCTGTTTGGAACCTTGCCTTCTTAAATGATTTTTC

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FIGURE 1161

MPCGEDWLSHPLGIVQGFFAQNGVNPDWEEKVIEYFKEKLENNAPKWVPSLNEVPLHYLKPN SFVKFRMIQDM
FDPEFYMGVYETVNQNTKAHVLHFGKYRDVAECGPQQE L D L N S P R N T T L E R Q T F Y C V P V P G E S T W V K E A Y V N A N Q
ARVSPSTSYTPSRHKRSYEDDDDDMDLQPNKQKDQHAGARQAGSVGGLQWCGEPKRLETEASTGQQ L N S L N L S S P F
DLNFPLPGEGKPACLVKVYEDWDCFKVNDILELYGILSVDPVLSILNNDERDASALLDPMECTDTAE EQRVHSP
ASLVPRIHVILAQKLQHINPLLPACLNKEESKTCKFVSSFMSELSPVRAELLGFLTHALLGDSLAAEYLILHLIS
TVYTRRDVLP LGKFTVNLSGCP RNSTFTEHLYRIIQHLVPASFRLQMTIENMNHLKFIPHKDYTANRLVSGLLQL
PSNTSLVIDETLLEQGQLDTPGVHNVTALS NLITWQKVDYDFS YHQMEFPCNINVFITSEGRSLLPADCQIHLQP
QLIPPNMEEYMNSLLSAVLPSVLNKFRIYLTLLRFLEYSISDEITKAVEDDFVEMRKNDPQSITADDLHQLLVVA
RCLSLSAGQTTL SRERWLRAKQLES LRRLRLQQKCVNGNEL

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FIGURE 1162

TGTTCTTGAGCCCAGCTTCTTCTCGTCTCCACCCCAGCTTCCCGGCATTGGAAGAAGGGACCGTCCTCTTCCTT
GTCTTGGCCACCCAAATCCTGGTATCGAAAGGGTTGAACGGACCGGAAGTGTGCAGCAGCGACGGGTCCCCAGCT
AATCGACGCCGGAAGTAGCAATTACTAGACAAGCATTCCGCCGCCGGCTTCGCTATGGCGGCAATCCCCCAGAT
TCCTGGCAGCCACCCAACGTTTACTTGAGAGACCAGCATGGGAATCATTGTGCTGGAGCTGTACTGGAAGCATGCT
CCAAAGACCTGTAAGAACTTTGCTGAGTTGGCTCGTCGAGGTTACTACAATGGCACAAAATTCCACAGAATTATC
AAAGACTTCATGATCCAAGGAGGTGACCCAACAGGGACAGGTCGAGGTGGTGCATCTATCTATGGCAAACAGTTT
GAAGATGAACCTTCATCCAGACTTGAAATTCACGGGGGGCTGGAATTCTCGCAATGGCCAATGCGGGGCCAGATACC
AATGGCAGCCAGTTCTTTGTGACCCTCGCCCCACCCAGTGGCTTGACGGCAAACACACCATTTTTGGCCGAGTG
TGTCAGGGCATAGGAATGGTGAATCGCGTGGGAATGGTAGAAACAACTCCCAGGACCGCCCTGTGGACGACGTG
AAGATCATTAAAGGCATACCCTTCTGGGTAGACTTGCTACCCTCTTGAGCAGCTCTTCTGAGATGGCCCCAGTGAA
CCAGCTTCTAGATGACATAGAATGACATGTAATGCTAAATTTCAATTTGGCTTTGCAAGTCATGAAGCTTAGGAG
GCCTGGCATCTTGGGTGAGTTAGAGATGGAAGTACATTTTAATAGGATGCTTCTTTTCTCTTCCCCCAGTGCCTA
GGTTGCCAGAGCATTTCACAAAATGCCCTGTTTATCAATAGGTGACTACTTACTACACATGAACCATAATGCTG
CTTCTTGTCATGTCTGCTCTGATATACGTGGAACAATGTAGCAGCCACTGTCATTTCTCAGTGGTTTTGCCTAA
CCAAACTTCTTCTAAGGAGATTTATATTCTGGCCTACACAGCAGTCCTTGATGGCTGACAGCCACAGAATTCCA
AACCAAGTAGTGTCTGTCAGCCCTCTTAACTCTGTGCACGCCCTATTTTCAGTCTTTTACATTTGTTCTTCTAGGG
AATGTATGCATCTCTATATATATTTTCCCTCTCAAAAACCAGAACATCAACAGTGCTGTTTCTGACACTTCAGACA
TCCCACGCAAAGCCACATTGAATTTTTGCCAAATGAAAAACACATCCAACAATCAAGTTTCTAAGAAGGTGTCAA
GTGGGGAATAATAATAATGTATAATAATCAAGAAATTAGTTTATTAAAAGGAAGCAGAAGCATTGACCATTTTTT
CCCAGAGAAGAGGAGAAATCTGTAGTGAGCAAAGGACAGACCATGAATCCTCCTTGAGAAGTAGTACTCTCAGAA
AGGAGAAGCGCCACTCAAGTTCTTTTAACCCAAGACTTTAGAGAAATTAGGTCCAAGATTTTTATATGTTTCAATT
GTTTATGTATAAAAAATACTTTCTGGATTTTGTGGGGAGGAGCAGGAGAGGAAGGAAGTTAATACCTATGTAATA
CATAGAACTTCCACAATAAAATGCCATTGATGGTTGAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1163

MAAIPPSWQPPNVYLETSMGIIVLELYWKHAPKTCKNFAELARRGYNGTKFHRI IKDFMIQGGDPTGTGRGGA
SIYGKQFEDELHPDLKFTGAGILAMANAGPD TNGSQFFVTLAPTQWLDGKHTIFGRVCQGIGMVNRVGMVETNSQ
DRPVDDVKI IKAYPSG

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FIGURE 1164

AATAACCTGGAGCCGGCGGCGTAGGTTGGCTCTTTAGGGCTTCACCCCGAAGCTCCACCTTCGCTCCCGTCTTTC
TGGAACACCGCTTTGATCTCGGCGGTGCGGGACAGGTACCTCCCGGCTGCTGCGGGTGCCCTGGATCCAGTCGG
CTGCACCAGGCGAGCGAGACCCCTTCCCTGGTGGAGGCTCAGAGTTCCGGCAGGGTGTCATCCGGCCTGTGTGTGGC
GCGAGGCAGGGAAGCCGGTACCCGGGTCTGGCCCCAGCGCTGACGTTTTCTCTCCCTTTCTTCTCTCTTCGCG
GTTGCGGCGTGCAGACGCTAGTGTGAGCCCCCATGGCAGATACGACCCCGAGCGGGCCCCCAAGGGGCGGGCGCT
GTGCAATTCATGATGACCAATAAACTGGACACGGCAATGTGGCTTTCTCGCTTGTTTACAGTTTACTGCTCTGCT
CTGTTTGTCTGCCTCTTCTTGGGTGTCATGAAGCAGCAAGCTTTTACCAACGTGCTTTGCTGGCAATGCTCTT
ACCAGTGTCTGAGGCTGCATCAAAGATTACCACACTTCCAGTTAAGCAGAGCATTCTGGCCCAGGCTTTGTTA
GAGGACAGCTGCCACTACCTGTTGTATTCACTCATCTTTGTAAATTCCTATCCAGTTACAATGAGTATCTTCCCA
GTCTTGTTATTCTCTTTGCTTCATGCTGCCACATATACGAAAAAGGTCCTTGACGCAAGGGGCTCAAAATAGTTTA
CCTCTGCTGAGATCTGTCTTGACAAAATTAAGTGCTAATCAACAAAATATTCTGAAATTCATTGCTTGCAATGAA
ATATTCTGATGCCTGCGACAGTTTTTATGCTTTTTAGTGGTCAAGGAAGTTTGCTCCAACCTTTTATATACTAT
AGATTTCTTACCCTTCGATATTTCGTCTCGAAGAAACCCATATTGTGCGACCTTATTTAATGAAGTGAAGATTGTT
GTTGAACACATAATAATGAAACCTGCTTGCCCACTGTTTGTGAGAAGACTTTGTCTCCAGAGCATTGCCTTTATA
AGCAGATTGGCACCAACAGTTCCATAGTTTAAACATCTAGTTAAGCTACAAATATAGTATAAGCATTATTAGCAGC
TGGTACTTCTGCTAGGGGTTGTAAATTCAGGTGTTACACTGACCTCAATCCAATTTACATAATTTACATAAATG
CATCTCGGTGGAAAAATAATCATTCTTGGCATGTTAAATCAAGCTTAAAAAGTTTTGAGAAAATTTTACTGTG
CTGTGTTGCTAATGGTTAAAGAAGTCTGTATCTAGTGATAAATATACCAGTTTTTTTAAAAAGATGCTGTTGTGC
CTATATCATGAAGTACATTAATTTCTCATGTAAAAAAATAGCTCTAAAATTTGTTTCAACCTAATTGGTAACCT
GAGTTTATATCTGGCATGAATTCATTATGGTGATACACATATGTGAATTCAGTACATTTTGAGACAGTATTCTAC
CATTGAGTAATTTTGGTTAATGATTTTAACACTTCTCAGTGTATTTAATTTCAAATTTGTTTTTAAATGGTTTTT
ATGCTGCTTTGTTAGGACAGATGTGTTTTGAATGTACCATTATAAGAAGAATTCTATGTATCTTAAACTATGATC
TTCTAAAATTTTATTTCCGTAAGTACTTCTGTGGCCTTGAGTATTTTTTAAAAGGCTCAACTGTAAGCCTCTTAG
CCAGTTGGATAAATATTTGGGGTCACCTAGCCATTGAAAGCAGAAAGCAGTAGTGACACAGCTTTCCCTTCAAAG
AGCCATTGAGAAACATTTCTCAAACAGGAAATCCTTCTTTTACTAATGTGGACATATAGATTATTCGTATTATAG
TTTGTTAGAACTACCTAGTTTCAGAACTTTGACTGCCAGTTTTCTTGGTTTCTTAGGCTTGAATTTTCATAGACAAT
TGCAACAGTTTATAGTGCCTTTTGAAAGGAATGTAATGAAGATTGAGCATCTGACTATATGTGTGTCTATCCTGAA
ATAATAATGGAGAGTATACTGTAGATTACATGTTTACCCATCAAATCTGACTTAAAAGGTTAAATGGAAGGTTTT
ATAGGTAAGGTAATTGATTGGGAATGGGGTAGGGGAGGAGTTGTGGGGGAATAATGTGCATTTGAGTCTCAACG
CATAGATAAATTTAGGGGAATTGGATGCATTATTCAACTTTGATTGGGTGTTAAATGTGTTAAATCCTGTTCA
TTGAACTCCCATCAACTCTTATGAAATTCATGCTGATCTTCATTACCGTTGCATGATTGGAATGTTTAAACAT
TGTAAGTTTTAGTATAGAGAAATGTAATGGTTTTTGTGACCAGTTTCTGTCTGCATGTAATTTGGATTTCTCAA
ATACATTCATTAGTAATTTATCAGTAACATTAGTTTTATTTTTGTTTCACTCTCCTTATCTATAAAAAAGGGATATT
CTTAGGATAAATACATGAAAAATTATACTTGATAGCTTAACTATAATCAGCTATTTTTGTATTTTGTAAATATT
GTCCACTAAGCTGGAGAAGCAGCCTCATACAGTTGATTTTGTGTATGTGGCTAGTCTTATTGTCACTATGTAAGT
AATCCAATGGTTTTAGAACTAAACTTTCTAGAGCAATAAAATGACTATAATGTTAAGT

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FIGURE 1165

MADTTPSGPQGAGAVQFMMTNKLDTAMWLSRLFTVYCSALFVLPLLGLHEAASFYQRALLANALTSALRLHQRLP
HFQLSRAFLAQALLED SCHYLLYS LIFVNSYPVTMSIFPVLLFSL LHAATYTKKVL DARGSNSLP LLRSVLDKLS
ANQQN ILKF IACNEIFL MPATVFMLFSGQGSLLQPFIYYRFLTLRYSSRRNPYCRTL FNELRIVVEHIIMKPACP
LFVRR LCLQSI AFISRLAPTVP

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FIGURE 1166

GCACGAGCCCCGGGCTGCCGGCGGGGCGCCGCGGCACGTCCACAGGCTGGGTGCGGAGGTGGCGATCGCTGAGA
GGCAGGAGGGCCGAGGCGGGCCTGGGAGGCGGCGCGGAGGTGGGGCGCCGCTGGGGCCGGCCGCACGGGCTTCA
TCTGAGGGCGCACGGCCCGGACCGAGCGTGCGGACTGGCCTCCCAAGCGTGGGGCGACAAGCTGCCGGAGCTGC
AATGGGCGCGGCTGGGGATTCTTGTTTGGCCTCCTGGGCGCCGTGTGGCTGCTCAGCTCGGGCCACGGAGAGGA
GCAGCCCCCGGAGACAGCGGCACAGAGGTGCTTCTGCCAGGTTAGTGGTTACTTGGATGATTGTACCTGTGATGT
TGAAACCATTGATAGATTTAATAACTACAGGCTTTTCCCAAGACTACAAAACTTCTTGAAAGTGACTACTTTAG
GTATTACAAGGTAAACCTGAAGAGGCCGTGTCTTTCTGGAATGACATCAGCCAGTGTGGAAGAAGGGACTGTGC
TGTCAAACCATGTCAATCTGATGAAGTTCCTGATGGAATTAAATCTGCGAGCTACAAGTATTCTGAAGAAGCCAA
TAATCTCATTGAAGAATGTGAACAAGCTGAACGACTTGGAGCAGTGGATGAATCTCTGAGTGAGGAAAACACAGAA
GGCTGTTCTTCAGTGGACCAAGCATGATGATTCTTCAGATAACTTCTGTGAAGCTGATGACATTCAGTCCCCCTGA
AGCTGAATATGTAGATTTGCTTCTTAATCCTGAGCGCTACACTGGTTACAAGGGACCAGATGCTTGGAAAATATG
GAATGTCATCTACGAAGAAAACCTGTTTTAAGCCACAGACAATTAAAAGACCTTTAAATCCTTTGGCTTCTGGTCA
AGGGACAAGTGAAGAGAACACTTTTTACAGTTGGCTAGAAGGTCTCTGTGTAGAAAAAAGAGCATTCTACAGACT
TATATCTGGCCTACATGCAAGCATTAAATGTGCATTGAGTGCAAGATATCTTTTACAAGAGACCTGGTTAGAAAA
GAAATGGGGACACAACATTACAGAATTTCAACAGCGATTGATGGAATTTTGAAGTGAAGGAGAAGGTCCAAGAAG
GCTTAAGAACCTTGATTTTCTCTACTTAATAGAATAAGGGCTTTATCCAAAGTGTTACCATTCTTCGAGCGCCC
AGATTTTCAACTCTTTACTGGAAATAAAATTCAGGATGAGGAAAACAAAATGTTACTTCTGGAAATACTTCATGA
AATCAAGTCATTTCTTTGCATTTTGATGAGAATTCATTTTTTGCTGGGGATAAAAAAGAAGCACACAACTAAA
GGAGGACTTTCGACTGCATTTTAGAAATATTTCAAGAATTATGGATTGTGTTGGTTGTTTTAAATGTCGTCTGTG
GGGAAAGCTTCAGACTCAGGGTTTGGGCACTGCTCTGAAGATCTTATTTTCTGAGAAATTGATAGCAAATATGCC
AGAAAGTGGACCTAGTTATGAATTCATCTAACCAGACAAGAAATAGTATCATTATTCAACGCATTTGGAAGAAT
TTCTACAAGTGTGAAAGAATTAGAAAACCTTCAGGAACCTGTTACAGAATATTCATT**TAAG**AAAACAAGCTGATAT
GTGCCTGTTTCTGGACAATGGAGGCGAAAAGAGTGGAATTTCAATCAAAGGCATAATAGCAATGACAGCTCTTAAGC
CAAACATTTTATATAAAGTTGCTTTTGTAAAGGAGAATTATATTGTTTTAAGTAAACACATTTTTAAAAATTGTG
TTAAGTCTATGTATAATACTACTGTGAGTAAAGTAATACTTTAATAATGTGGTACAAATTTTAAAGTTTAATAT
TGAATAAAAGGAGGATTATCAAATTCATATATGATAAAAGTGAATGTTCTAAGTCTCTCAAAGTAGCGTTTTATG
TAATAATATGTAATATAAATAAACTATGGTAAATGTGACAAGCATTTAATAGGAAAATGCTAAGGAGGCCTCAT
AAATGACCCATAATTACCAACGTAGAATTTTTAGTACATTTAGGGTTGCTGGATTTAGCAAATAAAAAATAAGA
TTGCCCAGTTAGATTTGAATTTTCAAGATAAACAATTAGTTTTTTAATATTTTACATGGAATATTTGGAAAATACTT
ATACTAAAAAATTATTTGTTTGAAATTCACATTTAACTGGGAGTCTTGATTTTTATCTGGCAATCCTAAAAATACA
TTGGTATGAAACAAATCACTTTTAGAAGTATATTGCTATTTTGATTGGGTGTTTTTGTGTGTAGAAACGTACAA
TAACAACCTCAAAGGCACAGGAGATTTCTAAACATTGTGAAAAGTTGAATAGATTATATATTTATTCTCATAATAC
TTTCACTAATACTAAATAAAATTTGGGGAACACTTTTTATTTTTATATAATTTCCAATTTACAGAAAAGTTTCAA
AAATAGTACAAAGAGCTCTCTTACCCAGATTCATAATTGTTTCATACGTGCTTTATCTTTTCATGCTTTCTCTGTA
CACACACACACACACACAAATTTTCTCAATCATTGAAAGTCAGTTATAGGCATCATGCCCTTAAACCTTAA
ATACTTCAGTGTGTAATACTGAATAATTACTAAAAATGATTTTCTCAGAAAAAAAACCTCCACAATTCTGGAAC
TATAATACTGTAAGCCTTAGAATAAATAACTTTCAAGTTCCAATCTAAAGTTCTTTTTGAGTTTTGTTGCCCCG
TTTTATGCTTGATGTGTATAGTAATAGGGTAGGCTATTTATTTTATTAATAATTTTTTTTAGAGACAAGGTTTTGC
TGTGTTGCCCAAGCTGGAACCTGAACGACTGGGCTGAAGTGATCTTCCACCTCAGCCTCCCAAGTAGCTGGGAA
TACAGGTGTCTGCCACCATAACCCAGTTTCATTTTTGTTTTTATACCCGAAGTTCAATTTCTTTGTCTCCCTAAA
ACTGAACGTGAATTTTGGGAGGTTTTCATAGTGGAAGCTCTTCATTTATAAAGCTATTTGAAGGGGTTTAGGAA
TTTATATCACATGGTAATTGTAGAGAAAAAGAAGCTATATACCTCAAAATCGTGCCCTCTTTACATATGCTTAT
CAGGTATAACATGTTGAATGTCACATTAGTAGTAAAGTGGGGTTTTATTTATATAGTGGTTAAGAAATGTCAGTT
TACACTGCTGTATACTTCTTCTTCTGTGTCCCTAAGGCCCTGGTACAGTGCCAAGCACATACTTGGTATCCAATAA
ATATTTGTTGGATGAAAAA

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FIGURE 1167

MGRGWGFLFGLLGAVWLLSSGHGEEQPPETAAQRCFCQVSGYLDDCTCDVETIDRFNNYRLFPRLOKLLESDYFR
YYKVNLRPCPFWNDISQCGRDCAVKPCQSDEVDPDGIKSASYKYSEEANNLIEECEQAERLGAVDESLSEETQK
AVLQWTKHDDSSDNFCEADDIQSPEAEYVDLLLNPERYTGKGPDAWKIWNVIYEENCFKPQTIKRPLNPLASGQ
GTSEENTFYSWLEGLCVEKRAFYRLISGLHASINVHLSARYLLQETWLEKKWGHNITEFQQRFDGILTEGEGPRR
LKNLYFLYLIELRALSKVLPFFERPDLFTGNKIQDEENKMLLLEILHEIKSFPLHFDENSFFAGDKKEAHKLK
EDFRLHFRNISRIMDCVGCFKCRLWGKLQTQGLGTALKILFSEKLIANMPESGPSYEFHLTRQEIVSLFNAFGRI
STSVKELENFRNLLQNIH

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FIGURE 1168A

CGATAACGATTGTGTTGTGAGAGGCGCAAGCTGCGATTCTGCTGAACTTGGAGGCATTTCTACGACTTTTCTC
TCAGCTGAGGCTTTTCTCCGACCCCTGATGCTCTTCAATTCGGTGCTCCGCCAGCCCCAGCTTGGCGTCTTGAGA
AATGGATGGTCTTACAATACCCCTCTTCAATCCCTTCTGACTGGTTATCAGTGCAGTGGTAATGATGAACACACT
TCTTATGGAGAAACAGGAGTCCCAGTTCCTCCTTTTGGATGTACCTTCTCTTCTGCTCCCAATATGGAACATGTA
CTAGCAGTTGCCAATGAAGAAGGCTTTGTTGATTTGATAACACAGAATCACAAAGTTTCAGAAAGAAGTGCTTC
AAAGAATGGATGGCTCACTGGAATGCCGTCTTTGACCTGGCCTGGGTTCCTGGTGAACCTTAACTTGTTCACGCA
GCAGGTGATCAAACAGCCAAATTTTGGGACGTAAAAGCTGGTGAGCTGATTGGAACATGCAAAGGTCATCAATGC
AGCCTCAAGTCAGTTGCCTTTTCTAAGTTTGAGAAAAGCTGTATTCTGTACGGGTGGAAGAGATGGCAACATTATG
GTCTGGGATACCAGGTGCAACAAAAAGATGGGTTTTATAGGCAAGTGAATCAAATCAGTGGAGCTCACAATACC
TCAGACAAGCAAACCCCTTCAAACCCCAAGAAGAAACAGAATTCAAAGGACTTGCTCCTTCTGTGGATTTCCAG
CAAAGTGTTACTGTGGTCTCTTTCAAGACGAGAATACCTTAGTCTCAGCAGGAGCTGTGGATGGGATAATCAA
GTATGGGATTTACGTAAGAATTATACTGCTTATCGACAAGAACCCTATAGCATCCAAGTCTTTCTGTACCCAGGT
AGCAGCACTCGAAAACCTTGGATATTCAAGTCTGATTTTGGATTCCACTGGCTCTACTTTATTTGCTAATTGCACA
GACGATAACATCTACATGTTTAATATGACTGGGTTGAAGACTTCTCCAGTGGCTATTTTCAATGGACACCAGAAC
TCTACCTTTTATGTAAAATCCAGCCTTAGTCCAGATGACCAGTTTTTATGTCAGTGGCTCAAGTGATGAAGCTGCC
TACATATGGAAGGTCTCCACACCCTGGCAACCTCCTACTGTGCTCCTGGGTCAATTCTCAAGAGGTCACGTCTGTG
TGCTGGTGTCCATCTGACTTCACAAAGATTGCTACCTGTTCTGATGACAATACTAAAAATCTGGCGCTTGAAT
AGAGGCTTAGAGGAGAAACCAGGAGGTGATAAACTTCCACGGTGGGTGGGCTCTCAGAAGAAAAAGAGTCA
AGACCTGGCCTAGTAACAGTAACGAGTAGCCAGAGTACTCCTGCCAAAGCCCCAGGGTAAAGTGCAATCCATCC
AATTCTTCCCCGTATCCGCAGCTTGTGCCCCAAGCTGTGCTGGAGACCTCCTCTTCTTCAAATACTCCTACG
TTCTCTATTAAACCTCTCCTGCCAAGGCCCGGTCTCCCATCAACAGAAGAGGCTCTGTCTCCTCCGTCTCTCCC
AAGCCACCTTCATCTTTCAAGATGTCGATTAGAACTGGGTGACCCGAACACCTTCTCATCACCACCCATCACT
CCACCTGCTTCGGAGACCAAGATCATGTCTCCGAGAAAAGCCCTTATTCTGTGAGCCAGAAGTCATCCCAAGCA
GAGGCTTGCTCTGAGTCTAGAAATAGAGTAAAGAGGAGGCTAGACTCAAGCTGTCTGGAGAGTGTGAAACAAAAG
TGTGTGAAGAGTTGTAAGTGTGTGACTGAGCTTGATGGCCAAGTTGAAAATCTTCATTTGGATCTGTGCTGCCTT
GCTGGTAACCAGGAAGACCTTAGTAAGGACTCTTAGGTCTTACCAATCAAGCAAAATTGAAGGAGCTGGTACC
AGTATCTCAGAGCCTCCGTCTCCTATCAGTCCGTATGCTTCAGAAAGCTGTGGAACGCTACCTCTTCTCTTGAGA
CCTTGTGGAGAAGGGTCTGAAATGGTAGGCAAAAGAGAATAGTTCCCCAGAGAATAAAAACTGGTTGTTGGCCATG
GCAGCCAAACGGAAGGCTGAGAATCCATCTCCACGAAGTCCGTATCCAGACACCCAATTCCAGGAGACAGAGC
GGAAAGACATTGCCAAGCCCGGTCAACATCACGCCAGCTCCATGAGGAAAATCTGCACATACTTCCATAGAAAG
TCCCAGGAGGACTTCTGTGGTCTGAACTCAACAGAATTATAGATTCTAATCTGAGTGAGTTACTGAGCTTTG
GTCCACTAAAACAAGCTGAGCTTTGGTCCACTAAAACAAGATGAAAAATACAAGAGTGACTCTATAACTCTGGTC
TTTAAGAAAGCTGCCTTTTCAATTTTATGACAAAAATCTTTTCAACGCTGAAATGTACCTAATCTGGTTCTACTACC
ATAATGTATATGCAGCTTCCCAGGATGAATGCTGTGTTTAAATTTTATAAAGTAAATTTGTCACTCTAGCATTT
TGAATGAATAGTCTTCACTTTTTTAAATTATTCATCTTCTATAATAATGACATCCAGTTTATGGAGGCAAAAA
ACAAGTTTCTTGTATCCTGAAACTTTCTATGCTCAGTGGAAAGTATCTGCCAGCCACAGCATGAGGCCTGTGAA
GGCTGACTGAGAAATCCTCTGCTGAAGACCCCTGGTTCTGTTCTGCCCTCCAACATGTATAATTTTATTTGAAATA
CATAATCTTTTCACTATGCTTTTGTGGGGTTTTTTTTAAGTATGTGTAAAAATGTGATGCTCAGATAAGTACATT
TATATCAGTTTCACTGTTAAATGCAGTCTCTTGAGTTAAAGTCATCTTTATTTTAAATGCAGTGATAAATGTCAA
CTCTTCGGAGAACTAGGAGAACAAACAGAAAGCTGTGTTTGTCTTTTTTCTCTCAAATATATCTCCCGTATG
AGATTTTCAAGTCCCCATGTTTTTACCAAGCAATCTGCTATGTCAGCCAACCAACATCACTTTTCTACAGGAGGTT
ATGATTTTTGCCATTTACTAGAGGAAGATGTTTTATGAAATCAATTTGGGGTTTGAATTCAGGTGCAGTCATCAG
TTCTTTAGGGGCTGCAATGTTTTAAAAAAAATAAGTCATCAGATTTTAAAGAAAAAGTGATGATTTCTTATTGAT
ATTTTTGTAAACAGAATATAGCTCTTAACTGAAAATCCAGAACCAAGATAAATCTTGAGTTTCTTTTTCATGTA
CATAAAAAGCAATAGCCTTTTATGATAGATAGCCCTGAGCCAAAAAGTAATAGAATTTTCTCTAGATATTTAATA
CAGAGAGTGTATAGACTGACTCTAAGTTAATAATGTGCAAAATATCTTAAACATCCCTCCCTTATTCAACAATT
ATGTATCAGTGATCTTGAACATTGTTTTATATTTTTTCACTTTGTAACCTCATGGAAAGAGGCTTTACATACTT
TCTATGTACTATTTACTTAGAAGGGAGCCCCCTTCCAGTCATGAAACTTCATTTGTTTTATCCATATCCCTGAGG

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FIGURE 1168B

ACTGTGTAGACTTTATGTCAGTTCGTGTAGACTTTATGTCAGTTTTTGTTCATTATTTGAAAACTATTCTGACA
ACTTTTTAATTCCTTTGATCTTATAAGTTAAAGCTGTAACAAGCTGAAATTGCATGGATCAAGTAAGCATAGTTTT
ATCCAGGGAGAAAAATAAAAGGAAGCCATAGAATTGCTCTGGTCAAAACCAAGCACACCATAGCCTTAAGTGAAT
ATTTAGGAAATCTGCCTAATCTGCTTATATTTGGTGTGTTGTTTTTTGACTGTTGGGCTTTGGGAAGATGTTATTT
ATGACCAATATCTGCCAGTAACGCTGTTTATCTCACTTGCTTTGAAAGCCAATGGGGGAAAAAATCCATGAAAA
AAAAAAGATTGATAAAGTAGATGATTTTGTGTTGTATCCCTACCCATCTCCTGGCAGCCCTACTGAGTGAAATTGG
GATACATTTGGCTGTCAGAAATTATACCGAGTCTACTGGGTATAACATGTCCTCACTTGAAAGCTAGTACTTTTA
AATGGGTGCCAAAGGTCAACTGTAATGAGATAATTATCCCTGCCTGTGTCCATGTCAGACTTTGAGCTGATCCTG
AATAATAAAGCCTTTTACCTT

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FIGURE 1169

MLFNSVLRQPQLGVLRNGWSSQYPLQSLITGYQCSGNDHTSYGETGVPVPPFGCTFSSAPNMEHVLAVANEEGF
VRLYNTEQSFRKKCFKEWMAHWNNAVFDLAWVPGELKLVTAAAGDQTAKFWDVKAGELIGTCKGHQCSLKSVAFSK
FEKAVFCTGGRDGNIMVWDTRCNKKDGFYRQVNQISGAHNTSDKQTPSKPKKKQNSKGLAPSVDFQQSVTVVLFQ
DENTLVSAGAVDGI IKVWDLRKNYTAYRQEP IASKSFLYPGSSTRKLGYSLLILDSTGSTLFANCTDDNIYMFNM
TGLKTSPVAIFNGHQNSTFYVKSSLSPDDQFLVSGSSDEAAYIWKVSTPWQPPTVLLGHSQEVTSVCWCPSDFTK
IATCSDDNTLKIWRLNRGLEEKPGGDKLSTVGWASQKKKESRPGLVTVTSSQSTPAKAPRVKCNPSNSSPSSAAC
APSCAGDLPLPSNTPFTFSIKTSPAKARSPINRRGSVSSVSPKPPSSFKMSIRNWVTRTPSSSPFITPPASETKIM
SPRKALIPVSQKSSQAEACSESRNRVKRRLDSSCLESVKQKCVKSCNCVTELDGQVENLHLDLCCLAGNQEDLSK
DSLGPTKSSKIEGAGTSISEPPSPISPYASESCGTLPLPLRPCGEGSEMVGKENS SPENKNWLLAMAAKRKAENP
SPRSPSSQTPNSRRQSGKTLPSVTTITPSSMRKICTYFHRKSQEDFCGPEHSTEL

[illegible]

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FIGURE 1171

GCGCTCCCGGAACGCGCGCACCGCAGACGGCGCGGATCGCAGGGAGCCGGTCCGCCGCCGGAACGGGAGCCTGGG
TGTGCGTGTGGAGTCCGGACTCGTGGGAGACGATCGCGATGAACACGGTGCTGTCGCGGGCGAACTCACTGTTTCG
CCTTCTCGCTGAGCGTGATGGCGGCGCTCACCTTCGGCTGCTTCATCACCACCGCCTTCAAAGACAGGAGCGTCC
CGGTGCGGCTGCACGTCTCGCGGATCATGCTAAAAAATGTAGAAGATTTCACTGGACCTAGAGAAAAGAAGTGATC
TGGGATTTATCACATTTGATATAACTGCTGATCTAGAGAATATATTTGATTGGAATGTTAAGCAGTTGTTTCTTT
ATTTATCAGCAGAATATTCAACAAAAAATAATGCTCTGAACCAAGTTGTCCTATGGGACAAGATTGTTTTGAGAG
GTGATAATCCGAAGCTGCTGCTGAAAGATATGAAAACAAAATATTTTTTCTTTGACGATGGAAATGGTCTCAAGG
GAAACAGGAATGTCACCTTTGACCCTGTCTTGGAACGTCGTACCAAATGCTGGAATTCTACCTCTTGTGACAGGAT
CAGGACACGTATCTGTCCCATTTCCAGATACATATGAAATAACGAAGAGTTATTAAATTATTCTGAATTTGAAAC
AACATATTTTTTATACTTAATGAATTGTATCTCATTAATCTCTTCCCTTACATCTTCATGTATTGTTGGTTTGT
TTTGGTTTTGGGTTTTTTTTTTTTTTTTTTTTTTGGTATAAGAATAACATCAAAGGCCTGTTTAAAGGGAAAGGTTA
ATGGGCTACTTAATATTATGAACAAAAACAAAAAACAAGGCTGCCACAGTGGAATATTATCTTACAAGAATAAGA
ACTACATAAAACAGATTTGTAAAAAATACATATTTGAAGTATTCCCTGTATTTCATTATTCTTTATGGAATATA
AAGTAAGCATGAAAGGTAGTTAAACTTTTCAGGTGCCCTGTAGAGTCATAATACTGTATTTTATGCCTTGCATT
ACGCAAATTCACATTGGATGTGATTTAAAAGTAGACATTCTCTTTTTCCTCTTTTAGGATATGTTTGATTACTGG
AAAATTAATATGGTTATTTGTTAGAAGTCTGGTTTATAAAAAAGCCAAAAGTGATGGAATTTATTCCATTTGTCT
TAGGAAGGCCATAATACTTGTCTTTTCTTACATGTGACTAGCAACTTTCTCCACTTAAAGACTAAATACCTCTT
ATATGATGTAAATTATTCTAATTCATTTTAAAATCTTTTAGGTCAGCAAAATGTGTGCTTTCAGTGCTTTCTCTA
AAAACGTTCTTTATAGCTTTGTACTTTTTTTTTTAGCGTTGCCATTGAAAGTTAAATGTTTGCATGGTTTACC
CTCTGAGTTATGTTTCTTCTAGTGAGCATGCCTGCTGTCACTAAGTGAATTATTTACTACTTTTTGTAGGTCTAT
ATTTTAATAATTATTGGGATAATAATAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1172

MNTVLSRANSLFAFSLSVMAALTFGCFITTAFAKDRSVPVRLHVSRIMLKNVEDFTGPRERSDLGFITFDITADLE
NIFDWNVKQLFLYLAEYSTKNNALNQVVLWDKIVLRGDNPKLLLKDMKTKYFFDDGNGLKGNRNVTLTLSWNV
VPNAGILPLVTGSGHVSVPFPDTYEITKSY

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FIGURE 1173

TTTGCTAAAGCCACCATAAAGGAAATAGTTGTGTGGCCCATGTTTGAGGCCAGACATCTTTACTGGTTTAAAGGGGA
CCCCCTAAAGGAATTTTGTCTTTTGGTCCTCCTGGGACTGGTAAACTCTAATTGGCAAGTGCATTGCTAGTCAG
TCTGGGGCAACATTCTTTAGCATCTCTGCTTCATCCTTAACTTCTAAATGGGTAGGTGAGGGGGAGAAAATGGTC
CGTGCATTGTTTGTCTGTTGCAAGGTGTGAGCAACCAGCTGTGATATTTATTGACGAAATTGATTCTTTGTTATCT
CAACGGGGAGATGGTGAGCATGAATCTTCTAGAAGGATAAAAAACAGAATTTTTAGTTCAATTAGATGGAGCAACA
ACATCTTCTGAAGATCGTATCCTAGTGGTGGGAGCAACAAATCGGCCACAAGAAATTGATGAGGCTGCCCCGAGA
AGATTGGTGAAAAGGCTTTATATTCCCCTCCCAGAAGCTTCAGCCAGGAAACAGATAGTAATTAATCTAATGTCC
AAAGAGCAGTGTTGCCTCAGTGAAGAAGAAATTGAACAGATTGTACAGCAGTCTGATGCGTTTTTCAGGAGCAGAC
ATGACACAGCTTTGCAGGGAGGCTTCTCTTGGTCCTATTTCGCAGTTTACAACTGCTGACATTGCTACCATAACA
CCGGATCAAGTTCGACCCATAGCTTACATTGATTTTGAAAATGCTTTTAGAAGTGTGCGACCTAGTGTCTTCTCCA
AAAGATTTAGAGCTTTATGAAAAGTGAACAAAACCTTTTGGTTGTGGAAAGTAAAGTGGGATACTTGGAATCAAGG
CATCTCTGTAGTACAGTCTTCTTTATTTTTTAGCATAGAAAGTTGGGGATGTGTTAATTGTATTTTTAAGAATAT
ATTCTAAGTTCTGTACTTCAAATAATAGCACAGATTTTACATCTGATTGACATAGTGTATGTTAATGTAAGTTTT
GCTTTCAGTGATTACCTGATACGTAAGCCTATTTGAACAAAGTGAGAATGAACTTTTGTTTCTAAGAAGTCITT
ATCTTGAAGCTATATAACATGAAAAGTGAGCTCAAATTTTTTTTAGTTGAAGATTACATATAAAGTTGTGTCTGA
TTAATATTCATCTTTTATTGAAGAAAGTGCCTTCTGATGGCCACATAATTCTTAATGTCAGCTAGTATAATGGTT
TACATTTGGACAAAGTATTGCTTAGTGTTATTTAAGTAGATTTAAGATCTCAAAGCTAAAGTGCCAATTTTTACT
TTCTTCAGCCAATTTGTTACCTCTTTTATGGTTTTAAATTTTTTATCAGGACTAACATTTTCAGAAATAGCAAGGT
GTGATCTAGTATTAGATTCACAGAACTGAAAGGTTAATTAAGAATGTTGGTTATTTTCACGGGAGCGTGTGATAT
TTAACATTAATATTTTATTTGACACTACAGCCTGTAATACTGCTCTCTTTCAAAAACAAGTTTTCAGATTTTAT
AACAGACCCATTTTGTTTTATGAAACATGTTTATTACAGAAACATGAGAAAATAGAGATAAGTAAAAAGAATAAA
AGTCACTATTATCCTACCACTTTGCGGGACACACTATTAATATTTAAGCATAGATTCTTCCAGATGTTTTGTTTT
ATACAGCAGTAGGATTGTGTAATGTATTCTCTCTGTAGCCTATTCTTCAAAGCGTATCTTCACTTTCCATGTTA
ACATAAATGTCCTTTTATGATTGTCTAGGATTCATGGATGGATGGAATATAATTGAGTCATCTGGTAGAGCGCA
TATAGGACAGGACGCTAGGTTGTTTATCTTTTGTATTGTAAAGGAAGTATGTGGGATGCATTTGGTGATCTTT
TTAAAAATGTATAAATTTCTTGAGTAATTCCTGGATTAAAGAATATGCACTTCTT

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FIGURE 1174

MLRPDIFTGLRGPPKGILLFGPPGTGKTLIGKCIASQSGATFFSISASSLTSKWVGECEKMVRALFAVARCQOPA
VIFIDEIDSLLSQRGDGEHESSRRIKTEFLVQLDGATTSSDRILVVGATNRPQEIDEAARRRLVKRLYIPLPEA
SARKQIVINLMSKEQCCLSEEEIEQIVQQSDAFSGADMTQLCREASLGPIRSLQTADIATITPDQVRPIAYIDFE
NAFRTVRPSVSPKDLELYENWNKTFGCGK

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FIGURE 1175

CACATATAATAATAGCAACTCCTGGTTCGACTGATTGACCACTTGAAACCTTTTCGTATTTTCCAAGTGCTGGCAAG
CGCTTCCTGCGCAGGCCGAGGCCGACCTGGAGTTTGTGACGCTGTGATGGTCTAGAGGCTGGAGATTCAAGATCTG
GGTGCCATCATTTTTCTGGTTCTGTTGATGACCCTCTTCCAGGTTACATACAGCTTACATCTTGCATCCTCAAGCG
TTTTTCTTATAAGGCTAAAAATTACAAAGCATATATCAATGAATCAGGAGGATCTAGATCCGGATAGTACTACA
GATGTGGGAGATGTTACAAATACTGAAGAAGAAGCTTATTAGAGAATGTGAAGAAATGTGGAAAAGATATGGAAGAA
TGTCAGAATAAATTATCACTTATTGGAAGTGAAGCACTCACCGATTCAAATGCTCAGCTATCATTGTTAATTATG
CAAGTAAAATGTTTAACCGCTGAACTCAGTCAATGGCAGAAAAAACACCTGAAACAATTCCCTTGACTGAAGAC
GTTCTCATAACATTAGGAAAAGAAGAGTTCCAAAAGCTGAGACAAGATCTTGAAATGGTACTGTCCACTAAGGAG
TCAAAGAATGAAAAGTTAAAGGAAGACTTAGAAAAGGGAACAACGGTGGTTGGATGAACAGCAACAGATAATGGAA
TCTCTTAATGTACTACACAGTGAATTGAAAAATAAGGTTGAAACATTTTCTGAATCAAGAACTTTAATGAAGT
AAAATAAAATGCTTAATATAAAAGAATATAAGGAGAACTCTTGAGTACCTTGGGCGAGTTTCTAGAAGACCAT
TTTCTCTGCCTGATAGAAGTGTTAAAAAGAAAAAGAAAAACATTCAAGAATCATCTGTAAACCTGATAACACTG
CATGAAATGTTAGAGATTCTTATAAATAGATTATTTGATGTTCCACATGATCCATATGTCAAATTAGTGATTCC
TTTTGGCCACCTTATGTTGAGCTGCTGCTGCGTAATGGAATTGCCTTGAGACATCCAGAAGATCCAACCCGAATA
AGATTAGAAGCTTTCCATCAGTAAAAGGATGTTTTCTTTTTTTCACACAGTAAAAATTCTTATCATTCAAGGATAT
TGGAACCACAGGACTATTTGGATAAAAAACATTATTTGCAAATTAATGCGCATAGTACTTTTATTGCAAAATGGC
ATGTGCTGCCATCTATTATTCATTTTTAAATGGTCATTTCTTATTCACTGAGTGCTTTAGTGTTTTAACTATAT
GGATAAGAATGCAGGTAGATAATATTCTAGGCATAAAACATTTAATGTACCTTACCTCATGCAATATTCTTTGGA
TTCTTTGTTGATTTATGATATTGCTAATATAATATTTTCTTAAATATATAACAATATCTTTTATGCATTTGAGT
TCCAGCTGGTGCTTCTTTATATTTAGAAATTATAATGGGAAGGTCATTTAATTACAGATGGTTTTAAATTTAG
GTAATATCTGAGGTGGCATAATTTAAAAATATTTAGCAAATTTGTTTCATATATACTGTCTTATTTCTAGATTTG
TTTAAATTTGGAATATGAAAACTAATGGATAAAGCTAGCATAAAATTGATATTTTAGTTTGTATTATTAATATA
TCATGTTACCTTATATATTAATCTACTCTTGATTCTGCTAATTATTACCAACAAAATTGTATTTCATGACATTTTA
TTAATCCTCTGTGAATTTTCTGTAAATAAAATTATTTCTGAAAATCTCTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1176

MNQEDLDPDSTTDVGDVTNTEELIRECEEMWKDMEECQNKLSLIGTETLTDSNAQLSLLIMQVKCLTAELSQWQ
KKTPEIPLTEDVLITLGKEEFQKLRQDLEMVLSTKESKNEKLKEDLEREQRWLDEQQQIMESLNVLHSELKNKV
ETFSESRIFNELKTKMLNIKEYKEKLLSTLGEFLEDHFPLPDRSVKKKKKNIQESSVNLITLHEMLEILINRLFD
VPHDPYVKISDSFWPPYVELLLRNGIALRHPEDPTRIRLEAFHQ

1294/1629
FIGURE 1177

AGTCGCTGTTTGGGACGCTGGGTGTGCGGTGTTCTGTCTCCGCTCCCGTTTCGCTGTACAGCCCGTTCCCTCCC
GGAGCCCGGGACAGGCTGGGCGCGCGCCCGTGTGAGTGAGCGGGACTCAGGGCAGAAGTGTCCCCTCACTGCGTT
TTTTTTTCCTTTTATCCAAAGAACGGGGCAGTTAGTACGCTTGCTTCTGTGCGCCGGTTGGGAGCGGGGTGG
TGTGCGGAGTGGTTCGCCTTTTTTTCTTTAGAACTTGTGAGCCTTTTTTTTTTTTTTTTTTCTTTCTTTTTTT
AGGCTCAGTGCTGTCCGGGCTGGTTTGGCCGGTCCCTGACTAACGGCTTCTGCCCCCTTCTCTGCCACCCCTGC
CCAAGTCGCCCCCTGTGCCTTCGCCCCGTGTCCCGGGAGGGTGGGAAGCTTTGACCCCGCCCTGCCACTCGCGTC
TCCGCAGCCGTAGCCGCGCCTGTCCCAATATGAATAGGGTCAACGACCCACTTATTTTTATAAGAGATATTAAGC
CCGGACTGAAAACTTAAATGTCGTCTTTATTGTCTGGAGATAGGACGCGTGACCAAAACCAAAGACGGCCATG
AAGTGAGATCGTGCAAAGTAGCAGATAAAACGGGCAGCATCACTATTTCGCTGTGGGATGAGATCGGAGGTCTTA
TACAGCCAGGGGATATTATTCGGTTGACCAGAGGGTATGCATCCATGTGGAAAGGATGTCTGACACTTTATACTG
GAAGGGGTGGTGAACCTTCAAAAAATTGGGGATCTAGGTGCGGTGCAGGCAGCCGCAATGCGAGATTCCATACACT
ACTACCCTGGTAATGATCTCCACCCTGACCTGGAGGAGCCATCCTCTCTAGGGGTGTAAGATTTTGTATGGTTTA
TTCAGAAGTGCCAAATTTTCACTGAACCCAACCCAGATTATCGAGGACAGCAGAACAAGGGGCACAGAGTGAACA
GAAGAATAATTCATGAATAGTAATATGGGTACAGGTACATTTGGACCAGTGGGAAATGGTGTTCACACTGGCCC
TGAATCAAGGGAACACCAGTTTTTACATGCTGGCAGAAGCAATGGCCGGGGACTTATAAATCCACAACCTACAAGG
AACAGCTAGTAATCAAACAGTGATGACCACAATAAGTAATGGCAGGGACCCCTCGGAGAGCCTTTAAAGATGACC
TATGCTAAATACTCATGTGTAGTTTTTATACTACATGCCCTACTTGAACACTTATTGCACTTTTATTATTGTTA
ACTGTGAAAAGTACGTCTTTATTGGGTTTTCTTTTATATTCTTGTTTGTAAAGAAGATGGTTTGTTTTTATA
GCAAAACTGTAAAGCTGCTCGAGTCTCCTGTTGAAGAATGGGAACACTGAAAAGTAGGGGCATTTATTTTTAGAG
TAAAAAGATTATTGGATAGCCTTTAAAAAACCTGCACCCATTTCATGGGTGAGTTACTTAAGACATCAGCTTTAT
AGCCTCTATGAGTCTATCTTCTGTATAAGTTTTGTAATATTTAACATAAGGCTTAATGGGAGATGTTCTTTTGTCT
TTGTATTCAGATATTGCCAACTAAAGCAATAACCATCAAAAAACACAAGAACTTGTCAATGCTAGCAGTAATTTT
TGAGTGTGTGTGGCTCTCGGAATGATTGACTTCGTTTCACTGACTACTATTAAGATTTTCCAAGGACTGACTCATC
CCAAATTTTGTGTATTACCAAAAAACAGATTCTTATCAGAATTTGGAATAGAATGTGATCTCTATTGCAAC
AAGTAATTTTAAAGAAAGCTACATTTATTTTAGAGTAGTGCTCCTAACATGTATTATCAACTTTGTGGATTACA
TTGGAGGAAAATTTAAACTGGGGCCTTGAATATTTATTTTTTGAACCTACCATGTTAAATACTGAAGTATAATT
TGGGGGAGTTATAAAGTTATGATAAACATTATCTGATTATTTTAAACAATAGTTGTGGTAGATAAACATACTGG
AGGTGAGTAAAATTGAATTCATATAGTAACATGCAGTCTGAAGTCTAGTTACTTAATAGGTACTCAGCCTGGAG
TGAAAATCCTGGGTACTGACTTTGAGAGGAGTGAGTGTGCATGTTGTCAAAGTTTCTGAACACAGTTCACATAGC
CTTATTAGCAAAAGTTTTAAGAAATGGCTCTATCAAAGAAGCAATTGCAGCTTTATTAGAAATATAAAGTGGAA
ATTTATGTACATGTCATAAGTGGTACCCACTTCCCTTTTTTACTGTAGGGTGGATAACTCTTAGGATTTAACTCT
TTGAATATTATCTCTTGAATAAAGCATGTGTTAATGTTAAACAAACCTACGTAATTTTGGCCCTTTCAATGACTTA
CAGTGGAGAGCCAGTACATCTTAACCTACTGTTGTAGTGATGGTATCAACCTCATGGTTACTTAGCTCTGCATTTG
TTGCTTTGTTTTTTTTTCCACTTCAAATCACAAAATAAGTAGATTTTGTCTGAAAACCTCATAGCATTGGAAT
ACAAAAAGTTGTGCCAGATTGTTTGGCCCTAATTCAGTGTGTTTAAACAAATATTTTCACTACACACTATGTATTAGG
CACTGTGTGGAAAGTGTTAAGGGGTAGACAAGATACCGAATAATCTCCACAAGTTTATTTGTGGTCTATAGTACT
TTTGTAACCTGGGGTTACAAAAATTATAGAAATTTTTTTTCTTTGTTTCATATGCATATTTCATGATTATAATTTGGC
TTTGTGTGTGATTAAATGTTTTCTTAAGATTTTACATTATAGAATACCTCAAAGAAGTTGTCTAAGGACTGGGA
TAGAGAGTATGTTTCATAAAATTGTAGATGTTTGAATTTTTTAAAAACCTACAAATTAGTATATGATTGTTTTA
TATAAGTAAGATAGGAGCAACACTTTAAATTATTTGTGGGAGAATACAGCATTAAGGTGATTTTAAAGAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1178

MNRVNDPLIFIRDIKPLKLNLVVFIVLEIGRVTKTKDGHEVRSCKVADKTGSITISVWDEIGGLIQPGDIIRLT
RGYASMWKGLTLYTGRGGELQKIGDLGAVQAAAMRDSIHYYPGNDLHPDLEEPSLGV

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FIGURE 1179

CAGCCCACCTCTTGTCATCGTCACCTACAGGTATCTAAGCAATGGATCCAAGCCCTGGAGGTTGGTGAGAGCCATG
TATTACCCCTAGATGAAATTGGACAAGAGACC**ATG**ACCGTAACCCCTCCTCGATGCCAATCACTGTCTTGGTTCTG
TCATGTTTCTCTTTGAAGGATATTTTGGAAACCATCCTCTACACAGGTGATTTTCGATACACACCATCCATGCTAA
AGGAGCCAGCCCTGACACTGGGGAAACAGATCCATACTTTATACCTAGACAACACCAATTGCAATCCAGCCCTGG
TTCTTCCTTCCCGACAAGAAGCTGCCCACCAGATTGTCCAGCTCATTGAAAACACCCACAACATAACATAAAGA
TTGGACTCTACAGCCTGGGAAAGGAATCACTGCTGGAGCAGCTGGCCCTGGAGTTTCAGACCTGGGTGGTATTGA
GTCCCTCGGCGCCTGGAGTTGGTACAGCTACTGGGCTGGCAGATGTGTTTACAGTGGAGGAGAAGGCTGGCCGCA
TCCATGCAGTAGACCATATGGAGACCTGCCATTCCAACATGCTGCGTTGGAACCAGACCCACCCCTACGATTGCTA
TCCTTCCCAACAAGCCGAAAAATCCACAGCTCCCACCCTGATATCCACGTCATCCCTTACTCTGACCATTCTCTT
ACTCCGAGCTTCGTGCCCTTTGTGCGCAGCACTGAAGCCTTGCCAGGTGGTGCCCATTTGTAAGTCGGCGGCCCTGTG
GAGGCTTTCAGGACAGTCTGAGCCCCAGGATCTCCGTGCCCTGATTCCGGA CTCTGTACAGCAATACATGAGTT
CTTCTCTAGAAAACCAAGCCTTCTCTGGCTGTTAGAAAGGAGGCTAAAGAGGCCGAGAACCCAAGGTGTTGTGT
TTGAATCCCCTGAGGAAAGTGCTGATCAATCTCAAGCTGACAGAGACTCAAAGAAGGCCAAGAAAGAGAACTTT
CTCCCTGGCCTGCGGACCTTGAAAAGCAGCCTTCCCACCATCCTTTGCGGATCAAGAAGCAGTTGTTCCCAGATC
TCTATAGCAAAGAATGGAACAAGGCAGTGCCCTTCTGTGAGTCTCAAAAGAGGGTGACTATGTTGACGGCCCCAC
TGGGATTTTCAGTGCACCTTAAGGTCTACAGATGAGGAGTTTATTTCTCAAAAAACCAGGGAGGAAATTGTTTAG
GGTCCCCCTTGGTACCCATGGGAGATGATGATGGAGGTCCAGAAGCCACAGGGAATCAGAGTGCCTGGATGGGCC
ATGGTTCTCCCTGTCCACAGCAGCAAGGGCACCCCTCTTCTAGCTACTGAATTCAGGGGTCTAGCACTCAAAT
ATCTTCTGACTCCAGTGAACCTTTTCCAGGCAGGGTATTCTTCCAGGAGATTTGACCAGCAAGTGGAATAATACC
ATAAACCCCTGCT**GAA**AGACAGGAGAGTACAGAATGACAACATTGAGCCCACTGCAGTTTTGAAAGATAGTAAGTG
ATGGCTGGTGGGAAAGAGTTTGTCTTTGGGGCTACTTTTCTATCTTTACAAGACTCTTATGGGGCCACCCTGGA
GCAGCACTTCCCAAACTTGTTCACTGGGGTCCCTCGTGCTATGGAATCCTTCTTTTATAACTAAGTTTAAGAA
ATACTTTTTTTATAAAATCTTTGGAGTATGCGTGAGCAAATTAAGAGTTCTTTGAAGTCTACAGTAAGTTAATC
TGTTTAACCTTGTTTAACCCAGTATTTCTCAAACCTTTTGTGAACATGCAATCATCTTATGTGGGTACAGAAAGAG
GTAAAGAGTCTGAATCAAAAAGGACCAGGTTATTGCTGTTGCTGTTTTGTGGTGTGATGAGCCATTCTCCATGTC
CCCTTCTCCCTCTTCTCAGATCAAAATCCCTAGGGAGTTCTATTTTTTAAATATGAAGTATGGCGCTGCATGCT
TCAATCCTGAACGTCAGTACTGCTGTGACCATCCAAATAATTTTCTGTCTCTGCTCTGGGAGGGAACAGGA
AGCGATGAAGAGGTCTTGGAACAGTAGTGAAAATTCTACCTCTATGTCCTTCATGAGGATGTGCAGTATCCAGT
ATCACTGGGATCCATGTGGAACAGAGCCAGCTGGGGGGTTGGGCAGCTCTCTCCAAGGCAGTACCTAGAGCCCAG
CTGAACAACAAGGCTTTGGGTGTGAAGGGACTCCCCAGCCTGGAGACCCTATTTGGCTGAAACAGTTACAAAATA
TCAAATGTGTTGTCAGATATTCTCCAATTGTTACATAGCTGGGATATTTGTTGCTCCCTCACCCCTTGGAAT
ATGTAGGGAGCCAGTGCACACAGCCTGTTTGTGTTTAGTATCCAAGGAAGAGACCAAGGAGCCAGCTGGCGGGAAG
GGGTGGGGGTGTGCAGTCTGCCCTGTCTTCTGCTCATAACCTGACAAAATGCCAACTAGTAAGCAGGATAGCT
GATACCACGGCTATGAGGGAGTAGGCTCCGAGAGGGCACAGACTTGTGGAGCTGGGCGTCTGGATCAAACTGCT
TTGGGATGGAACCTCGAGCCCTAGCAGTGAAGAAGATTCCATTTCTTGTCCAGGGGATTTAAAGAGTTTTCTGC
TTTGAGAGAGAAATAGAGAGTTTAGAAAAGCAATTGCTCTTGGGAAAGCTATACACAGCTCTGTTTTGTCAATGAC
CTTTGTTGTAAGTCTCCCAACGTCTATTAGGAGCCACAGCAGGTGAGGCATTTGGTGCAGCAGGAAACATGGGG
ACTGCCTAGGCTCGAATCTGTGGCACCTGAGCAATTACTTAAATTGTGGAGCCTAGTTCTCTCATCTGTAAGATG
GACTTGAGATTCTACCTCTCATGATTACTATGGAGATTGAATAATTGGTAAAATTCTCTAGCTCAGTGACTGC
CACAGGATGGGTCTTTCAGATTTTGGTTCTCTTTAGCTTCTGGTTCTTGAAAGAAATTGATCTGTATATAACATA
AGAACTTTGAAAGTC

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FIGURE 1180

MTVTLLDANHCPGSVMFLFEGYFGTILYTGDFRYTPSMLKEPALTLGKQIHTLYLDNTNCNPALVLP SRQEAAHQ
IVQLIRKHPQHNIKIGLYSLGKESLLEQLALEFQTWVVLSPRRLELVQLLGLADVFTVEEKAGRIHAVDHMETCH
SNMLRWNQTHPTTIAILPTSRKIHSSHPDIHVIPYSDHSSYSELRAFVAALKPCQVVPIVSRRPCGGFQDSLSPRI
SVPLIPDSVQQYMSSSRKPSLLWLLERRLKRPRTOGVVFESPEESADQSQADRD SKKAKKEKLSPPADLEKQP
SHHPLRIKKQLFPDLYSKEWNKAVPFCE SQKRVMTLTAPLGFSVHLRSTDEEFISQKTREEIGLGSPLVPMGDDD
GGPEATGNQSAWMGHGSPLSHSSKGTPLLATEFRGLALKYLLTPVNFFQAGYSSRRFDQQVEKYHKPC

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FIGURE 1181A

CCGGTTCCCGCGGTTCGACGCTCCAGCCGCCTCCTCCGCGCAGCCGCCGCTCAGCTGCTCGCTCTGTGGGTCCGGT
CCTCTCCGGCACTTGGGGCTCCAGTCGCGCCCTCCAAGCCCTTCAGGCCGCCCCAGTGTCTCTCTCTTCTCCGGC
CAGACCCAGCCCCGCGAAGATGGTGGACCGCGAGCAACTGGTGCAGAAAGCCCGCTGGCCGAGCAGGCGGAGCG
CTACGACGACATGGCCGCGGCCATGAAGAACGTGACAGAGCTGAATGAGCCACTGTCTGAATGAGGAACGAAACCT
TCTGTCTGTGGCCTACAAGAACGTTGTGGGGGACGCCGCTCTTCTGAGGGTCATCAGTAGCATTGAGCAGAA
GACATCTGCAGACGGCAATGAGAAGAAGATTGAGATGGTCCGTGCGTACCGGGAGAAGATAGAGAAGGAGTTGGA
GGCTGTGTGCCAGGATGTGCTGAGCCTGTGATAACTACCTGATCAAGAATTGCAGCGAGACCCAGTACGAGAG
CAAAGTGTCTACCTGAAGATGAAAGGGGACTACTACCGCTACCTGGCTGAAGTGGCCACCGGAGAGAAAAGGGC
GACGGTGGTGGAGTCTCCGAGAAGGCCTACAGCGAAGCCCACGAGATCAGCAAAGAGCACATGCAGCCCACCCA
CCCCATCCGATTAGGCCTGGCTCTTAATACTACTCCGTCTTCTACTATGAGATCCAGAAGCCCCAGAGCAAGCGTG
CCACTTGGCCAAGACCGCGTTCGACGACGCCATCGCCGAGCTTGACACCCTCAACGAGGACTCCTACAAGGACTC
CACGCTCATCATGCAGCTCCTCCGCGACAACCTCACGCTCTGGACGAGCGACCAGCAGGACGACGATGGCGGCGA
AGGCAACAATTAAGGCCCCAGGGGAACTGGCAGCGCACGCGGATGCTACTACTGCAGTCTTTATTTTTTCCCAT
GAGTTGGGGGTCGGGTGGGGGAGGGAAGGGAGGGATGACCTTCCCAGGGAGAAACCCACGACCTGTCTGTCTT
TGATCGCTCTTTGACATTTTTGCCAAAATACCACTAGTGGAAAGTCAGGCTAGCTGTGCTGGTATTGGAATAGC
AGCCTCACACTGGCGTCTGGACTGTTCTGTAGATTTCATGCAAGTGGAGCTGTCTGTCTCTAATTTAACTTATTGC
TAGATAATAGGGTTTTTTCAGATGAAAAGAAAACCTTAAAGAGGAATGGCCCTCATTAGTAAGTTCTGTGGTTCCAG
TAAGGATTTTTATGTACATACGCTCTCGTCTCTCGTTTTTGGGTACTTTCTATCTCATCTGTCTCGGCTCTGCATG
TTTTCCAGGGTGTAGCCTACAGACATGGAACAGTGTAAATCCCAGACTGACAGACTTAGAACCTGAGGTCTCATT
CATCCTTATGGTTTAGGCCCTTGCCAGTTTTCCGAAGTCTCTGATTAGTTGACAGTATTAACACTAAATTGCAGTT
TACAGTATTTCTACATTACAGCCATATGTAACATCAAGCCATCGATTGTGTACTTTTCCTTTGCTAGTTGTTTGG
GCTTTAACATCCTTATTACGCCTTATCCAGGTTGGTTTTTGTCTGTGATCGGTCTCCTAGGCTAAATGAGAATGAA
AGCGACTTCAGGTTTTTGGTTTCATAGGTGCTCGGCAGGTGGCTGTGGGATTTTTTTTTTTTGGTCTTCTTTCTC
TTAACGTAAATCCACCACCAAAATTTATTAATCCTCTTGAGAGAAACGTGAAACGCCACAAAAATAGAGAAAATTC
AGGTCTGTATGTATGGATCGTGTGGTATTTTCAGAGAACATCCCGCTTCTGAAGCTGCTGCAGCTCCCTCCTC
AGGGATCACACTGCCGTACCCACTCTGCACTGGGGCGTTTCTACTGCGCCTCGTGTGGCGGACGCAGCTGGG
TGCAGAAGCTGTGGGGTCGGAGAGGCGTTTGGAGAAGGTCTGTGGTGCAGTGTGTGAAAATTCAGGTGCTAGAAG
CCTACTGGTAGAAAAACCCAAAAGGAAGAGCTATATCCTTAACCATCTGTCCAATTTCCGGGAGCCTTGTCAAGT
TGTCAGTTTTTCTCCCGAAGACACTCCTTCCCCAAGTAATTGTAGGAAGATAAAAAACTGTTACCAGATAAC
AAACACTTAACCTATTTGACCAGAACTTTTCTCTCGAGATAGTTTTTTCTTTTAAATGAAAAAGCATAGG
AATTGGAGATTGGCTTGTCTCACGCAGCCAGTGCACATTTGGAATTGACGGAAACAACGTTGCTATTTCCACCCA
TTTGTTCGCGCAGCCTTAAGGCCCTCATTCTCATTTCGGGTGAATCTGTCTATCTGTGAACGTGGCCCGCATGT
GCATTCTTTTTTTATATATATAAAGTCAGTGACGAGGCACTCCCAGAGCTGTAATGACACCACACTTGTTC
TTTGTTCCTTTGTTTTATTTAGGCAAGAAGAGGTGTGAGTAATTGAGGAAAACTGACAGATGCTTTTGCTAATA
CCAAAATTGAGCTTACAATTAGGAACAGATATGTGTAACAGGATACAGGTGACAGTGAAGATAGAAGAACCACG
ATGACCACAGACTCAATGTGCTCTGTAACATCGCACAGTTTACCCAGCATGACTTTCCTTAGGAGGCCCCCTCCT
CACGCTAGAGTAAAAGTCCCAGTTAAGTGAAGCCTACCAGAAGAACTAGTAGAAGAAGCTTTGCCGCTTTTGTGC
CTCTCACAGGCGCCTAAAGTCATTGCCATGGGAGGAAGACGATTTGGGGGGGGAGGGGGGGGGCAGGGTAGGTGG
GGCTTTCCTAATTTATCTTCATGTCCAGTGAGCAGTGTTCGCTTTTTCCTTGTAGCATTTGGAAATGATTTACT
GGAATTACAAAACCTATTTTCTTTTAAATTTTTCAGCTTTGGCTCTGGCTGCTTTTGTAGATAATGCAAGATAAAA
ATCACACCTGAGGGCTGAAAACGGAGAGGGAATGGGAGACTTGATATTTAAGCAGCTTGAATGGTTTTTCTTTTC
TTTATTTTAAAGAAATGCACTTGCCTATGATACTGTCTCTCCAGTGAAATGATTACTCTCATTACTCTATTG
ATACAAATATTGTGCATGCTAGTGTGTATTTCTATACAGTAGCTTGAAATTGATTAACTTATACTGTAGGTGTTA
TGTATTCCATGACAAAAAAATTAAGTCTTCAAATTTTTTAAAGGTTTTTTTTTTTTTAAATTTAATTTTCTTTT
TGGGGTAAAGTTTGTCTTACCAAATAGTGATTGTAACAAATGATCTGTTTTGGATGTTGCTATAGTGACATGC
AGTTATATATTTGTTTTTAAAGGGGGGGAGCAAAAGAAACACCAGTGTTAGCTTAATCTTAATGTCTGGTGT
TGTCATGGTGAATTATAACTATTACAGTGTTGGAGAACAACAAATATGTTCTCTGAATGAGCCTTTGTGCTTTT
TGTCATGTTATGCAGTGAACATTTTTTAAAGTCTAATCAGTGATTATTTTCCAGCTCCGTGTTTCTTAAGGAA

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FIGURE 1181B

TTATTTACACACGGACCATCTTTAGCAGTTTCCTCAGTGATGGAATATCATGAATGTGAGTCATTATGTAGCTG
TCGTACATTGAGCAAATAAACTTACAGATCTGACGCC

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FIGURE 1182

MVDREQLVQKARLAEQAERYDDMAAAMKNVTELNEPLSNEERNLLSVAYKNVVGARRSSWRVISSIEQKTSADGN
EKKIEMVRAYREKIEKELEAVCQDVLSLLDNYLIKNCSETQYESKV FYLKMKG DYRYLAEVATGEKRATVVESS
EKAYSEAHEISKEHMOPHTPIRLGLALNYSVFYYEIQNAPEQACHLAKTAFDDAIAELDTLNEDSYKDSTLIMQL
LRDNLTLWTSDQQDDDGEGNN

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FIGURE 1183

AGCAGTGGCCCCAAAGAGGAGCAGCAGACAAGAGTGCAGTGGTGGCTGCCGCCGCACCAGCCTCAGTGGCAGATGA
CACACCACCCCCCGAGCGTCGGAACAAGAGCGGTATCATCAGTGAGCCCCTCAACAAGAGCCTGCGCCGCTCCCCG
CCCGCTCTCCCCTACTCTTCTTTTGGCAGCAGTGGTGGTAGTGGCGGTGGCAGCATGATGGGCGGAGAGTCTGC
TTGACAAGGCCACTGCGGCTGCAGCCTGGCCTTCCCTGTTGGCCAATGGGATGACCTGGCGGGCGGCCATGGCGGT
GGACAAAAGCAACCCTACCTCAAAGCACAAAAGTGGTGTGTGGCCAGCCTGCTGAGCAAGGCAGAGCGGGCCAC
GGAGCTGGCAGCCGAGGGACAGCTGACGCTGCAGCAGTTTGCGCAGTCCACAGAGATGCTGAAGCGCGTGGTGTGA
GGAGCATCTCCCGCTGATGAGCGAGGCGGGTGTGGCCTGCCTGACATGGAGGCTGTGGCAGGTGCCGAAGCCCT
CAATGGCCAGTCCGACTTCCCCTACCTGGGCGCTTTCCCCATCAACCCAGGCCTCTTCATTATGACCCCGGCAGG
TGTGTTCCCTGGCCGAGAGCGCGCTGCACATGGCGGGCCTGGCTGAGTACCCCATGCAGGGAGAGCTGCCTCTGCC
ATCAGCTCCGGCAAGAAGAAGCGGAAACGCTGCGGCATTGTGCGCGCCCTGCCGGCGGCGCATCAACTGCGAGCA
GTGCAGCAGTTGTAGGAATCGAAAGACTGGCCATCAGATTTGCAAATTCAGAAAATGTGAGGAACTCAAAAAGAA
GCCTTCCGCTGCTCTGGAGAAGGTGATGCTTCCGACGGGAGCCGCCTTCCGGTGGTTTTCAGTGACGGCGGCGGAA
CCCAAAGCTGCCCTCTCCGTGCAATGTCACTGCTCGTGTGGTCTCCAGCAAGGGATTGGGGCGAAGACAAACGGA
TGCACCCGCTTTTAGAACCAAAAATATTCTCTCACAGATTTATTCTGTTTTTATATATATATTTTTTGTGTGTC
GTTTTAACATCTCCACGTCCCTAGCATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1184

MAVDKSNPTSKHKSGAVASLLSKAERATELAAEGQLTLQQFAQSTEMLKRVVQEHPLMSEAGAGLPDMEAVAGA
EALNGQSDFPYLGAFPINPGLFIMTPAGVFLAESALHMAGLAEYPMQGELPLPSAPARRSGNAAALCAPCRRRIN
CEQCSSCRNRKTGHQICKFRKCEELKKKPSAALEKVMLPTGAAFRWFQ

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FIGURE 1185

GGAACAAAAGCTGGAGCTCCACCGCGGTGGCGGCCGCTCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTTCGG
CACGAGCAGAAGAGGGGGCTAGCTAGCTGTCTCTGCGGACCAGGGGAGACCCCGCGCCCCCGGTGTGAGGCGG
CCTCACAGGGCCGGGTGGGCTGGCGAGCCGACGCGGCGGCGGAGGAGGCTGTGAGGAGTGTGTGGAACAGGACCC
GGGACAGAGGAACCAATGGCTCCGCGAGAACCTGAGCACCTTTTGCCCTGTTGCTGCTATACCTCATCGGGGCGGTGA
TTGCCGGACGAGATTTCTATAAGATCTTGGGGGTGCCTCGAAGTGCCTCTATAAAGGATATTAAAAAGGCCTATA
GGAAACTAGCCCTGCAGCTTCATCCCGACCGGAACCTGATGATCCACAAGCCCAGGAGAAATTCCAGGATCTGG
GTGCTGCTTATGAGGTTCTGTGATAGTGAAGAACGGAACAGTACGATACTTATGGTGAAGAAGGATTAAAAG
ATGGTCATCAGAGCTCCCATGGAGACATTTTTTCACACTTCTTTGGGGATTTTGGTTTCATGTTTGGAGGAACCC
CTCGTCAGCAAGACAGAAATATTCCAAGAGGAAGTGATATTATTGTAGATCTAGAAGTCACTTTGGAAGAAGTAT
ATGCAGGAAATTTTGTGGAAGTAGTTAGAAACAAACCTGTGGCAAGGCAGGCTCCTGGCAAACGGAAGTGCAATT
GTCGGCAAGAGATGCGGACCACCCAGCTGGGGCCCTGGGCGCTTCCAATGACCCAGGAGGTGGTCTGCGACGAAT
GCCCTAATGTCAAAC TAGTGAATGAAGAACGAACGCTGGAAGTAGAAATAGAGCCTGGGGTGAGAGACGGCATGG
AGTACCCCTTTATTGGAGAAGGTGAGCCTCACGTGGATGGGGAGCCTGGAGATTTACGGTTCCGAATCAAAGTTG
TCAAGCACCCAATATTTGAAAGGAGAGGAGATGATTTGTACACAAATGTGACAATCTCATTAGTTGAGTCACTGG
TTGGCTTTGAGATGGATATTACTCACTTGGATGGTGCACAAGGTACATATTTCCCGGGATAAGATCACCAGGCCAG
GAGCGAAGCTATGGAAGAAAGGGGAAGGGCTCCCCAACTTTGACAACAACAATATCAAGGGCTCTTTGATAATCA
CTTTTGATGTGGATTTTCCAAAAGAACAGTTAACAGAGGAAGCGAGAGAAGGTATCAAACAGCTACTGAAACAAG
GGTCAGTGCAGAAGGTATACAATGGACTGCAAGGATATTGAGAGTGAATAAAATTGGACTTTGTTTAAAATAAGT
GAATAAGCGATATTTATTATCTGCAAGGTTTTTTTTGTGTGTGTTTTTTGTTTTTATTTTCAATATGCAAGTTAGGC
TTAATTTTTTTTATCTAATGATCATCATGAAATGAATAAGAGGGCTTAAGAATTTGTCCATTTGCATTCGGAAAAG
AATGACCAGCAAAGGTTTACTAATACGTCTCCCTTTGGGGATTTAATGTCTGGTGCTGCCGCCCTGAGTTTCAAG
AATTAAAGCTGCAAGAGGACTCCAGGAGCAAAGAAACACAATATAGAGGGTTGGAGTTGTTAGCAATTTTCATTC
AAAATGCCAACTGGAGAAGTCTGTTTTTAAATACATTTTGTGTTATTTTT

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FIGURE 1186

MAPQNLSTFCLLLLYLIGAVIAGRDFYKILGVPRSASIKDIKKAYRKLALQLHPDRNPDDPQAQEKFDLGAAYE
VLSDSEKRKQYDITYGEEGLKDGHQSSHGDIFSHFFGDFGFMFGGTPRQQDRNIPRGSDIIVDLEVTLEEVYAGNF
VEVVRNKPVARQAPGKRKCNCRQEMRTTQLGPGRFQMTQEVVCDPCPNVKLVNEERTLEVEIEPGVRDGMETPFI
GEGEPHVDGEPGDLRFRIKVVKHPIFERRGDDLYTNVTISLVESLVGFEMDITHLDGHKVHISRDKITRPGAKLW
KKGEGLPNFDNNNIKGSLIITFDVDFPKEQLTEEAREGIKQLLKQGSVQKVYNGLOGY

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FIGURE 1187

GGCACGAGGGCCAGGAACGCCAGCCGTTACGCGTTTCGGTCCTCCTTGGCTGACTCACC GCCCTCGCCGCCGCAC
CATGGACGCCCCCAGGCAGGTGGTCAACTTTGGGCCTGGTCCCGCCAAGCTGCCGCACTCAGTGTGTAGAGAT
ACAAAAGGAATTATTAGACTACAAAGGAGTTGGCATTAGTGTTCTTGAAATGAGTCACAGGTCATCAGATTTTGC
CAAGATTATTAACAATACAGAGAATCTTGTGCGGGAATTGCTAGCTGTTCCAGACAATAAGGTGATTTTTCT
GCAAGGAGGTGGGTGCGGCCAGTTCAGTGCTGTCCCCTTAAACCTCATTGGCTTGAAAGCAGGAAGGTGTGCGGA
CTATGTGGTGACAGGAGCTTGGTCAGCTAAGGCCGAGAAGAAGCCAAGAAGTTTGGGACTATAAATATCGTTCA
CCCTAAACTTGGGAGTTATACAAAAATTCCAGATCCAAGCACCTGGAACCTCAACCCAGATGCCTCCTACGTGTA
TTATTGCGCAAATGAGACGGTGCATGGTGTGGAGTTTGACTTTATACCCGATGTCAAGGGAGCAGTACTGGTTTG
TGACATGTCCTCAAACCTCCTGTCCAAGCCAGTGGATGTTTCCAAGTTTGGTGTGATTTTTGCTGGTGCCAGAA
GAATGTTGGCTCTGCTGGGGTCACCGTGGTGATTGTCCGTGATGACCTGCTGGGGTTTGCCCTCCGAGAGTGCCC
CTCGGTCTGGAATACAAGGTGCAGGCTGGAAACAGCTCCTTGTACAACACGCCTCCATGTTTCAGCATCTACGT
CATGGGCTTGGTTCCTGGAGTGGATTAAAAACAATGGAGGTGCCGCGGCCATGGAGAAGCTTAGCTCCATCAAATC
TCAAACAATTTATGAGATTATTGATAATTCTCAAGGATTCTACGTTTGTCCAGTGGAGCCCCAAAAATAGAAGCAA
GATGAATATTCCATTCCGCATTGGCAATGCCAAAGGAGATGATGCTTTAGAAAAAGATTTCTTGATAAAGCTCT
TGAATCAATATGTTGCTCTTGAAAGGGCATAGGTCTGTGGGAGGCATCCGGGCCTCTCTGTATAATGCTGTCAC
AATTGAAGACGTTCAGAAGCTGGCCGCCTTCATGAAAAATTTTTGGAGATGCATCAGCTATGAACACATCCTAA
CCAGGATATACTCTGTTCTTGAACAACATACAAAGTTTAAAGTAACTTGGGGATGGCTACAAAAAGTTAACACAG
TATTTTTCTCAAATGAACATGTTTATTGCAGATTCTTCTTTTTTGAAGAACAACAGCAAAACATCCACAACCTCT
GTAAAGCTGGTGGGACCTAATGTCACCTTAATTCTGACTTGAAGTGAAGCATTTTAAGAAATCTTGTTGCTTTT
CTAACAAATTCCCGCGTATTTTGCCTTTGCTGCTACTTTTTCTAGTTAGATTTCAAACCTGCCTGTGGACTTAAT
AATGCAAGTTGCGATTAAATATTTCTGGAGTCATGGGAACACACAGCACAGAGGGTAGGGGGGCCCTCTAGGTGC
TGAATCTACACATCTGTGGGGTCTCCTGGGTTTACGCGGCTGTTGATTCAAGGTCAACATTGACCATTGGAGGAGT
GGTTTAAGAGTGCCAGGCGAAGGGCAAACCTGTAGATCGATCTTTATGCTGTTATTACAGGAGAAGTGACATACTT
TATATATGTTTATATTAGCAAGGTCTGTTTTTAATACCATATACTTTATATTTCTATACATTTATATTTCTAATA
ATACAGTTATCACTGATATATGTAGACACTTTTAGAATTTATTAAATCCTTGACCTTGTGCATTATAGCATTCCA
TTAGCAAGAGTTGTACCCCTCCCGAGTCTTCGCTTCTCTTTTTAAGCTGTTTTATGAAAAAGACCTAGAAGT
TCTTGATTCATTTTTACCATTCTTTCCATAGGTAGAAGAGAAAGTTGATTGGTTGGTTGTTTTTCAATTATGCCA
TTAAACTAAACATTTCTGTAAATTACCCTATCCTTTGTTCTCTACTGTTTTCTTTGTAATGTATGACTACGAGA
GTGATACTTTGCTGAAAAGTCTTTCCCTATTGTTTATCTATTGTCAGTATTTTATGTTGAATATGTAAAGAACA
TTAAAGTCCTAAACATCTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1188

MDAPRQVVNFGPGPAKLPHSVLLEIQKELLDYKGVGISVLEMSHRSSDFAKIINNNTENLVRELLAVPDNYKVIFL
QGGGCGQFSAPVPLNLIGLKAGRCADYVVTGAWSAKAAEEAKKFGTINIVHPKLGSYTKIPDPSTWNLNPDASYVY
YCANETVHGVEFDFIPDVKGAVLVCDMSSNFLSKPVDVSKFGVIFAGAQKNVGSAGVTVVIVRDDLLGFALRECP
SVLEYKVQAGNSSLYNTPPCFSIYVMGLVLEWIKNNGGAAAMEKLSSIKSQTIIYEIIDNSQGFYVCPVEPQNRSK
MNIPFRIGNAKGDDALEKRFLDKALELNMLSLKGHRSVGGIRASLYNAVTTIEDVQKLAAFMKKFLEMHQL

1307/1629
FIGURE 1189

CGCCCGTCGGGGTCTCGTTTCAGCAGCCAATGGGTCTGCACCTTCGTCCTCGTCAGCATT TTTGTCTAATCGCGGC
CTGTGACCTCGAAGGCGGGGAGCAGAGGGAGATACAGAAACCGACAGGGCCAGGCGCCGGTGGCTCCGAAGCGGG
GAAGTGGGACAAGATGGTTTACATCTCGAACGGACAAGTGTGGACAGCCGGAGTCAGTCTCCATGGAGATTATC
TTTGATAACAGATTTCTTCTGGGGAATAGCTGAGTTTGTGGTTTTGT TTTTCAAACCTCTGCTTCAGCAAGATGT
GAAAAAAAAAGAAGCTATGGAACTCATCTGATTCCAGATATGATGATGGAAGAGGGCCACCAGGAAACCTCC
CCGAAGAATGGGTAGAAATCAATCATCTGCGTGGCCCTAGTCCCCCTCCAATGGCTGGTGGATGAGGAAGGTAAAT
GTCTGCTCTAAGAAGCAGACAACCGGACATGCGCATT CATAGCAGAAGGAAACCATCAAGAAGTGAAGGCTGAC
CATGATGAGCAGTAGATGAATGTGTATGTCTAAACAAGGACTGCTCTGTGTCCTCACAGATGAATGAGGTCATGC
TGGGAATTCCCTCTGCAGGGAAC TGGCCTGACTGACATGCAGTTCCATAAATGCAGATGTTTGTCTCATTACCTT
TTTGTATAGTTTATTAAAGTATTAATATAGTTTTAATAAGTAAATATTTT TAGGTTGCAGAATGGACTCCTCATC
TTTATATTCACGAAAAAGCAATCTGAAGAAAACAAATAAAAGCCTGTGTATTTAGCAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAA

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FIGURE 1190

ARRGLVSAANGSAPSSSSAFCLIAACDLEGGEQREIQKPTGPGAGGSEAGKWDKMVYISNGQVLDSRSQSPWRLS
LITDFFWGIAEFVVLFFKTLLQQDVKKRRSYGNSSDSRYDDGRGPPGNPPRRMGRINHLRGE SPPPMAGG

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FIGURE 1191

ATGTTGGTGCTGTTTGAACGTCTGTGGGTACGCCATCTTTAAGGTTCTAAATGAGAAGAACTTCAAGAGGTT
GATAGTTTATGGAAAGAATTTGAACTCCAGAGAAAAGCAAAACAAATAGTAAAGCTAAAACATTTTGAGAAATTT
CAGGATACAGCAGAAGCATTAGCAGCATTACAGCTCTGATGGAGGGCAAAATCAATAAGCAGCTGAAAAAAGTT
CTGAAGAAAATAGTAAAAGAAGCCCATGAACCGCTGGCAGTAGCTGATGCTAAACTAGGAGGGGTCATAAAGGAA
AAGCTGAATCTCAGTTGTATCCATAGTCCTGTTGTTAATGAACCTTATGAGAGGAATTCGTTCAAAATGGATGGA
TTAATCCCTGGGGTAGAACCACGTGAAATGGCAGCTATGTGTCTTGGATTGGCTCACAGCCTGTCTCGATATAGA
TTGAAGTTTAGCGCTGATAAAGTAGACACAATGATTGTTCAAGCAATTTCCCTGTTAGATGACTTGGATAAAGAA
CTAAACAACCTACATTATGCGATGTAGAGAATGGTATGGCTGGCATTTCCTGAATTAGGAAAAATTATTTAGAT
AATTTAACATACTGCAAGTGTTTACAGAAAGTTGGCGATAGGAAGAACTATGCCTCTGCCAAGCTTTCTGAGTTG
CTGCCAGAAGAAGTTGAAGCAGAAGTGAAAGCAGCTGCAGAGATATCAATGGGAACAGAGGTTTCAGAAGAAGAT
ATTTGCAATATTCTGCATCTTTGCACCCAGGTGATTGAAATCTCTGAATATCGAACCCAGCTCTATGAATATCTA
CAAAATCGAATGATGGCCATTGCACCCAATGTTACAGTCATGGTTGGGGAATTAGTTGGAGCACGGCTTATTGCT
CATGCAGGTTCTCTTTTAAATTTGGCCAAGCATGCAGCTTCTACCGTTCAGATTCTTGGAGCTGAAAAGGCACTT
TTCAGAGCCCTCAAATCTAGACGGGATACCCCTAAGTATGGTCTCATTTATCATGCTTCACTCGTGGGCCAGACA
AGTCCCAAACACAAAGGAAAGATTTCTCGAATGCTGGCAGCCAAAACCGTTTTGGCTATCCGTTATGATGCTTTT
GGTGAGGATTCAAGTTCTGCAATGGGAGTTGAGAACAGAGCCAAATTAGAGGCCAGGTTGAGAACTTTGGAAGAC
AGAGGGATAAGAAAAATAAGTGGAACAGGAAAAGCATTAGCAAAAACAGAAAAATATGAACACAAAAGTGAAAGT
AAGACTTACGATCCTTCTGGTGACTCCACACTTCCAACCTGCTCTAAAAAACGCAAAATAGAACAGGTAGATAAA
GAGGATGAAATTACTGAAAAGAAAGCCAAAAAAGCCAAGATTAAAGTTAAAGTTGAAGAAGAGGAAGAAGAAAAA
GTGGCAGAAGAAGAAGAAACATCTGTGAAGAAGAAGAAAGGGGTAAAAAGAAACACATTAAGGAAGAACCA
CTTTCTGAGGAAGAACCATGTACCAGCACAGCAATTGCTAGTCCAGAGAAAAAGAAGAAAAAGAAAAAAGAGA
GAGAACGAGGATTAA

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FIGURE 1192

MLVLFETSVGYAIFKVLNEKKLQEVDSLWKEFETPEKANKIVKLKHFEEKFQDTAEALAAFTALMEGKINKQLKKV
LKKIVKEAHEPLAVADAKLGGVIEKLNLSCHSPVVNELMRGIRSQMDGLIPGVEPREMAAMCLGLAHSLSRYR
LKFSADKVDTMIVQAISLLDDLDKELNNYIMRCREWYGWHFPELGKIIISDNLTICKCLQKVGDRKNYASAKLSEL
LP EEVEAEVKAAA EISMGT EVSEEDICN I LHLCTQVIEISEYRTQLYEYLQNRMMAIAPNVTVMVGELVGARLIA
HAGSLLNLAKHAASTVQILGAEKALFRALKSRDTPKYGLIYHASLVGQTS PKHKGKISRMLAAKTVLAIRYDAF
GEDSSAMGVENRAKLEARLRTLED RGIRKISGTGKALAKTEKYEHKSEVKTYDPSGDSTLP TCSKKRKIEQVDK
EDEITEKKAKKAKIKVKVEEEEEEEKVAEEEEETSVKKKKKRGKKKH IKEEP LSEEE PCTSTAIASPEKKKKKKKKR
ENED

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FIGURE 1193

GGGGGTGGCGGGGACGCGAGTGGCGGCCGCGGGGCCCCGGACAAGGGTCCGCAGAGCTGCAGCCTTCGAGGGCCA
GCCCTCTCCGAGTCCGGGGCTGGGTCCCACCAAGTGACAAGGCGGCAGCCCCGCGCACACCAAAGAGAAAGCGGCT
GTGGCGGCAGCGGCAGCCCCAGCC**ATG**CTGTGTTATGTGACGAGGCCGGACGCGGTGCTGATGGAGGTGGAGGTG
GAGGCGAAAGCCAACGGCGAGGACTGCCTCAACCAGGTGTGCAGGCGACTGGGAATCATAGAAGTTGACTATTTT
GGACTGCAATTTACGGGTAGCAAAGGTGAAAGTTTATGGCTAAACCTGAGAAACCGGATCTCCCAGCAGATGGAT
GGGCTAGCCCCCTTACAGGCTTAAACTTAGAGTCAAGTTCTTCGTGGAGCCTCATCTCATCTTACAGGAGCAGACT
AGGCATATCTTTTTCTTGACATCAAGGAGGCCCTCTTGGCAGGCCACCTCTTGTGTTCCCCAGAGCAGGCAGTG
GAACTCAGTGCCCTCCTGGCCCAGACCAAGTTTGGAGACTACAACCAGAACACTGCCAAGTATAACTATGAGGAG
CTCTGTGCCAAGGAGCTCTCCTCTGCCACCTTGAACAGCATTGTTGCAAAACATAAGGAGTTGGAGGGGACCAGC
CAGGCTTCAGCTGAATACCAAGTTTTGCAGATTGTGTGCGCAATGGAACACTATGGCATAGAATGGCATTCTGTG
CGGGATAGCGAAGGGCAGAGACTGCTCATTGGGGTTGGACCTGAAGGAATCTCAATTTGTAAAGATGACTTTAGC
CCAATTAATAGGATAGCTTATCCTGTGGTGCAGATGGCCACCCAGTCAGGAAAGAATGTATATTTGACGGTCACC
AAGGAATCTGGGAACAGCATCGTGCTCTTGTTTTAAATGATCAGCACCAGGGCGGCCAGCGGGCTCTACCGAGCG
ATAACAGAGACGCACGCATTCTACAGGTGTGACACAGTGACCAGCGCCGTGATGATGCAGTATAGCCGTGACTTG
AAGGGCCACTTGGCATCTCTGTTTCTGAATGAAAACATTAACCTTGGCAAGAAATATGTCTTTGATATTAAAAGA
ACATCAAAGGAGGTGTATGACCATGCCAGGAGGGCTCTGTACAATGCTGGCGTTGTGGACCTCGTTTCAAGAAGC
AACCAGAGCCCTTCACACTCGCCTCTGAAGTCCTCAGAAAGCAGCATGAACTGCAGCAGCTGCGAGGGCCTCAGC
TGCCAGCAGACCCGGGTGCTGCAGGAGAAGCTACGCAAGCTGAAGGAAGCCATGCTGTGCATGGTGTGCTGCGAG
GAGGAGATCAACTCCACCTTCTGTCCCTGTGGCCACACTGTGTGCTGTGAGAGCTGCGCCGCCAGCTACAGTCA
TGTCCCGTCTGCAGGTGCGGTGTGGAGCATGTCCAGCACGTCTATCTGCCAACGCACACCAGTCTTCTCAATCTG
ACTGTAAATCT**TAA**CTGTTGTGCTTTTGTGGACTTGGCATGTTTCCATGAACTGCCTATTATAAACTATTAAAA
TGATAGATGTTGGAGAAAGTAATTATTCCAACACCCATCTGCCCATGCGATGTTAAAAAA

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FIGURE 1194

MLCYVTRPDAVLMEVEVEAKANGEDCLNQVCRRLLGIIEVDYFGLQFTGSKGESLWLNLRNRISQQMDGLAPYRLK
LRVKFFVEPHLILQEQTRHIFFLHIKEALLAGHLLCSPEQAVELSALLAQTKFGDYNQNTAKYNYEELCAKELSS
ATLNSIVAKHKELEGTSQASAEYQVLQIVSAMENYGIEWHSVRDSEGQRLLIGVGPEGISICKDDFSPINRIAYP
VVQMATQSGKNVYLTVTKESGNSIVLLFKMISTRAASGLYRAITETHAFYRCDTVTSAVMMQYSRDLKGHLASLF
LNENINLGKKYVFDIKRTSKEVYDHARRALYNAGVVDLVSRSNQSPSHSPLKSSESSMNCSSCEGLSCQQTRVLQ
EKLRKLKEAMLCMVCCEEEINSTFCPCGHTVCCESCAAQLQSCPVCRSRVEHVQHVVYLPHTSLLNLTVI

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FIGURE 1195

GCGGCCGCGGGGCCCCGGACAAGGGTCCGCAGAGCTGCAGCCTTCGAGGGCCAGCCCTCTCCGAGTCCGGGGCTG
GGTCCCACCAAGTGACAAGGCGGCAGCCCCGCGCACACCAAAGAGAAGGCGGCTGTGGCGGCAGCGGCAGCCCCAG
CCATGCTGTGTTATGTGACGAGGCCGGACGCGGTGCTGATGGAGGTGGAGGTGGAGGCGAAAGCCAACGGCGAGG
ACTGCCTCAACCAGGCATATCTTTTTCTTGACATCAAGGAGGCCCTCTTGGCAGGCCACCTCTTGTGTTCCCA
GAGCAGGCAGTGGAACTCAGTGCCCTCCTGGCCAGACCAAGTTTGAGACTACAACCAGAACACTGCCAAGTAT
AACTATGAGGAGCTCTGTGCCAAGGAGCTCTCCTCTGCCACCTTGAACAGCATTGTTGCAAAACATAAGGAGTTG
GAGGGGACCAGCCAGGCTTCAGCTGAATACCAATTTTGCCAGATTGTGTCGGCAATGAAAACTATGGCATAGAA
TGGCATTCTGTGCGGGATAGCGAAGGGCAGAACTGCTCATTGGGGTTGGACCTGAAGGAATCTCAATTTGTAAA
GATGACTTTAGCCCAATTAATAGGATAGCTTATCCTGTGGTGCAGATGGCCACCCAGTCAGGAAAGAATGTATAT
TTGACGGTCACCAAGGAATCTGGGAACAGCATCGTGCTCTTGTTTAAAATGATCAGCACCAGGGCGGCCACGCGG
CTCTACCGAGCGATAACAGAGACGCACGCATTCTACAGGTGTGACACAGTGACCAGCGCCGTGATGATGCAGTAT
AGCCGTGACTTGAAGGGCCACTTGGCATCTCTGTTTCTGAATGAAAACATTAACCTTGGGGCAAGAAATTATGTC
TTTGATATTTAAAAGAACATCAAAGGAGGTGTATGACCATGCCAGGAGGCTCTGTACAATGCTGGCGTTGTGGAC
CTCGTTTCAAGAACAACCAGAGCCCTTCACACTCGCCTCTGAAGTCTCAGAAAGCAGCATGAACTGCAGCAGCT
GCGAGGGCCTCAGCTGCCAGCAGACCCGGGTGCTGCAGGAGAAGCTACGCAAGCTGAAGGAAGCCATGCTGTGCA
TGGTGTGCTGCGAGGAGGAGATCAACTCCACCTTCTGTCCCTGTGGCCACACTGTGTGCTGTGAGAGCTGCGCCG
CCCAGCTACAGTCATGTCCCGTCTGCAGGTGCGGTGTGGAGCATGTCCAGCACGTCTATCTGCCAACGCACACCA
GTCTTCTCAATCTGACTGTAATCTAATCTGTTGTGCTTTTGTGGACTTGGCATGTTTCCATGAACTGCAGTATT
ATAAACTATTAAAATGATAGATTGTGGAGAAAAGTAATTATTCCAACACCCATCTGCCATGCGATGTTAAAAAAA
AAAAAAGGAAGAAAAATAACACAGCTACTCCTCACTGCAAAAACATATCCATGCGTAGAATCAACAACCTCCAGT
CATGGGACCAGGAGGAGCTCTGGGACGCAGACACATTCCCTTGATGTTGATTTTTTTTTATGATCTAGTAAAGGAA
TAGGTAAAGTCTTTGATGTGAGTGAAGTGGCAACATAGCCAAAAAGTTGGGTACCTTTTAGGAAATGATGTTGTA
AGTCTCCTTAATGTATCCTGAGGTAAAGTTTCCCTACTGGCAGCAGATTTTGTAAAGATTACTTTTAAGAATTTTCA
TCTTTTTGTATGGTCATGGAGCTCCAACCATTTTAAATAGGAAAGTCTTTTGTAAATTGTTGTCGTTTTAATGT
CATTTCTGCTTTTATAACTTGATCAAGAATGATTGGAAGGCAAACAGGTTTACAAATCAATTCTGTGACTTTTAA
AAAGTTGACAATGTTGTGATTTTAAACCAGTGTGGCTAGTAAAAAGCAGCTCACTCAATGTTGGGTGGCTCCCT
ATTCCTTTACGCTCCCCCTATCCCTACCCCAAGCCTTTCGATTATAAAATACTACCAATCTTGTATAAGATT
ACTGTGGAGTAGTCAAGTACTCCCCGGGCCTTCTGAGCTGGTGAATATTTTATTTTCAAGTGAACAGAGAGC
ACTCTCCTTGGGAAGGGAAAGCGGCTTGCTGAGTGAGAGATGGAGCCTCATGGTGTACAACCTGAGGGTAGTTAAC
TCATCACTTCTCCAAGCACTCGATCCAGCTTCACCCACTGGTGTGCTTTGCTTGAACCTGTTCAAGCCTTTTA
TAGCCTTACCATAAGTATTTAGATATGGTGTCTCTTCTGTTTTTGGGGGGGAGTTTTGTTGTGTTTTTTTAA
GTAAGTGCTTAAGTATTAACCTTTGGGTGTCCCTCTGTATGTTTCGAAGGGGTTTTGGTTCTTTTTGCTTCTGT
TTTCTTAAACATGTTTTTCACTCCCACTTGGGCATTTTGGAAGCTGGTCAGCTAGCAGTTTTCTGGGATGTCGG
GAGACCTAGATGACCTTATCGGGTGCAATACTAGCTAAGGTAAAGCTAGAAACCTACACTGTCACTTTACTGAGA
TTTCTGAGTATACTTTTCATATTGCCTTAATGTAGCAGTAATGTGTTTATGCATTTGTTTCTTTGCACAGACATT
TTGTCAAATATTAAAACCTCTACTTTTTTATGGCACATATTAGCATATAAGCCTTTATTCCAAGAGGTATTTATTT
TTTCACTTGTAATAAATAATGTTTCCACGTAAAGAACTCTGTTATATCCTAGAGGACTCTGTCTTTTATATTTCG
GGATAATAAAGACTTTAAAGCAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1196

MENYGIEWHSVRDSEGQKLLIGVGPEGISICKDDFSPINRIAYPVVQMATQSGKNVYLTVTKESGNSIVLLFKMI
STRAATRLYRAITETHAFYRCDTVTSVMMQYSRDLKGHLASLFLNENINLGPRNYVFDI

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FIGURE 1197

AGAAGGGAAGGTAGACATCAGGTTCTCCCTGGAGACTTTTCGTTTTTCATTTACGCTGCGGAAACTGACGTTTTTG
CCTAACACCCCATGTAATGTAAACGTATAGGCTTGAGTACGTGTCCGGCCGCATGTGTAGTGAACCCTAAAGCTT
TCCTAATTGTAGTTAGCATCGTCCCTAAGCGGAACGATTTTCCGTGAACATGATTTGTACTTTTCTACGAGCCGT
ACAGTATACGGAGAAGCTGCACAGGTCCTCGGCAAAGCGATTGCTTTTGCCATACATCGTGCTTAACAAAGCGTA
CTTGAAGACTGAGCCCAGTTTGAGATGTGGGCTTCAATATCAAAAAGAAAACGCTGCGACCTAGATGTATTCTTGG
AGTCACCCAGAAAACCATCTGGACGCAGGGACCGAGCCCCGAAAAGCAAAGGAGGATGGCAGCAAACAAGTGTC
TGTGCACAGGAGTCAGAGAGGGGGAACCGCCGTCCCAACATCACAAAAAGTGAAAGAAGCCGGAAGAGATTTTAC
CTATTTAATAGTGGTGCTTTTTTGAATCAGCATTACAGGTGGCTTGTTTTACACGATTTTCAAAGAACTTTTTTC
TTCATCCAGTCCTAGCAAGATATATGGGAGAGCCTTAGAAAAATGCAGATCACATCCTGAGGTGATCGGTGTCTT
TGGTGAGTCTGTTAAAGGCTATGGGGAGGTGACAAGGCGGGGTCGCCGGCAGCATGTCAGGTTCACTGAATATGT
AAAAGATGGGCTGAAACACACGTGTGTGAAATTCTACATTGAGGGCTCTGAGCCAGGGAAGCAAGGAACGGTGTA
TGCGCAAGTGAAAGAGAACCCAGGAAGTGGTGAATATGATTTTCGATATATATTTGTAGAAATTGAATCTTATCC
TAGAAGAACTATTATCATTGAAGATAATCGATCCCAAGATGATTAATAATCAAGCAAGCAGGTTTCTGATGGATG
TTGAATGGCGTGGACTCGCTACTCCGTTCTTCACAGCTGCCTTCCAGAATGTGTTCAAAGAAAGACAAGAAGGA
GTGTATGGCTTATAAAGTGAATCTAATACAGTATTTGTTGCATTTAAACAACTAGACATTTTCTTACGGAAAAA
TTATGAAATACAGCATATTTTATGTTCTCQCATTGACTCAATCATGACAATATTTCTGCTTTAACACCATCTTTC
GTGATTAGAAATGTTTGTATTGGAAATGTTACACCATGTAAATAAAGGAAATAGATTTTAGTATTGTATTTCATT
TTATATTATAGAACTGCATAATGTCTGCAGAATAAAATTAAAACTAACAAATAAAAAAAAAAAAAAAAAA

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FIGURE 1198

MICTFLRAVQYTEKLHRSSAKRLLLPYIVLNKAYLKTEPSLRGCLQYQKKTLRPRCILGVTQKTIWTQGSPRKA
KEDGSKQVSVHRSQRGGTAVPTSQKVKEAGRDFTYLIVVLFGISITGGLFYTIFKELFSSSSPSKIYGRALEKCR
SHPEVIGVFGESVKGYGEVTRRGRRQHVRFTYVVDGLKHTCVKFYIEGSEPGKQGTVYAQVKENPGSGEYDFRY
IFVEIESYPRRTIIIEDNRSQDD

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FIGURE 1199

CAGGGCTGGGCGGCGGCGGCGGCGGCGGCTC**ATCG**AAACGCCAAGAGGAGTCTCTGTCCGCGCGGCCGGCCCTGGAG
ACCGAGGGGCTGCGCTTCCTGCACACCACGGTGGGCTCCCTGCTGGCCACCTATGGCTGGTACATCGTCTTCAGC
TGCATCCTTCTCTACGTGGTCTTTT**CAGA**AGCTTTCCGCCCGGCTAAGAGCCTTGAGGCAGAGGCAGCTGGACCGA
GCTGCGGCTGCTGTGGAACCTGATGTTGTTGTTAAACGACAAGAAGCTTTAGCAGCTGCTCGACTGAAAATGCAA
GAAGAACTAAATGCGCAAGTTGAAAAGCATAAGGAAAAACTGAAACAACCTGAAGAAGAAAAAAGGAGACAGAAG
ATTGAAATGTGGGACAGCATGCAAGAAGGAAAAAGTTACAAAGGAAATGCAAAGAAGCCCCAGGAGGAAGACAGT
CCTGGGCCCTTCCACTTCATCTGTCTGAAACGGAAATCGGACAGAAAGCCTTTGCGGGGAGGAGGTTATAACCCG
TTGTCTGGTGAAGGAGGCGGACTTGCTCCTGGAGACCTGGACGCAGAGGCCCGTCATCTGGCGGATGAGGCTAAG
AATCTTGTTAGTGTCACTTTT**GAC**ATTAGCAAGATGAACCTT**TAA**CCCTCGATTCAATTGCCTTACGCACGCTTT
TCACAGTGACTAGCCAAGGGGAGGTGGGGTTGATTCTGTTCTTA**ACT**TACACCTGCATATGTCAGGGCTCCAGTC
AGCAAAAGGTATAGATGTTGCCTCTAGGCATGAGGTCATTGGTCACATTCTACTTGGAGACAGTGATTGCATTCA
TTGATTTTCATGGTTAATTGCTAGTTGGTAGGTAAAGGCCTCTAGATGATTAGCAATCTTGATAAAAGAGGCCTAG
TAATGTTCTTTTGAGGTTAGAAATCCTTGCTGCTAGGACAGTCTCTGTGACAGGTTGCGTTGAATGATGTCTTCC
TTATCAATGGTGAGCCCACCAGTGAGGATTACTGATGTGGACAGTTGATGGGGTTTGTCTTCTGTATATTTATTTT
TATGTACAGAACTTTGTAAAAACGAAACTATTTAAAAAACAAGAATAACATTTT**AG**CATCTTTATTCAAGGAGA
TTTATGGACTTCAATTTGTCTATCAAACATTAAATAGCTTTTTATTACAACCTC**CA**AAAAAAAAAAAAAAAAAAAA
AAAAAAAA

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FIGURE 1200

MERQEESLSARPALETEGLRFLHTTVGSLLATYGWYIVFSCILLYVVFQKLSARLRALRQRQLDRAAAAVEPDVV
VKRQEALAAARLKMQEELNAQVEKHKEKLKQLEEEKRRQKIEMWDSMQEGKSYKGNAKKPQEEDSPGPSTSSVLK
RKSDRKPLRGGGYNPLSGEGGGLAPGDLDARHLADEAKNLVSVTFDISKMNP

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FIGURE 1201A

GAGCCGGTGGCGCAGGTGTCTGGGGTCTCTCGAGCGCCCAGCCTGGGAGCATGATTGTGGACAAGCTGCTGGACGAC
AGCCGCGGCGGAGAGGGGCTGCGGGACGCGGCGGGCGGCTGCGGCCTCATGACCAGCCGCTCAACCTGAGCTAC
TTCTACGGCGCGTCTGCGCGCCCGCCGCGCCCGGGCGCCTGCGACGCCAGCTGCTCGGTCTTGGGCCCCCTCGGCG
CCCGGCTCGCCCGGCTCCGACTCCTCCGACTTCTCCTCTGCCTCGTCTGGTGTCTCTCTGCGGCGCCGTGGAGTCC
CGGTGAGAGGCGGCGCCCGCGCGGAGCGCCAGCCAGTTGAGCCCCATATGGGGGTTGGCAGGCAGCAGAGAGGC
CCCTTTCAAGGTGTTCTGGGTAAAGAACTCAGTGAAGGAACTCCTGTTGCACATCCGAAGTCATAAACAGAAGGCT
TCTGGCCAAGCTGTGGATGATTTTAAGACACAAGGTGTGAACATAGAACAGTTCAGAGAATTGAAGAACACAGTA
TCATACAGTGGGAAAAGGAAAGGGCCCCGATTCTGTTGTCTGATGGACCTGCTTGCAAAGGCCAGCTCTGTTGCAT
TCCCAATTTTTGACACCACCTCAAACACCAACGCCCCGGGAGAGCATGGAAGATGTTTATCTCAATGAACCCAAA
CAGGAGAGCAGTGTCTGATCTGCTTCAGAACATTATCAACATTAAGAATGAATGCAGCCCCGTTTCCCTGAACACA
GTTCAAGTTAGCTGGCTGAACCCCGTGGTGGTCCCTCAGAGCTCCCCCGCAGAGCAGTGTGAGGACTTCCATGGA
GGGCAGGTCTTTTTCTCCACCTCAGAAATGCCAACCATTTCCAAGTCAGGGGCTCCCAACAAATGATAGACCAGGCT
TCCCTGTACCAGTATTCTCCACAGAACCAGCATGTAGAGCAGCAGCCACACTACACCCACAAACCAACTCTGGAA
TACAGTCTTTTTCCCATACCTCCCCAGTCCCCCGCTTATGAACCAAACCTCTTTGATGGTCCAGAATCACAGTTT
TGCCCAAACCAAAGCTTAGTTTCCCTTCTTGGTGATCAAAGGGAATCTGAGAATATTGCTAATCCCATGCAGACT
TCCTCCAGTGTTTACGAGCAAAATGATGCTCACTTGCACAGCTTCAGCATGATGCCAGCAGCGCCTGTGAGGCC
ATGGTGGGGCACGAGATGGCCTCTGACTCTTCAAACACTTCACTGCCATTCTCAAACATGGGAAATCCAATGAAC
ACCACACAGTTAGGGAATCACTTTTTTCAGTGGCAGGTGGAGCAGGAAGAAAGCAAATTGGCAAATATTTCCCAA
GACCAGTTTCTTTCAAAGGATGCAGATGGTGACACGTTCCCTTCATATTGCTGTTGCCAAAGGAGAGGGCACTT
TCCTATGTTCTTGCAAGAAAGATGAATGCACCTTCACATGCTGGATATTAAAGAGCACAATGGACAGAGTGCCTTT
CAGGTGGCAGTGGCTGCCAATCAGCATCTCATTGTGCAGGATCTGGTGAACATCGGGGCACAGGTGAACACCACA
GACTGCTGGGGAAGAACACCTCTGCATGTGTGTGCTGAGAAGGGCCACTCCCAGGTGCTTCAGGCGATTGAGAAG
GGAGCAGTGGGAAGTAATCAGTTTGTGGATCTTGAGGCAACTAACTATGATGGCCTGACTCCCCCTTCACTGTGCA
GTCATAGCCCAATGCTGTGGTCCATGAACCTCCAGAGAAATCAACAGCCTCATTACCTGAAGTTTCAAGGAGCTT
TTACTGAAGAATAAGAGTCTGGTTGATACCATTAAGTGCCTAATTCAAATGGGAGCAGCGGTGGAAGCGAAGGAT
CGCAAAAGTGGCCGCACAGCCCTGCATTTGGCAGCTGAAGAAGCAAATCTGGAACCTATTGCGCTCTTTTTGGAG
CTGCCCAGTTGCCTGTCTTTTTGTGAATGCAAAGGCTTACAATGGCAACACTGCCCTCCATGTTGCTGCCAGCTTG
CAGTATCGGTTGACACAATTAGATGCTGTCCGCCTGTTGATGAGGAAGGGAGCAGACCCAAGTACTCGGAACCTG
GAGAACGAACAGCCAGTGCATTTGGTTCCCGATGGCCCTGTGGGAGAACAGATCCGACGTATCCTGAAGGGAAAAG
TCCATTACGAGAGAGCTCCACCGTATTAGCTCCATTAGCTTGGAGCCTGGCTAGCAACACTCACTGTGAGTTAG
GCAGTCTGATGTATCTGTACATAGACCATTTGCCTTATATTGGCAAATGTAAGTTGTTTCTATGAAACAAACAT
ATTTAGTTCACTATTATATAGTGGGTTATATTAAGAAAAGAAAGAAAATATCTAATTTCTTGGCAGATTTG
CATATTTCATACCCAGGTATCTGGGATCTAGACATCTGAATTTGATCTCAATGGTAACATTGCCTTCAATTAACA
GTAGCTTTTGAGTAGGAAAGGACTTTGATTTGTGGCACAAAACATTATTAATATAGCTATTGACAGTTTCAAAGC
AGGTAAATTGTAAATGTTTCTTTAAGAAAAGCATGTGAAAGGAAAAGGTAAATACAGCATTGAGGCTTCATTT
GGCCTTAGTCCCTGGGAGTTACTGGCGTTGGACAGGCTTCAGTCATTGGACTAGATGAAAGGTGTCCATGGTTAG
AATTTGATCTTTGCAAACCTGTATATAATTGTTATTTTTGTCCTTAAAAATATTGTACATACTTGGTTGTTAACAT
GGTCATATTTGAAATGTATAAGTCCATAAAATAGAAAAGAACAAGTGAATTGTTGCTATTTAAAAAAATTTTACA
ATTCCTTACTAAGGAGTTTTTATTGTGTAATCACTAAGTCTTTGTAGATAAAGCAGATGGGGAGTTACGGAGTTGT
TCCTTTACTGGCTGAAAGATATATTGGAATTGTAAAGATGCTTTTTCTCATGCATTGAAATTATACATTATTTGT
AGGGAATTGCATGCTTTTTTTTTTTTTTCTCCCGAGACAGGCTCTTGCTCTGGCGCCAGGCTGGAGTACAGTGG
CATGATCTTGGCTCACTTCAGCCTTGACTTGGGCTCAAGTGATCCTCCTACCTGAGCCTTCTGAGTAACTGGGAC
TACAGGTGTGCACTCCTCGCCTGGCTAATTTTTTATTTTTTGTACAGGCAGGATCTTGCCACCTTGCCAGGCTG
GTCTTGAACCTCTGAGCTCATGCCATCTGCCTGCCTTAGTCTCCCAAATGCTGGGATTACAGGAGTGAGCCACC
ATGCCCCGGCTGGCAGTTGCATGGAAGAGAACACCTCTTTATGGCTTACCCTCTAGAATTTCTAATTTATGTGTTT
TGTTGAAATTTTTGTTTTTTTTTACCTTTATTGAAACAACAAAAGTCAAGTATTGAAACATATCTTCTGTTTTCTG
TTGTCAAATGATGATAATGTGCCATGATGTTTTATATATATCATTGAGAAAAGTTTTATTTTTTAATAACATTC
TATTAACATTATTTTGCTTGCCGCTGGCATGCCTGAGGAATGTATTTGGCTTTGATTACACACTAAGTTTTTGTA

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FIGURE 1201B

ATAAATTGACTCATTAAAAACCTTTTTTTTTTAAAAAAAAAAAAAAAAAGAAAATCTCATTAGTGAACTTATCTTTG
CAGCTGAGTACTTAAATTCTTTTTAAAAAGATACCCTTTGGATTGATCACATTGTTTGACCCAGTATGTCTTGTA
GACACGTTAGTTATAATCACCTTGTATCTCTAAATATGGTGTGATATGAACCAGTCCATTACATTGGAAAACT
GATGGTTTTAAATAAACTAATTCATAATAAAAAAAAAAAAAAAAAA

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FIGURE 1202

MIVDKLLDDSRGGEGLRDAAGGCGLMTSPLNLSYFYGASPPAAAPGACDASCSVLGPSAPGSPGSDSSDFSSASS
VSSCGAVESRSRGGARAERQPVPEPHMGVGRQQRGPFQGV RVKNSVKELLHIRSHKQKASGQAVDDFKTQGVNIE
QFRELKNTVSYSGKRKGPDLSLDGPACKRPALLHSQFLTPPQTPTPGESMEDVHLNEPKQESSADLLQNI INIKN
ECSPVSLNTVQVSWLNPVVVPQSSPAEQCQDFHGGQVFSPPQKCQPFQVRGSQQMIDQASLYQYSPQNQHVEQQP
HYTHKPTLEYSPPFPIPPQSPAYEPNLFDPESQFCPNQSLVSLLDQRESENIANPMQTSSSVQQQND AHLHSFS
MMPSSACEAMVGHEMASDSSNTSLPFSNMGNPMNTTQLGKSLFQWQVEQEESKLANISQDQFLSKDADGDTFLHI
AVAQGRRALSYVLARKMNALHMLDIKEHNGQSAFQVAVAAHQHLIVQDLVNIGAQVNTTDCWGRTPLVCAEKGH
SQVLQAIQKGAVGSNQFVDLEATNYDGLTPLHCAVIAHNAVVELQRNQPHSPEVQELLKKNKSLVDTIKCLIQ
MGAAVEAKDRKSGRTALHLAAEEANLELIRLFLELPSCLSFVNAKAYNGNTALHVAASLQYRLTQLDAVRLLMRK
GADPSTRNLENEQPVHLVPDGPVGEQIRRLKKGKSIQQRAPPY

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FIGURE 1203A

GAGCCGGTGGCGCAGGTGTCTGGGGTCTCTCGAGCGCCAGCCTGGGAGCATGATTGTGGACAAGCTGCTGGACGAC
AGCCGCGGCGGAGAGGGGCTGCGGGACGCGGCGGGCGGGCTGCGGGCCTCATGACCAGCCCGCTCAACCTGAGCTAC
TTCTACGGCGCGTCTGCGCCCGCCGCCGCCCGGGCGCCTGCGACGCCAGCTGCTCGGTCTTGGGCCCTCGGGC
CCCGGCTCGCCCGGCTCCGACTCCTCCGACTTCTCCTCTGCCTCGTCTGGTGTCTCTCTGCGGGCGCGTGGAGTCC
CGGTGAGAGGCGGGCGCCCGCGCCGAGCGCCAGCCAGTTGAGCCCCATATGGGGTTGGCAGGCAGCAGAGAGGC
CCCTTTCAAGGTGTTCTGGGTAAAGAACTCAGTGAAGGAACCTCTGTTGCACATCCGAAGTCATAAACAGAAAGGCT
TCTGGCCAAGCTGTGGATGATTTTAAGACACAAGGTGTGAACATAGAACAGTTTCAGAGAATTGAAGAACACAGTA
TCATACAGTGGGAAAAGGAAAGGGCCCCGATTCTGTTGTCTGATGGACCTGCTTGCAAAGGCCAGCTCTGTTGCAT
TCCCAATTTTTTGACACCACCTCAAACACCAACGCCCGGGGAGAGCATGGAAGATGTTTCATCTCAATGAACCCAAA
CAGGAGAGCAGTGCTGATCTGCTTCAGAACATTATCAACATTAAGAATGAATGCAGCCCCGTTTCCCTGAACACA
GTTCAAGTTAGCTGGCTGAACCCCGTGGTGGTCCCTCAGAGCTCCCCCGCAGAGCAGTGTCAGGACTTCCATGGA
GGGCAGGTCTTTTTCTCCACCTCAGAAATGCCAACCATTCGAAGTCAGGGGCTCCCAACAAATGATAGACCAGGCT
TCCCTGTACCAGTATTCTCCACAGAACCAGCATGTAGAGCAGCAGCCACACTACACCCACAAACCAACTCTGGAA
TACAGTCTTTTTCCCATACCTCCCCAGTCCCCCGCTTATGAACCAACCTCTTTGATGGTCCAGAATCACAGTTT
TGCCCCAAACCAAGCTTAGTTTCCCTTCTTGGTGTATCAAAGGGAATCTGAGAATATTGCTAATCCCATGCAGACT
TCCTCCAGTGTTTCAGCAGCAAAATGATGCTCACTTGCACAGCTTCAGCATGATGCCAGCAGCGCTGTGAGGCC
ATGGTGGGGCACGAGATGGCCTCTGACTCTTCAAACACTTCACAGCTTCTCAAACATGGGAAATCCAATGAAC
ACCACACAGTTAGGGAATCACTTTTTAGTGGCAGGTGGAGCAGGAAGAAAGCAAATTGGCAAATATTTCCCAA
GACCAGTTTCTTTCAAAGGATGCAGATGGTGACACGTTCTTTCATATTGCTGTTGCCAAAGGAGAGGGCACTT
TCCTATGTTCTTGCAAGAAAGATGAATGCACTTCACATGCTGGATATTAAAGAGCACAATGGACAGAGTGCCTTT
CAGGTGGCAGTGGCTGCCAATCAGCATCTCATTGTGCAGGATCTGGTGAACATCGGGGCACAGGTGAACACCACA
GACTGCTGGGGAAGAACACCTCTGCATGTGTGTCTGAGAAGGGCCACTCCCAGGTGCTTCAGGCGATTGAGAAG
GGAGCAGTGGGAAGTAATCAGTTTGTGGATCTTGAGGCAACTAATATGATGGCCTGACTCCCCTTCACTGTGCA
GTCATAGCCCAATGCTGTGGTCCATGAACCTCAGAGAAATCAACAGCCTCATTACCTGAAGTTTCAGGAGCTT
TTACTGAAGAATAAGAGTCTGGTTGATACCATTAAGTGCCTAATTCAAATGGGAGCAGCGGTGGAAGCGAAGGAT
CGCAAAAGTGGCCGCACAGCCCTGCATTTGGCAGCTGAAGAAGCAAATCTGGAACCTCATTGCGCTCTTTTTGGAG
CTGCCCAGTTGCTGTCTTTTTGTGAATGCAAAGGCTTACAATGGCAACACTGCCCTCCATGTTGCTGCCAGCTTG
CAGTATCGGTTGACACAATTAGATGCTGTCCGCTGTGTGATGAGGAAGGGAGCAGACCCAAAGTACTCGGAACCTG
GAGAACGAACAGCCAGTGCATTTGGTTCCCGATGGCCCTGTGGGAGAACAGATCCGACGTATCTGAAGGGAAAAG
TCCATTACAGCAGAGAGCTCCACCGTATTAGCTCCATTAGCTTGGAGCCTGGCTAGCAACACTCACTGTCTAGTTAG
GCAGTCTGATGTATCTGTACATAGACCATTTGCCTTATATTGGCAAATGTAAGTTGTTTCTATGAAACAAACAT
ATTTAGTTCACTATTATATAGTGGGTATATTTAAAGAAAAGAAAGAAAATATCTAATTTCTCTTGGCAGATTTG
CATATTTACATACCAGGTATCTGGGATCTAGACATCTGAATTTGATCTCAATGGTAACATTGCCTTCAATTAACA
GTAGCTTTTGAGTAGGAAAGGACTTTGATTTGTGGCACAAAACATTATTAATATAGCTATTGACAGTTTCAAAGC
AGGTAAATTGTAAATGTTTCTTTAAGAAAAAGCATGTGAAAGGAAAAAGGTAAATACAGCATTGAGGCTTCATTT
GGCCTTAGTCCCTGGGAGTTACTGGCGTTGGACAGGCTTCAGTCATTGGACTAGATGAAAGGTGTCCATGGTTAG
AATTTGATCTTTGCAAACCTGTATATAATTGTTATTTTTGTCTTAAAAATATTGTACATACTGGTTGTTAACAT
GGTCATATTTGAAATGTATAAGTCCATAAAATAGAAAAGAACAAAGTGAATTGTTGCTATTTAAAAAATTTTACA
ATTCTTACTAAGGAGTTTTTATTGTGTAATCACTAAGTCTTTGTAGATAAAGCAGATGGGGAGTTACGGAGTTGT
TCCTTTACTGGCTGAAAGATATATTCGAATTGTAAAGATGCTTTTTCTCATGCATTGAAATTATACATTATTTGT
AGGGAATTGCATGCTTTTTTTTTTTTTTCTCCCCGAGACAGGGTCTTGCTCTGGCGCCAGGCTGGAGTACAGTGG
CATGATCTTGGCTCACTTCAGCCTTGACTTGGGCTCAAGTGATCCTCCTACCTGAGCCTTCTGAGTAACCTGGGAC
TACAGGTGTGCACTCCTCGCCTGGCTAATTTTTTATTTTTTGTACAGGCAGGATCTTGCCACCTTGCCAGGCTG
GTCTTGAACCTCCTGAGCTCATGCCATCTGCCTGCCTTAGTCTCCCAAAATGCTGGGATTACAGGAGTGAGCCACC
ATGCCCCGCTGGCAGTTGCATGGAAGAGAACACCTCTTTATGGCTTACCCTCTAGAATTTCTAATTTATGTGTTT
TGTTGAAATTTTTGTTTTTTTTTACCTTTATTGAAACAACAAAAGTCAGTATTGAAACATATCTTCTGTTTTCTG
TTGTCAAATGATGATAATGTGCCATGATGTTTTATATATATCATTAGAAAAAGTTTTATTTTTTAATAACATTC
TATTAACATTATTTTGCTTGCCGCTGGCATGCCTGAGGAATGTATTGGCTTTGATTACACACTAAGTTTTTGTA

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FIGURE 1203B

ATAAAATTTGACTCATTAAAAACCTTTTTTTTTTAAAAAAAAAAAAAAAAAGAAATCTCATTAGTGAAC TTATCTTTG
CAGCTGAGTACTTAAATTCTTTTTAAAAAGATACCCTTTGGATTGATCACATTGTTTGACCCAGTATGTC TTGTA
GACACGTTAGTTATAATCACCTTGTATCTCTAAATATGGTGTGATATGAACCAGTCCATTACATTGGAAAAACT
GATGGTTTTAAATAAACTAATTCATAATAAAAAAAAAAAAAAAAAA

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FIGURE 1204

MIVDKLLDDSRGGEGLRDAAGGCGLMTSPINLSYFYGASPPAAAPGACDASCSVLGPSAPGSPGSDSSDFSSASS
VSSCGAVESRSRGGARAERQPVPHMGVGRQQRGFQGVVRVKNVKELELLHIRSHKQKASGQAVDDFKTQGVNIE
QFRELKNTVSYSGKRKGPDSLSDGPACKRPALLHSQFLTPPQTPTPGESMEDVHLNEPKQESSADLLQNIINIKN
ECSPVSLNTVQVSWLNPVVVPQSSPAEQCQDFHGGQVFSPQKQPFQVRGSQQMIDQASLYQYSPQNHVEQQP
HYTHKPTLEYSFPPIPPQSPAYEPNLFDPESQFCPNQSLVSLLDQRESENIANPMQTSSSVQQQND AHLHSFS
MMPSSACEAMVGHEMASDSSNTSLPFSNMGNPMNTTQLGKSLFQWQVEQEESKLANISQDQFLSKDADGDTFLHI
AVAQGRRALSYVLARKMNALHMLDIKEHNGQSAFQVAVANQHLLIVQDLVNIGAQVNTTDCWGRTPLHVCAEKGH
SQVLQAIQKGAVGSNQFVDLEATNYDGLTPLHCAVIAHNAVVELQRNQPHSPEVQELLLKNKSLVDTIKCLIQ
MGAAVEAKDRKSGRTALHLAEEANLELIRLFLELPSCLSFVNAKAYNGNTALHVAASLQYRLTQLDAVRLLMRK
GADPSTRNLENEQPVHLVPDGPVGEQIRRLKKGKSIQQRAPPY

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FIGURE 1205

GGCCGCGCGTCCCAGAGAGCCAGCCCCGGCCGCCGTCGCGGGGAAGTGCCGCCTGGTGGGGTCACGGCGCCTGAA
GCCCACGTGCGCCGCCGAGCCCGAGGTGGCCTCGAGCGCGCGGCTGACAGCACAGCCCGCTGAGCTGCCTCCC
GCGCTCCTCCCCGAGGAAAGGATTTTGATTTCAAAGAAAGGAAGGAAGGAAGGACAACCTCCCAGCTTCCCCGTCC
CGCCCTCCCCGCTCCGAGGGCCGCGCCAGGCCATGCCAAGAAGGCGGCGGCGGCGGCGGAACCAGCAGAAGGGAC
TTTCCTGGCAGCCCGGCGACGAGGAGCGCGGACAGTGAGTTTGCTCTGCCCCGGTTTCATGGTTCTGCAAGCCCT
CTAGGAGGCCGAAAGCTGCAGCCCCCTCCCCTTGCCCCGAAGAGCCTTCCGCGTTCTCTCGCCCTCGGGCCCACCC
CGCGCCGCCCCGGGCTCCCCGCCGCCGACGCCAGTGCCCTCTGCCC GCGGCGGTGGATGGCATGATGGTGCAGGGGA
AGGCACCGCGGCCTTGCGCCAGCTGAGTCGCGACGGCCGCCGGGGCGGCGGCGAGTGGCCGCGGCAGCGGCGGTGGT
AGCGGGCTCCCCAGCGGCATGCCAGTGCCCCCGGGCGCGATGGCTAGCGGCAGCGCCGGGAAGCCCACTGGCGA
GGCGGCTTCTCCGGCTCCTGCGAGCGCCATCGGCGGGGCCAGCTCGCAGCCGCGGAAGAGGCTGGTATCCGTCTG
CGACCACTGCAAGGGCAAGATGCAGCTGGTGGCTGACCTGCTGCTGCTGCTGAGCGAGGCGCGGCCGTGCTCTT
CGAGGGCCCCGCTCCTCTGGTGCCGGCGCCGAGTCCTTCGAGCAGTGCCGGGACACCATCATCGCGCGCACCAA
GGGGCTCTCCATCCTCACCCACGACGTGCAGAGCCAGCTCAACATGGGCCGCTTCGGGGAGGCGGGGGACAGCCT
GGTGGAGCTGGGCGACCTGGTGGTGTGCTGACCGAGTGCTCGGCCCCACGCGGCCTATCTGGCCGCTGTGGCCAC
GCCGGGCGCCAGCCCGCGCAGCCGGGCCTGGTGGACCGCTACCGCGTGACGCGATGCCGCCACGAGGTGGAGCA
GGGTTGCGCCGTGCTGCGCGCCACGCCGCTGGCCGACATGACGCCGAGCTGCTGCTGGAGGTGTGCGAGGGCCT
GTCGCGCAACCTCAAGTTCTGACGACGCGTGCGCCCTGGCCAGTGACAAGTCACGGGACCGCTTTTCGCGGGGA
GCAGTTCAAGCTGGGCGTCAAGTGATGACACCAGCGCGTCGGCGCTGCTGGCCTGCGTGCGCGAGGTGAAGGT
GGCGCCAGTGAGCTGGCGCGCAGCCGCTGTGCGCTCTTCAGCGGGCCCCCTGGTGCAGGCAGTGAGCGCCCTGGT
AGGCTTCGCCACCGAGCCGCGAGTTCTGGGTGCGCGCGGAGCTGTGAGCGCCGAGGGCAAGGCGGTGCAGACCGC
CATCTGGGCGGCGCCATGAGCGTGGTGTGCGCCTGCGTGCTCTGACCCAGTGCCCTCAGGGATCTGGCGCAGCA
CCCCGACGGGGGCGCCAAGATGTCGGACCACAGGGAGAGGCTGAGGAACTCGGCCTGCGCCGTGTCTGAAGGCTG
CACCCTGCTATCTCAGGCTTTAAGGGAGAGGTCTTCGCCAGGACTTTACCGCCAGTGAATTCCAATTCTGTGAA
TTAGCACCCCAACCCCATACCCCTTCTTCCACCCCAAGACTAAAGGAAGATACTTACTCTCTGCCCCCTCTCCATT
TATACCAAAGAAATCATAGGTGAAACCCCTACCCCTCCCAACGTTAAATGCTCGAGAGGAATCTTCCACAAGGC
AGGGCCATGCACGCAACCTGCACACGCACTTGAGAGGGCCAGGTGTCTCTCCACCAGCCCCCATGCAGTAGGGAC
TGGAAGATATGTCATCTGCTGGTTGTGTTATCACTCCCACCCCTACCCAGCCCGTCTTCCGGAATTTCTCAAC
TAAATTTCAATTATTGGGCAGGAAGGAGGTGATGGGTTCAATTCATTTTTGTTTTTTGTGTTTTTAATTAAGAA
AGGTTACCTCAGTTTTCACTCCTTAGACATGGATGTAGCTACCTTTTTTTGTATGTCTTTTTTTTTTAAGCAAT
CGTGTGAAATTAGGAGTATACTTGGTGAGGAAAGAGTATGAATTTGCCATGTGATTTGCAAATGGGGGGAAGCTA
CTGTGAGCGTGTGTTTTTTTAATTTACACTATAGAGTGATTTTTTTTCCCCAACGTCAAGTTTTTACCTTGCAT
GTACTGGAGTATTTATTTATCTATTAAATGTTATGTTTCTCAGAAAAAACCTCGTGGCGAATCTTGGCCTC
GAGGGCCAAAT

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FIGURE 1206

MASGSAGKPTGEAASPAPASAIGGASSQPRKRLVSVCDHCKGKMQLVADLLLLSSEARPVLFEGPASSGAGAESF
EQCRDTIIARTKGLSILTHDVQSQLNMGRFGEAGDSLVELGDLVVSLTECSAHAAYLAAVATPGAQPAQPGLVDR
YRVTRCRHEVEQGCAVLRATPLADMTPLQLLLEVSQGLSRNLKFLTDACALASDKSRDRFSREQFKLGVKCMSTSA
SALLACVREVKVAPSELARSRCALFSGPLVQAVSALVGFATEPQFLGRAAAVSAEGKAVQTAILGGAMSVVSACV
LLTQCLRDLAQHPDGGAKMSDHRERLRNSACAVSEGCTLLSQALRERSSPRTLPPVNSNSVN

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FIGURE 1208

MLPCFQLLRIGGGRGGLDLYTFHPPAGAGCTYRLGHRADLCDVALRPQQEPGLISGIHAELHAEPRGDDWRVSLED
HSSQGTLVNNVRLPRGHRLELSGDLLTFGPEGPPGTSPSEFYFMFQQVRVKPQDFAAITIPRSRGEARVGAGFR
PMLPSQGAPQRPLSTFSPAPKATLILNSIGSLSKLRPQPLTFSPSWGGPKSLPVPAPPGEVGTTPSAPPQRNRRK
SVHRVLAELDDESEPLENPPPVLMEPRKKLRVDKAPLTPTGNRRGRPRKYPVSAPMAPPAVGGGEPCAAPCCCLP
QEETVAWVQCDGCDVWFHVACVGCSIQAAREADFRCPGCRAGIQT

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FIGURE 1209

GGCAGCCGTCTGTGCCACCCAGAGCCGGCGGGCCGCTAGGTCCCCGGAGACCCTGCTATGGTGCGTGCGGGCGCC
GTGGGGGGCTCATCTCCCCGCGTCCGGCTTGGATATCTTCGGGGACCTGAAGAAGATGAACAAGCGCCAGCTCTAT
TACCAGGTTTTTAACTTCGCCATGATCGTGTCTTCTGCACTCATGATATGGAAAGGCTTGATCGTGCTCACAGGC
AGTGAGAGCCCCATCGTGGTGGTGCTGAGTGGCAGTATGGAGCCGGCCTTTCACAGAGGAGACCTCCTGTTCCCTC
ACAAATTTCCGGGAAGACCCAATCAGAGCTGGTGAATAGTTGTTTTTAAAGTTGAAGGACGAGACATTCCAATA
GTTTACAGAGTAATCAAAGTTCATGAAAAAGATAATGGAGACATCAAATTTCTGACTAAAGGAGATAATAATGAA
GTTGATGATAGAGGCTTGTACAAAGAAGGCCAGAACTGGCTGGAAAAGAAGGACGTGGTGGGAAGAGCAAGAGGG
TTTTTACCATATGTTGGTATGGTCACCATAATAATGAATGACTATCCAAAATTCAAGTATGCTCTTTTGGCTGTA
ATGGGTGCATATGTGTTACTAAAACGTGAATCCTAAAATGAGAAGCAGTTCCTGGGACCAGATTGAAATGAATTC
TGTTGAAAAAGAGAAAAACTAATATATTTGAGATGTTCCATTTTCTGTATAAAAGGGAACAGTGTGGAGATGTTT
TTGTCTTGTCAAATAAAAGATTACACAGTAAAAAAAAAAAAAAAAA

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FIGURE 1210

MVRAGAVGAHLPASGLDIFGDLKKMNKRQLYYQVLNFAMIVSSALMIWKGLIVLTGSESPIVVVLSGSMEPAFHR
GDLLFLTINFREDPIRAGEIVVFKVEGRDIPIVHRVIKVHEKDNGDIKFLTKGDNNEVDDRGLYKEGQNWLEKKDV
VGRARGFLPYVGMVTIIMNDYPKFKYALLAVMGAYVLLKRES

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FIGURE 1211

TCCCTGTCCTGCGCCCGCGCGCCCCGGGAGCCTACCCAGCACGCGCTCCGCGCCCACTGGTTCCCTCCAGCCGCC
GCCGTCCAGCCGAGTCCCCACTCCGGAGTCGCCGCTGCCGCGGGGACATGGTCCTCTGCGTTCAGGGGTGAGCAC
CCCCTTGTAAGCTCAGGGCTACTGTTGGGTGTCAGGGAACAAAGTTTTAGACTGCTGCGCTCCAAAGCGGGCACA
CACATGTACCTAGAACACACCAGCCACTGTCCCCACCATGATGATGACACAGCCATGACACACCCCTGCCCAGA
CCTCGTCCCTTTGCTGGCTGTGGAGCGGACTGGGCAGCGGCCCTGTGGGCCCCGTCCCTGGAAGTGGCCAAGCCA
GTCATGCAGCCCTTGCTGCTGGGGCCTTCCTCGAGGAGGTGGCAGAGGGTACCCAGCCAGACAGAGAGTGAG
CCAAAGGTGCTGGACCCAGAGGAGGATCTGCTGTGCATAGCCAAGACCTTCTCCTACCTTCGGGAATCTGGCTGG
TATTGGGGTTCCATTACGGCCAGCGAGGCCCGACAACACCTGCAGAAGATGCCAGAAGGCACGTTCTTAGTACGT
GACAGCACGCACCCAGCTACCTGTTACGCTGTGAGTGAACCACTCGTGGCCCCACCAATGTACGCATTGAG
TATGCCGACTCCAGCTTCGCTGTGGACTCCAAGTCTGTCCAGGCCACGCATCCTGGCCTTTCCGGATGTGGTC
AGCCTTGTGCAGCACTATGTGGCCTCCTGCACTGCTGATACCCGAAGCGACAGCCCCGATCCTGCTCCACCCCG
GCCCTGCCTATGCCTAAGGAGGATGCGCCTAGTGACCCAGCACTGCCTGCTCCTCCACCAGCCACTGCTGTACAC
CTAAACTGGTGCAGCCCTTTGTACGCAGAAGCAGTGCCCGCAGCCTGCAACACCTGTGCCGCTTGTTCATCAAC
CGTCTGGTGGCCGACGTGGACTGCCTGCCACTGCCCGGCGCATGGCCGACTACCTCCGACAGTACCCCTTCCAG
CTCTGACTGTACGGGGCAATCTGCCCCACCTCACCCAGTCGCACCCTGGAGGGGACATCAGCCCCAGCTGGACTT
GGGCCCCCACTGTCCCTCCTCCAGGCATCCTGGTGCCTGCATACCTCTGGCAGCTGGCCCAGGAAGAGCCAGCAA
GAGCAAGGCATGGGAGAGGGGAGGTGTACACAACCTTGGAGGTAAATGCCCCCAGGCCGATGTGGCTTCATTA
TACTGAGCCATGTGTGAGAGGATGGGAGACAGGCAGGACCTTGTCTCACCTGTGGGCTGGGCCCCAACCTCCAC
TCGCTTGCCTGCCCTGGCCACCTGAAGTGTATGGGCACTCTCAGCCCTGGTTTTTCAATCCCCAGGGTCGGTAGG
ACCCCTACTGGCAGCCAGCCTCTGTTTCTGGGAGGATGACATGCAGAGGAACTGAGATCGACAGTACTAGTGAC
CCCTTGTGAGGGGTAAGCCAGGCTAGGGGACTGCACAATTATACACTATTTATTTATTTATTTCTCCTTGGGGTT
GGTGTGAGGGGCAAACCAACCCACCTCTATGCCCTGAGCCCTGGTAGTCCAAAGACCCCACTCTGCCCTGGCT
TCTCTGGTTCTTCCCTGTGGAAGGCCATCCTGAGACATCTTGCTGGAACCAAGGCAATCCTGGATGTCTGGTA
CTGACCCACCCCTCTGTGAATGTGTCCACTCTCTTCTGCCCCAGCCATATTTGGGGAGGATGGACAACCTACAAT
AGGTAAGAAAATGCAGCCGGAGCCTCAGTCCCCAGCAGAGCCTGTGTCTCACCCCTCACAGGACAGAGCTGTAT
CTGCATAAAGCTGGTCTCACTGTGGCGCAGGCCCGGGGGGAGTGCTGTGCTGTCAGGAAAAGGGGGTGCTGGT
TTGAGGGCCACCCTGCAGTTCTGCTAGGTCTGCTTCCCTGCCAGGAAGGTGCCTGCACATGAAAGGAGAGAAAT
ACACGTCTGATAAGACTTCATGAAATAATAATTATAGCAAAGAACAGTTTGGTGGTCTTTTCTCTTCCACTGATT
TTTCTGTAATGAACATTATACCTTTATTACCTCTTTATTTATTACCTCTATAATAAAATGATACCTT

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FIGURE 1212

MDTPLPRPRLLAVERTGQRPLWAPSLLELPKPVMOPLPAGAFLEEVAEGTPAQTESEPKVLDPEEDLLCIAKTFS
YLRESGWYWGSITASEARQHLQKMPEGTFILVRDSTHPSYLEFTLSVKTTTRGPTNVRIEYADSSFRLDSNCLSRPRI
LAFFDVVSLVQHYVASCTADTRSDSPDPAPTPALPMPKEDAPSDPALPAPPPATAVHLKLVQPFVRRSSARSLQH
LCRLVINRLVADVDCPLPRRMADYLRQYPFQL

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FIGURE 1213A

ATCTGCTGGCATTTCCTGCAGCCAGGCCCGCGCCGCCAGTGGAGCCCCCGCGCGCCCGGCCGGCCCGGAGCACCG
AGCTCGCGGCACGGTAGGAGAAGCCCCGAGCGCCACAGCATGAAGGAGGAGGCCTTCCTCCGGCGCCGCTTCT
CCCTGTGTCCACCTTCCTCCACCCCTCAGAAAGTCGACCCCCGGAAGCTCACCCGGAACCTTGCTCCTCAGCGGAG
ACAATGAGCTCTACCCACTCAGCCCAGGGAAGGACATGGAGCCCAACGGCCCGTCGCTGCCAGGGATGAAGGGC
CCCCGACCCCAAGCTCTGCCACGAAGGTGCCACCGGCAGAGTACAGGCTGTGCAACGGGTGAGACAAGGAATGTG
TGTCACACACGGCAGCTGCTCAGCGCTCTGACAGACCCAGCGTGGTCATCATGGCTGACAGCCTGAAGATCCGCG
GCACCCCTGAAGAGCTGGACCAAGCTGTGGTGCCTGCTGAAGCCGGGGGTGCTGCTCATCTACAAGACGCCCAAGG
TGGGCCAGTGGGTGGGCACGGTGTGCTGCACTGCTGCGAGCTCATCGAGCGGCCCTCCAAGAAGGACGGCTTCT
GCTTCAAGCTCTTCCACCCGCTGGATCAGTCCGTCTGGGCCGTGAAGGGCCCCAAAGGTGAGAGCGTGGGCTCCA
TCACACAGCCCCTGCCAGCAGCTACCTGATCTTCAGGGCCGCTCCGAGTCAGATGGTCTGCTGCTGGCTGGACG
CCCTGGAGCTGGCCCTGCGCTGCTCTAGCCTACTGAGACTGGGCACCTGCAAGCCGGGCGGAGACGGGGAGCCAG
GGACCTCGCCAGACGCATACCCCTCATCGCTCTGTGGGTGCCAGCCTCAGCCACCGTCCACCCAGACCAAGACC
TGTTCCCACTGAACGGGTCTTCCCTGGAGAACGATGCATTCTCAGACAAGTCGGAGAGAGAGAACCCTGAGGAGT
CAGATACCGAGACCCAGGACCATAGCCGGAAGACGGAGAGTGGCAGCGACCAGTCAGAGACCCCTGGGGCCCCGG
TGCGGAGAGGGACACCTATGTGGAGCAGGTCCAGGAGGAGCTGGGGGAGCTGGGCGAGGCGTCCAGGTGGAGA
CAGTGTGAGAGGAGAACAGAGTCTGATGTGGACCCCTGCTGAAGCAGCTACGGCCAGGCATGGACCTGTCCCGCG
TGGTGTACCCACGTTCTGACTGGAGCCGCGCTCCTTCTGAACAAGCTCTCCGACTACTACTACCACGCAGACC
TGCTCTCCAGGGCTGCGGTGGAGGAGGATGCCTACAGCCGCATGAAGCTGGTGTGCGGTGGTACCTGTCTGGCT
TCTACAAGAAGCCCCAAGGGAATCAAGAAGCCGTACAACCCCATCTTGGGGGAGACCTTCCGCTGCTGTGGTTCC
ACCCGCAGACTGACAGCCGCACATTCTACATAGCAGAGCAGGTGTCCACCACCCGCCCCGTGTCTGCCTTCCACG
TCAGCAACCGGAAGGACGGCTTCTGCATCAGTGGCAGCATCACAGCCAAGTCCAGGTTTTATGGGAACCTCGCTGT
CGGCGTGTGGACGGCAAAGCCACGCTCACCTTCTGAACCGAGCCGAGGATTACACCTTACCATGCCCTACG
CCCACTGCAAAGGAATCCTGTATGGCACGATGACCCTGGAGCTGGGTGGGAAGGTCACCATCGAGTGTGCGAAGA
ACAACCTCCAGGCCCAGCTGGAATTCAAACCTCAAGCCCTTCTTCGGGGGTAGCACCAGCATCAACCAGATCTCGG
GAAAGATCACGTCGGGAGAGGAAGTCTTGGCGAGCCTCAGTGGCCACTGGGACAGGGACGTGTTTTATCAAGGAGG
AAGGGAGCGGAAGCAGTGCCTTTTTCTGGACCCGAGCGGGGAGGTCCGCAGACAGAGGCTGAGGCAGCACACGG
TGCCGCTGGAGGAGCAGACGGAGCTGGAGTCCGAGAGGCTCTGGCAGCACGTACACAGGGCCATCAGCAAGGGCG
ACCAGCACAGGGCCACACAGGAGAAGTTTGCCTGAGGAGGACACAGCGGCAGCGGGCCCGTGTGAGCGGCAGGAGA
GCCTCATGCCCTGGAAGCCGCAGCTGTTCCACCTGGACCCCATCACCCAGGAGTGGCACTACCGATACGAGGACC
ACAGCCCCTGGGACCCCTGAAGGACATCGCCCAAGTTTGTAGCAAGACGGGATCCTGCGGACCTTGCAGCAGGAGG
CCGTGGCCCGCCAGACCCTTCTTGGGCAGCCAGGGCCAGGCACGAGAGGTCTGGCCAGACCAGCGGCTTC
GCAAGGCCAGCGACACCCCTCCGGCCACAGCCAGGCCACGGAGAGCAGCGGATCCACGCCTGAGTCTGCCAG
AGCTCTCAGACGAGGAGCAGGATGGTGACTTTGTCCCTGGCGGTGAGAGCCCATGCCCTCGGTGCAGGAAGGAGG
CGCGGCGGCTGCAGGCCCTGCACGAGGCCATCCTCTCCATCCGAGAGGCCCAGCAGGAGCTGCACAGGCACCTCT
CGGCCATGCTGAGCTCCACGGCACGGGCAGCACAGGCACCGACCCAGGCCTCCTGCAGAGCCCCCGATCCTGGT
TCCTGCTCTGCGTGTTCCTGGCGTGTGAGCTGTTTCAATTAACCACATCCTCAAATAGGAGGCCCTGGGGGCAGAGCT
CCTGGCCAGTCCCAGGCCCTCCCTCCCAGGCACCCAGCACTTTAAGCCTGCTCCATGGAGGCAGAGAGGCCCGGC
AAGCACAGCCACTGTGACGGGGAGTCCAGGCGCAGGAGGGACCCGGGGCCACAAGGCGCTGCGGGCCAGGTGTG
CTGGGCCCCCTCTCAGGGGCACTGGCCTCTCTGCAGGGCCTTCCGCCCAGCGCTGGCCTTAATGCTAAAGCCAAAT
GCAGCTTCTGCTGTGCGACGCACTCCTGGCCATCTTGCCGTGTACCCCTGTCCGGCCTCCACTTGCCATGGGG
GATGGATGGATTTAGGGTGGGAGGGCCTGTGGGGGCCCTGGACAGTCACACCCAGCAGCAGTGAAGTGGGCAGGT
TTGGAGGAGCAGCCAGGGAGCCCCGAGTGGCCCAGGAGTCCCCCACACACAGATGCATAGGCCTGCCTTCCGGA
GACCTGTCCACATTGCCGGGACCACCTGGTGGGGCCACTGGTGGGTGCCAGGGACAGGTTAGGGCCACTCTGG
GGAAGGCATTTTGGTTTTTTTATTCCACGCTGTGCTGTTTGGATGGGAGCCCCACAGAGGCAGGTCCTGGAACCAC
CCCACCCACACCTGGACGCTCGCTCTGGTGGGGGCACACGCAGGTGGAGGTGGTTGTGGGTGCAGGTGTGTGC
AGGGGTGTGGGGGGCGCAGGGGTGTGGCTTAGCTGGCCCCGCACCCAGGCCGGGGAGGCTCAAGTTCGCCACTTT
ACTCAGACCGATGCACAGTCTTCCATTTTACACTTTTTTAATAAACATAATTGCAATATTTAGGTGGGCTGCG

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FIGURE 1213B

AGCTGCAGTCAGCCTTCACGTCTGGCCTCAGTCCCCGTGTCAGTGCCGCTCTGCGTGTGCGTGTGCGCGTGTGTG
AGCCTCTACACATATATATACGTACAGAGCCTTAAACCACATCGTGGCGGTGCCGTCTGAGCTGTAGCGGGTGGC
TTTGTTTCCAGTTTTTGTACCCGTGTCCTTGTCTCCCCCTCCTCCCCATCTGGGGATGTGTCTGTGTTCCACACC
TTGAAATAAACAGACACATACGTGTTCTCTTAAAAAAAAAAAAAAAAAAAA

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FIGURE 1214

MKEEAFLLRRRFLSCPPSSSTPQKVDPRKLTRNLLLSGDNELYPLSPGKDMEPNGPSLPRDEGPPTPSSATKVPPAE
YRLCNGSDKECVSPTARVTKKETLKAQKENYRQEKKRATRQLLSALTDPSVVIMADSLKIRGTLKSWTKLWCVLK
PGVLLIYKTPKVGQWVGTVLLHCCELIERPSKKDGFCKLFLHPLDQSVWAVKGPKGESVGSITQPLPSSYLIFRA
ASESDGRCWLDALELALRCSSLLRLGTCKPGRDGEPGTSPDASPSSLCGLPASATVHPDQDLFPLNGSSLEND AF
SDKSERENPEESDTETQDHSRKTESGSDQSETPGAPVRRGTTYVEQVQEELGELGEASQVETVSEENKSLMWTL
KQLRPGMDLSRVVLP TFVLEPRSFLNKLSDYYYHADLLSRAAVEEDAYS RMKLVLRWYLSGFYKKPKGIKKPYNP
ILGETFRCCWFHPQTDSRTFYIAEQVSHHPPVSAFHVSNRKDGFCSIGSITAKSRFYGNLSLALLDGKATLTFLN
RAEDYTTLTPYAHCKGILYGTMTLELGKVTIECAKNNFQAQLEFKLPFFGGST SINQISGKITSGEEVLASLS
GHWDRDVF IKEEGSGSSALFWTPSGEVRRQRLRQHTVPLEEQTELESERLWQHVTRAISKGDQHRATQEKFALEE
AQRQRARERQESLMPWKPQLFHLDPITQEWHYRYEDHSPWDPLKDIAQFEQDGILRTLQQEAVARQTTFLGSPGP
RHERSGPDQRLRKASDQPSGHSQATESSGSTPESCPELSDEEQDGFVPGGESPCPRCRKEARRLQALHEAILS
REAQQELHRHLSAMLSSTARAAQAPTFGLLQSPRSWFLLCVFLACQLFINHILK

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FIGURE 1215

GAATCTCTCGCGGGCAGCAGGGCGCGCGCTGCACGCACAGTACTAGGTCAGGTGGTGCTCCCGGGTGAGGAGCTG
CTCCTGCCGGAACAGGAGGACGCGGAAGGCCCTGGGGGTGCAGTGGAGCGACCGTTGAGCCTGAATGCTAGAGCG
TGCTCGCGGGTGCGCGTTTGTATGCGGTCCGGGCCTTCGACGCTGTGGGGACCGCCTGCTGGTCACCAAGTGC GG
CCGCCTCCGTCACAAGGAGCCCGGCAGTGGAGGCGGCGGGCGGTGTTTACTGGGTGGACTCTCAGCAGAAGCGGTA
TGTTCCAGTAAAAGGAGACCATGTGATTGGCATAGTGACAGCTAAATCTGGAGATATATTCAAAGTTGATGTTGG
AGGGAGTGAGCCAGCTTCTTTGTCTTACTTGTCAATTTGAAGGTGCAACTAAAAGAAACAGACCAAATGTGCAGGT
TGGAGATCTCATCTATGGCCAGTTTGTGGTTGCTAATAAAGACATGGAACCAGAGATGGTCTGTATTGACAGCTG
TGGACGAGCCAATGGAATGGGTGTCATTGGACAGGATGGTCTGCTTTTTAAAGTGACTCTGGGCTTAATTAGAAA
GCTATTAGCTCCAGATTGTGAAATCATAACAGGAAGTGGGAAAACCTCTATCCACTGGAGATAGTATTTGGAATGAA
TGGAAGAATATGGGTTAAGGCAAAAACCATCCAGCAGACTTTAATTTTGGCAAACATTTTAGAAGCTTGTGAACA
CATGACGTCAGATCAAAGAAAACAGATCTTCTCCAGATTGGCAGAAAAGTTGATATAGGTGGACTTTTTTACAGGT
CAGTTGAGGCAAAAACTATGGGTTTTTTTCAGGTGAACCTCCCCATTTAAATACTCAGAAGATAAGGTGTGAAT
GTATGTATTATTAGAGTCCGAAAGTATTTTTATAAGTTACTGGTTTTACCCACGCTTTTGTGGGAGAGAAAATC
ATTGCAAAATCATTTTTTTTTGTTTCGGTACAATAAAGTTTACTAAAAAACAAA

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FIGURE 1216

MLERARGCAFVCGPGLRRCGDRLLVTKCGRRLRHKEPGSGGGGGVYWVDSQQKRYVPVKGDHVGIVTAKSGDIFK
VDVGGSEPASLSYLSFEGATKRNRPNVQVGDLIYGQFVVANKDMEPEMVCIDSCGRANGMGVIGQDGLLFKVTLG
LIRKLLAPDCEIIQEVGKLYPLEIVFGMNGRIWVKAKTIQQTLILANILEACEHMTSDQRKQIFSRLAES

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FIGURE 1217

GGATTTTCCTTGGTCTTAAGATGGGTAGAAATGTGATGCGACACATGTCTGATGACTTAGGAAAGTTATGTTTCTC
TTTCGTGTGATGACTTTTCTTCACAGGAATTAGAGATTTTCATTTGCTCCTTTTCTCCTCCTGGCTTCAAATGT
TTGTTGCAGAGGCAGTCTTTAAAAAGTTGTGTCTACAGAGCTCTGGCAGTGTTTCTTCTGAGCCACTCTCTCTTC
AGAAAATGGTATATTCTATTTACCAGCCTTGGGGAAAACCTGGTGTGCTTGGGTCTGGAAAAGATTACAGGTGTCAA
AGAAAATAGGACAGCGGCCTTGTTTTGACTCTCAGAGAACCTTACTAATGCTGAATGGTACTAAACAAAAACAAG
TCGAAGGGCTGCCAGAGTTACTAGACCTGAACCTTGCTAAATGTTCTCATCATTAAAAAAATTGAAAAAGAAGT
CAGAAGGAGAATTGTCATGTTCCAAGGAGAATTGCCCTCTGTAGTTAAAAAGATGAATTTTCACAAGACTAATC
TAAAAGGAGAAACAGCCCTGCATAGAGCTTGCTAAATAACCAAGTGGAGAAATTGATTCTTCTTCTCTCTTTGC
CAGGAATAGACATCAATGTTAAAGACAATGCTGGCTGGACGCCTTTGCATGAAGCCTGTAAGTATGGCAACACAG
TGTGTGTCCAGGAAATTTTGCAACGTTGTCCAGAGGTAGATCTGCTCACTCAAGTGGACGGGGTGACTCCTTTGC
ATGATGCACTGTCAAACGGACATGTAGAAATTGGCAAGCTGCTACTACAGCATGGGGGCCAGTGCTTTTACAAC
AGAGGAATGCTAAGGGAGAATTGCCCTTGGAATTATGTGGTTTACCTCAAATCAAAGAAGAACTGTTTGCTATTA
CAAAAATAGAAGATACAGTGGAGAACTTTTCATGCACAAGCAGAGAAACATTTTCATTACCAGCAACTTGAATTTG
GCTCCTTTTTACTTAGTAGGATGTTGCTAAATTTTGTTCATTTTGTATTTATCTTCAGAGTTCATTTTAGCTT
CCAAAGGGTTAACTCATCTAAATGAAGTCTTATGGCTTGTAAGAGTCATAAAGAAACCACCAGTGTTCATACTG
ACTGGTTACTGGATCTTTATGCTGGAAATATAAAGACATTGCAGAACTCCACACATTCTTAAGGAAGTGCCTG
AGAATTTGAAAGTGTGTCCTGGGGTACACACTGAGGCCTTGATGATAACATTGGAAATGATGTGTCGGTCAGTCA
TGGAGTTTTCATGATGATGCTAGAAAGTATGGATTGACTTTCTAAATCTGTTTCAGTTTGCATTGGTACTTACTGT
GGACTTCATAGCTTACTGACAGATAGTAATTTGATTTATTTATTGACAGACTTTGCAGCCTTGCTAAATTTTAAA
AGCATTTTTAAAAAACTTCTACAAAACCTCTAGTATGGGCTTCTGACTTTTTCCAGGGTGTAGAATTTGACTCAA
AAGTAAAAATAATTTTGTTTTAGTATATTCTACTTTTATTAATGTTTTTTTGTCTGAAAGTGATATTATATTGT
ACATGTAAAAATTAATTTAAATATTTTTTCAAATAAAAATGTAATGTCCTGTAAAAA

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FIGURE 1218

MGRNVMRHMSDDLGSYVSLSCDDFSSQELEIFICSFSSSWLQMFVAEAVFKKLCLOSSGSVSSEPLSLQKMVYSY
LPALGKTGVLGSGKIQVSKKIGQRPCFDSQRTLLMLNGTKQKQVEGLPELLDLNLAKCSSSLKKLKKKSEGEISC
SKENCPSVVKMNFHKTNLKGETALHRACINNQVEKLILLLSLPGIDINVKDNAGWTPLHEACNYGNTVCVQEIL
QRCPEVDLLTQVDGVTPLDALSNHGVEIGKLLQHGGPVLLQQRNAKGELPLDYVVSPQIKEELFAITKIEDTV
ENFHAQAEKHFHYQQLEFGSFLLSRMLLNFCISIFDLSSEFILASKGLTHLNELLMACKSHKETTSVHTDWLLDLY
AGNIKTLQKLPHILKELPENLKVCPGVHTEALMITLEMMCRSVMEFS

[illegible]

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FIGURE 1220

MPAERPAGSGGSEAPAMVEQLDTAVITPAMLEEEEQLEAAGLERERKMLEKARMSWDRESTEIRYRRLQHLLKS
NIYSKFLLTKEQQQLEEQKKKEKLERKKESLKVKKGKNSIDASEEKPVMRKKRGREDESYNISEVMSKEEILSV
AKKNKKENEDENSSSTNLCVEDLQKNKDSNSIIKDRLSETVRQNTKFFFDPVVRKCNGQPVPFQQPKHFTGGVMRW
YQVEGMEWLRMLWENGINGILADEMGLGKTVQCIATIALMIQRGVPGPFLVCGPLSTLPNWMAEFKRFTPDIPMT
LYHGTQEERQKLVRNIYKRKGTLQIHPVVITSFEIAMRDRNALQHCYWKYLIVDEGHRIKNMKCRLIRELKRFNA
DNKLLLTGTPLQNNLSELWSLLNFFLLPDVFDLKSFSWFDITSLSETAEDI IAKEREQNVLHMLHQILT PFLLR
RLKSDVALEVPPKREV VVYAPLSKKQEIFYTAIVNRTIANMFGSSEKETIELSPTGRPKRRTRKSINYSKIDDFP
NELEKLISQIQPEVDRERAVVEVNIPVESEVNLKLQNIMLLRKCCNHPYLI EYPIDPVTQEFKIDEELVTNSGK
FLILDRMLPELKKRGHKVLLFSQMTSMLDILMDYCHLRDFNFSRLDGSMYSEREKNMHSFNTDPEVFIFLVSTR
AGGLGINLTAADTVIIYDSWNPQSDLQAQDRCHRIGQTKPVVVYRLVTANTIDQKIVERAAAKRKLEKLIHKN
HFKGGQSGNLNLSKNFLDPKELMELLKSRDYEREIKGSREKVISDKDLELLLD RSDLIDQMNASGPIKEKMGIFKI
LENSEDSSPECLF

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FIGURE 1222

MQGTWLPPSFLAVCDTEEVSLFLELCFKIHVTCKAVLICDYGPMELGQSLWEAEGKDPGHFR

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FIGURE 1223

CCCTTTAAAGGGTGACTCGTCCCACTTGTGTTCTCTCTCCTGGTGACAGTTGCAAGCAAGTTTATCAGAGTATC
GCCATGAAGTTTCGTCCCCTGCTCCTGCTGGTGACCTTGTCTGCTGGGGACTTTGGGTACAGCCCCGAGGCAA
AAGCAAGGAAGCACTGGGGAGGAATTCCATTTCCAGACTGGAGGGAGAGATTCTGCACTATGCGTCCCAGCAGC
TTGGGGCAAGGTGCTGGAGAAGTCTGGCTTCGCGTCGACTGCCGCAACACAGACCAGACCTACTGGTGTGAGTAC
AGGGGGCAGCCCAGCATGTGCCAGGCTTTTGCTGCTGACCCCAAACCTTACTGGAATCAAGCCCTGCAGGAGCTG
AGGCGCCTTCACCATGCGTGCCAGGGGGCCCCGGTGCTTAGGCCATCCGTGTGCAGGGAGGCTGGACCCCAGGCC
CATATGCAGCAGGTGACTTCCAGCCTCAAGGGCAGCCCAGAGCCCAACCAGCAGCCTGAGGCTGGGACGCCATCT
CTGAGGCCCAAGGCCACAGTGAACTCACAGAAGCAACACAGCTGGGAAAGGACTCGATGGAAGAGCTGGGAAAA
GCCAAACCCACCACCCGACCCACAGCCAAACCTACCCAGCCTGGACCCAGGCCCGGAGGGAATGAGGAAGCAAAG
AAGAAGGCCTGGGAACATTGTTGAAACCCCTCCAGGCCCTGTGCGCCTTTCTCATCAGCTTCTTCCGAGGGTGA

CAGGTGAAAGACCCCTACAGATCTGACCTCTCCCTGACAGACAACCATCTCTTTTTATATTATGCCGCTTTCAAT
CCAACGTTCTCACACTGGAAGAAGAGAGTTTCTAATCAGATGCAACGGCCCAAATTCTTGATCTGCAGCTTCTCT
GAAGTTTGAAAAAGAAACCTTCCTTTCTGGAGTTTGACAGAGTTCAGCAATATGATAGGGAACAGGTGCTGATGGG
CCCAAGAGTGACAAGCATAACAATACTTATTATCTGTAGAAGTTTTGCTTTGTTGATCTGAGCCTTCTATGAA
AGTTTAAATATGTAACGCATTTCATGAATTTCCAGTGTTTCAGTAAATAGCAGCTATGTGTGTGCAAAATAAAAGAA
TGATTTCAGAAAT

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FIGURE 1224

MKFVPCLLLVTLSCLGTLGQAPRQKQGSTGEEFHFQTGGRDSCTMRPSSLGQGAGEVWLRVDCRNTDQTYWCEYR
GQPSMCQAFADPKPYWNQALQELRRLHHACQGAPVLRPSVCREAGPQAHMQQVTSSLKGSPEPNQQPEAGTPSL
RPKATVKLTEATQLGKDSMEELGKAKPTTRPTAKPTQPGPRPGGNEEAKKKAWEHWCWKPQALCAFLISFFRG

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FIGURE 1225

GTCTACACCCCTCCTCACACGCACTTCACCTGGGTCGGGATTCTCAGGTCATGAACGGTCCCAGCCACCTCCGG
GCAGGGCGGGTGAGGACGGGGACGGGGCGTGTCCAACCTGGCTGTGGGCTCTTGAAACCCGAGCATGGCACAGCAC
GGGGCGATGGGCGCGTTTCGGGCCCTGTGCGGCCTGGCGCTGCTGTGCGCGCTCAGCCTGGGTACGCGCCCCACC
GGGGGTCCCGGGTGCGGCCCTGGGCGCCTCCTGCTTGGGACGGGAACGGACGCGCGCTGCTGCCGGGTTCACACG
ACGCGCTGCTGCCGCGATTACCCGGGCGAGGAGTGCTGTTCCGAGTGGGACTGCATGTGTGTCCAGCCTGAATTC
CACTGCGGAGACCCTTGCTGCACGACCTGCCGGCACCAACCTTGTCCCCAGGCCAGGGGGTACAGTCCCAGGGG
AAATTCAGTTTTGGCTTCCAGTGTATCGACTGTGCCTCGGGGACCTTCTCCGGGGGCCACGAAGGCCACTGCAAA
CCTTGACAGACTGCACCCAGTTCGGGTTTCTCACTGTGTTCCCTGGGAACAAGACCCACAACGCTGTGTGCGTC
CCAGGGTCCCCGCCGGCAGAGCCGCTTGGGTGGCTGACCGTCGTCCTCCTGGCCGTGGCCGCCTGCGTCTCCTC
CTGACCTCGGCCCAGCTTGGACTGCACATCTGGCAGCTGAGGAGTCAGTGCATGTGGCCCCGAGAGACCCAGCTG
CTGCTGGAGGTGCCGCCGTGACCGAAGACGCCAGAAGCTGCCAGTTCCCCGAGGAAGAGCGGGGCGAGCGATCG
GCAGAGGAGAAGGGGCGGCTGGGAGACCTGTGGGTGTGAGCCTGGCCGTCTCCGGGGGCCACCGACCGCAGCCAG
CCCCCCCCAGGAGCTCCCCAGGCCGCAGGGGCTCTGCGTTCTGCTCTGGGCCGGGCCCTGCTCCCCTGGCAGCA
GAAGTGGGTGCAGGAAGGTGGCAGTGACCAGCGCCCTGGACCATGCAGTTCGGCGGCCGCGGCTGGGCCCTGCAG
GAGGGAGAGAGAGACACAGTCATGGCCCCCTTCCTCCCTTGCTGGCCCTGATGGGTGGGGTCTTAGGACGGGAG
GCTGTGTCCGTGGGTGTGCAGTGCCAGCACGGGACCGGCTGCAGGGGACCTTCAATAAACACTTGTCCAGTGA
AAAAAAAAAAAAAA

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FIGURE 1226

MAQHGAMGAFRALCGLALLCALSLGQRPTGGPGCGPGRLLLGTGTDARCCRVHTTRCCRDYPGEECCSEWDCMCV
QPEFHCGDPCCTTCRHHPCPPGQGVQSQGKFSFGFQCIDCASGTFSGGHEGHCKPWT DCTQFGFLT VFPGNKTHN
AVCVPGSPPAEPLGWLTVVLLAVAACVLLLSAQLGLHIWQLRSQCMWPRETQLLLEVPPSTEDARSCQFPPEER
GERSAEEKGRLGDLWV

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FIGURE 1227

CGCCCGCGCGCCCCGGGAGCCTACCCAGCACGCGCTCCGCGCCCACTGGTTCCCTCCAGCCGCGCCGTCCAGCC
GAGTCCCCACTCCGGAGTCGCCGCTGCCGCGGGGACATGGTCCCTCTGCGTTCAGGGACCTCGTCCTTTGCTGGCT
GTGGAGCGGACTGGGCAGCGGCCCTGTGGGCCCCGTCCCTGGAAGTGCCCAAGCCAGTCATGCAGCCCTTGCCT
GCTGGGGCCTTCCTCGAGGAGGTGGCAGAGGGTACCCAGCCCAGACAGAGAGTGAGCCAAAGGTGCTGGACCCA
GAGGAGGATCTGCTGTGCATAGCCAAGACCTTCTCCTACCTTCGGGAATCTGGCTGGTATTGGGGTTCCATTACG
GCCAGCGAGGCCCCGACAACACCTGCAGAAGATGCCAGAAGGCACGTTCTTAGTACGTGACAGCACGCACCCACG
TACCTGTTTCACGCTGTGAGTGAACCACTCGTGGCCCCACCAATGTACGCATTGAGTATGCCGACTCCAGCTTC
CGTCTGGACTCCAAGTGTGTCCAGGCCACGCATCCTGGCCTTTCCGGATGTGGTCAGCCTTGTGCAGCACTAT
GTGGCCTCCTGCACTGCTGATACCCGAAGCGACAGCCCCGATCCTGCTCCCACCCCGGCCCTGCCTATGCCTAAG
GAGGATGCGCCTAGTGACCCAGCACTGCCTGCTCCTCCACCAGCCACTGCTGTACACCTAAAGTGGTGCAGCCC
TTTGTACGCAGAAGCAGTGCCCGCAGCCTGCAACACCTGTGCCGCCTTGTGATCAACCGTCTGGTGGCCGACGTG
GACTGCCTGCCACTGCCCCGGCGCATGGCCGACTACCTCCGACAGTACCCCTTCCAGCTCTGACTGTACGGGGCA
ATCTGCCCCACCTCACCCAGTCGCACCCTGGAGGGGACATCAGCCCCAGCTGGACTTGGGCCCCCACTGTCCCTC
CTCCAGGCATCCTGGTGCCTGCATACCTCTGGCAGCTGGCCCAGGAAGAGCCAGCAAGAGCAAGGCATGGGAGAG
GGGAGGTGTACACAACCTGGAGGTAAATGCCCCCAGGCCGCATGTGGCTTCATTATACTGAGCCATGTGTCAGA
GGATGGGGAGACAGGCAGGACCTTGTCTCACCTGTGGGCTGGGCCCAGACCTCCACTCGCTTGCCTGCCCTGGCC
ACCTGAACTGTATGGGCACTCTCAGCCCTGGTTTTTCAATCCCCAGGGTCGGGTAGGACCCCTACTGGCAGCCAG
CCTCTGTTTCTGGGAGGATGACATGCAGAGGAAGTGAATCGACAGTGAAGTGAAGCCCTTGTGAGGGGTAAG
CCAGGCTAGGGGACTGCACAATTATACTATTTATTTATTTATTTCTCCTTGGGGTTGGTGTGAGGGGCGAGCCA
ACCCACCTCTATGCCCTGAGCCCTGGTAGTCCAGAGACCCCAACTCTGCCCTGGCTTCTCTGGTTCTTCCCTGT
GGAAAGCCCATCCTGAGACATCTTGCTGGAACCAAGGCAATCCTGGATGTCCTGGTACTGACCCACCCGTCTGTG
AATGTGTCCACTCTCTTCTGCGCCCAGCCATATTTGGGAGGATGGACAAGTACAATAGGTAAGAAAATGCAGCC
GGAGCCTCAGTCCCCAGCAGAGCCTGTGTCTACCCCTCACAGGACAGAGCTGTATCTGCATAGAGCTGGTCTC
ACTGTGGCGCAGGCCCC

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FIGURE 1228

MVLCVQGPRPLLAVERTGQRPLWAPSLELPKPVMOPLPAGAFLEEVAEGTPAQTESEPKVLDPEEDLLCIAKTF
YLRESGWYWGSITASEARQHLQKMPEGTFLVRDSTHPSYLF T LSVKTTTGPTNVRIEYADSSFR L DSNCLSRPRI
LAFPDVVSLVQHYVASCTADTRSDSPDPAPT PALPMPKEDAPSDPALPAPPPATAVHLKL V QPFVRRSSARSLQH
LCRLVINRLVADVDC L PLPRRMADYLRQYPFQL

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FIGURE 1229

GGCACGAGGGTTCCCGCCAGGTCCGTGCCGGGCGAGAGAGATGCTGCCCGGCCCGCCTCGGCTTTGAGGCGAGAG
AAGTGTCCCAGACCCATTTTCGCCTTGCTGACGGCGTCGAGCCCTGGCCAGACATGTTCCACAGGGTTCTCCTTCGG
GTCCGGGACTCTGGGCTCCACCACCGTGGCCGCCGGCGGGACCAGCACAGGCGGCGTTTTCTCCTTCGGAACGGG
AGCGTCTAGCAACCCTTCTGTGGGGCTCAATTTTGGAATCTTGGAAGTACTTCAACTCCAGCAACTACATCTGC
TCCTTCAAGTGGTTTTTGGAACCGGGCTCTTTGGATCTAAACCTGCCACTGGGTTCACTCTAGGAGGAACAAATAC
AGGAATAGCAACAATACTATACTACAGGATTAACCTCTGGGAACGCCAGCCACTACATCTGCAGCTACAACAGGCTT
CAGTTTAGGATTCAATAAACCTGCAGCATCTGCCACACCATTTGCTCTACCTATTACCTCTACCTCAGCTAGCGG
TCTGACTCTTTTCGTCTGCTCTGACATCAACTCCAGCAGCATCCACAGGATTTACTCTAAATAATTTGGGTGGGAC
AACAGCCACAATACTACAATGCATCAACAGGCCTCTCTTTAGGGGGAGCCTTAGCTGGTTTTGGGAGGTTCACTTTT
CCAGAGTACAAACACAGGAACATCAGGACTTGAGACAGAATGCTTTAGGGTTGACTTTGGGAATACTACAGCAGCTAC
TTCAACTGCAGGCAATGAAGGCCCTTGGTGGTATAGATTTCACTAGCTCCTCAGATAAAAAGAGTGATAAAACGGG
AACAAGACCAGAGGATAGTAAAGCTCTGAAGGATGAAAACTACCTCCTGTCTATCTGCCAGGATGTTGAAAACTC
CCAGAAATTTGTGAAGGAGCAGAAACAAGTTCAAGAAGAAATAGTAGAATGTCTTCAAAGCAATGCTTAAGGT
ACAAGAAGATATTAAAGCTCTGAAGCAGCTCCTGTCTGGTGGCTGCCAATGGAATACAGAGAAACACTCTCAACAT
TGACAAATTTGAAAATAGAACTGCTCAGGAGTTGAAGAATGCTGAAATAGCTTTAAGAACCCAGAAGACACCACC
TGGACTTCAACATGAATATGCAGCTCCTGTCTGACTACTTCAGAATCTTGGTTCAGCAATTTGAGGTACAGCTTCA
GCAGTACAGGCAGCAGATTGAAGAACTAGAAAACCATCTTGCCACTCAAGCAAATAATTCACATATAACCCCTCA
AGATTTGTCAATGGCTATGCAGAAAATTTATCAAACATTTGTAGCTTTAGCGGCACAACCTCAGTCTATTTCATGA
AAATGTAAAGGTTCTGAAAGAACAGTACCTTGGCTACAGGAAAATGTTCTTGGGAGATGCTGTTGATGTGTTTGA
AACAAGGCGAGCAGAAGCCAAGAAGTGGCAGAACACACCCAGAGTTACTACTGGACCCACTCCTTTACGACCCAT
GCCAAACGCAGCAGCCGTTGCCATGGCTGCAACACTTACACAGCAGCAACAGCCTGCTACAGGGCCACAGCCATC
TCTGGGAGTTAGTTTTGGAACGCCATTTCGGCTCAGGTATTGGCACTGGCTTGCAATCAAGTGGCTTAGGTTCTTC
AAACCTTGGAGGATTTGGAACCTAGCTCTGGTTTTGGATGCAGCACCACAGGGCCTCCACATTTGGATTTGGAAC
AACAAATAAACCCCTCAGGAAGTCTTAGTGCAGGCTTTGGCAGCTCAAGTACATCTGGGTTTAACTTCAGCAATCC
TGGCATCACGGCATCAGCTGGTTTTGACTTTTGGGGTGTCCAATCCTGCCCTCTGCAGTTTTGGAACAGGAGGACA
ACTCCTTCAGTTGAAGAAACCTCCAGCTGGAAACAAAAGAGGAAAAAGATTAACATGGGTTGATGTGTTGAGAGA
ATCCATAGCAGCACCCTTCATTCTATGAGTCTATTTTTCTAATGATGCAGTAATTAAATTGCATCCCAGGAGATT
TATAAGTTTTGATATTTTTCCCTACTCTGGAATTTGAACCTTTCTTCATGTTTGCCATACTGAACATCTTTTTTC
TTGTGGAATTTAAAGTCCAGCTGTGTTTTCTTTTTAATTTGATTCTCAGTGTAAAGAAATGTTCTGATTACATCAC
TGATTGGTAATGGTTAGAAAACCATTAACCTAAAACCTTACTATTTAACCTAGTGTTTTTGTTGATGAGGTTTACAT
TATGTGAATACATGCACATTTGTTTCTTATACAGGTGGTGTGAACCTTAGGGCCTATACTAGAATCAATTTGTTT
CTTGTTAAAGGCCTTTTGAATTATACTGCAGGGCATCTTGTGAATATGTATGTAAATATATACAGAATAATACAC
ACAGTTGTGTGTGCATATAAAATACATATTTACGCCAGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGG
AGGCCGAGGCAGGCGGATCACCTGAGGTCAGGAGTTTGAGACCAGCCTGACATGGTGAAACCCCATCTCTACGAA
AAATACAAAAATTAGCTGGGCATAGTGGCGGGTACCTATAATCCCAGCTACTCGGGAGGCTGAGGCACGAGAATC
ACTTGAAGCCGGGAGGTGGGGGTTCAGTGAGCCGAGATCACACCACTGCACTCCAGCCTGGGCAACAAGAGCAA
AACTCCGTCTCAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1230

MSTGFSFGSGTLGSTTVAAGGTSTGGVFSFGTGASSNPSVGLNFGNLGSTSTPATTSA
PSSGFGTGLFGSKPATG
FTLGGTNTGIATTTITGLTLGTPATTSAATTGFSLGFNKPAASATPFALPITSTSASGLTLSSALTSTPAASTGF
TLNNLGGTTATTTTASTGLSLGGALAGLGGSLFQSTNTGTSGLGQNALGLTLGTTAATSTAGNEGLGGIDFSSSS
DKKSDKTGTRPEDSKALKDENLPPVICQDVENLQKFVKEQKQVQEEISRMSKAMLVQEDIKALKQLLSLAANG
IQRNTLNIDKLKIETAQELKNAEIALRTQKTPPGLQHEYAAPADYFRILVQQFEVQLQQYRQQIEELENHLATQA
NNSHITPQDLSMAMQKIYQTFVALAAQLQSIHENVKVLKEQYLG YRKMFLGDAVDVFETRRAEAKKWQNTPRVTT
GPTPFSTMPNAAVAMAATLTQQQQPATGPQPSLGVSFGTFFGSGIGTGLQSSGLGSSNLGGFGTSSGFGCSTTG
ASTFGFGTTNKPSGSLSAGFGSSSTSGFNFSNPGITASAGLTFGVSNPASAGFGTGGQLLQLKKPPAGNKRGR

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FIGURE 1231

TTTTCGAGACCGGAAGTGAGTGATCGAAAGCATGGCGTCGGTGGTGTGGCGCTGAGGACCCGGACAGCCGTTAC
ATCCTTGCTAAGCCCCACTCCGGCTACAGCTCTTGCTGTCAGATACGCATCCAAGAAGTCGGGTGGTAGCTCCAA
AAACCTCGGTGGAAAGTCATCAGGCAGACGCCAAGGCATTAAGAAAATGGAAGGTCACATATGTTGCTGCTGGGAA
CATCATTGCAACACAGCGCCATTTCCGCTGGCACCCAGGTGCCCATGTGGGTGTTGGGAAGAATAAATGTCTGTA
TGCCCTGGAAGAGGGGATAGTCCGCTACACTAAGGAGGTCTACGTGCCTCATCCAGAAACACGGAGGCTGTGGA
TCTGATCACCAGGCTGCCCCAAGGGTGCTGTGCTCTACAAGACTTTTGTCCACGTGGTTCCTGCCAAGCCTGAGGG
CACCTTCAAACCTGGTAGCTATGCTTTTGATGTCTGTTGAGGCCATCGGACAGAGACTGGAGCCCAGGTGACAGGA
GATGGTGATACCAGAAGTCAAGGGTTGGGGTGCGGACACGGCCTCCCGAGGAAGAGGTCTGCTTGATGGTGACTC
TGCAGGAGACTCTGAAGTGACTGCTGGGAAACCCTTTGGGAGACCTGACCTGGGGCCAAAAATAAAGTGAGCCAG
CGTCATGAACGCATGCTATTTAGGGACAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1232

MASVVLALRTRTAVTSLLSPTPATALAVRYASKKSGGSSKNLGGKSSGRRQGIKKMEGHYVHAGNIIATQRHFRW
HPGAHVGVGKNKCLYALEEGIVRYTKEVYVPHPRNTEAVDLITRLPKGAVLYKTFVHVVPKPEGTFLVAML

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FIGURE 1233

CCCGAGCCCCGCCCCTCCGGGCCCCGGGTCGGCGCGCCAGCCTGCCAGCCGCGCTGCTGCTGCTCCTCCTGCTGT
GGGACCGCTGACCGCGCGGCTGCTCCGCTCTCCCCGCTCCAAGCGCCGATCTGGGCACCCGCCACCAGCATGGAC
GCTCGCCGCGTGCCGCAGAAAGATCTCAGAGTAAAGAAGAACTTAAAGAAATTCAGATATGTGAAGTTGATTTCC
ATGGAAACCTCGTCATCCTCTGATGACAGTTGTGACAGCTTTGCTTCTGATAATTTTGCAAACACGAAACCTAAA
TTCAGGTCAGATATCAGTGAAGAACTGGCAAGTGTTTTTTATGAGGACTCTGATAATGAATCTTTCTGCGGCTTT
TCAGAAAGTGAGGTGCAAGATGTATTAGACCATTGTGGATTTTTACAGAAACCAAGGCCAGATGTCATAACGAA
CTGGCCGGTATTTTTTCATGCCGACTCTGACGATGAATCATTTTGGGTTTCTCAGAGAGTGAGATACAAGATGGA
ATGAGGCTGCAGTCAGTTCCGGGAAGGCTGTAGGACCCGCAGCCAGTGCAGGCACTCTGGACCTCTCAGGGTGCGG
ATGAAGTTTCCAGCGCGGAGTACCAGGGGAGCAACCAACAAAAAGCAGAGTCCCGCCAGCCCTCAGAGAATTCT
GTGACTGATTCCAACCTCCGATTCAGAAGATGAAAGTGGAATGAATTTTTTGAGAGAAAAGGGCTTTAAATATAAG
CAAAACAAAGCAATGCTTGCAAAACTCATGTCTGAATTAGAAAGCTTCCCTGGCTCGTTCCGTGGAAGACATCCC
CTCCCAGGCTCCGACTCACAATCAAGGAGACCGCGAAGGCGTACATTCCCGGGTGTTGCTTCCAGGAGAAACCTT
GAACGGAGAGCTCGTCTCTTACCAGGTCAAGGTCCCGATCCTCGGGTCCCTTGACGCTCTACCCATGGAGGAG
GAGGAGGAAGAGGATAAGTACATGTTGGTGAGAAAGAGGAAGACCGTGGATGGCTACATGAATGAAGATGACCTG
CCCAGAAGCCGTCGCTCCAGATCATCCGTGACCTTCCGCATATAATTGCCCCAGTGGAAGAAATTACAGAGGAG
GAGTTGGAGAACGTCTGCAGCAATTCTCGAGAGAAGATATATAACCGTTCACTGGGCTCTACTTGTCTCATCAATGC
CGTCAGAAGACTATTGATACCAAAACAACTGCAGAAACCCAGACTGCTGGGGCGTTTCGAGGCCAGTTCTGTGGC
CCCTGCCTTCGAAACCGTTATGGTGAAGAGGTGAGGGATGCTCTGCTGGATCCGAACTGGCATTGCCCGCCTTGT
CGAGGAATCTGCAACTGCAGTTTCTGCCGGCAGCGAGATGGACGGTGTGCGACTGGGGTCTTGTGTATTTAGCC
AAATATCATGGCTTTGGGAATGTGCATGCCTACTTGAAAAGCCTGAAACAGGAATTTGAAATGCAAGCATAATAT
CTGGAAAATTTGCTGCCTGCCTTCTACTTCTCAATCTTTCTTGTAAGTTTCCAATTTTTCTACTGAAACCTG
AGTTAAAAATCTTGATGATCAGCCTGTTTCATAAGAACTCCAATCAAGTTAATCTTAGCAGACATGTGTTTCTG
GAGCATCACAGAAGGTATATTGCTAGTTACACTTTGCCCTCCTGCAGTTTCTTCTGCTCCCAACCCCATCTC
ATAGCATCCCCCTCTATTTCCAATGCTCCTCTCCAACCGCTTAGTTTCTGAATTTCTTTAAATTACAGTTTTAT
GAAAGCATATTTTATTTACTTGGTGTGAAATAGCCCTCATAAAACCTAAGCACTTGAAACACAATAATAGTAT
TAACTAACTAGATCTATTGAATTTTCAAGAGAAGAGCCTTCTAACTTGTTTACACAAAAACGAGTATGATTTAGCAT
TCATACTAGTTGAAATTTTTAATAGAATCAAGGCACAAAAGTCTTAAACCATGTGGAAAAATTAGGTAATTATT
GCAGATTGATGTCTCTCAATCCCATGTATTGCGCTTATGTTACAAGTTGTTGTCACAGTTGAGACTTAATTTCTC
CTAATTTCTTCTGCCCCGAAGGGTAAGTGGTGCCTCCAGCTTACACAATCATAATTCAAAGTTGGTGGGCAATGT
AATACTTAATTAATAATGATGGAAGAGCTATCTGGAGATTATGAGTAAGCTGATTTGAATTTTCAGTATAAAA
CTTTAGTATAATTGTAGTTTGCAAAGTTTATTTTCAAGTTTACATGTAAGGTATTGCAAATAAATCTTGGACAATT
TTGTATGGAACTTGATATTAAAACTAGTCTGTGGTTCTTTGAGTTTCTTGTAATTTATAAACAGGCACAA
GGTTCAAGTTTAGATTTTAAGCACTTTTATAACAATGATAAGTGCCTTTTGGAGATGTAACTTTATAGCAGTTTG
TTAACCTGACATCTCTGCCAGTCTAGTTTCTGGGCAGGTTTCTGTGTCAGTATCCCCCTCCTCTTTGCATTAA
TCAAGGTATTTGGTAGAGGTGGAATCTAAGTGTTTGTATGTCCAATTTACTTGCATATGTAAACCATTGCTGTGC
CATTCAATGTTTGTATGCATAATTGGACCTTGAATCGATAAGTGTAATAACAGCTTTTGATCTGTAATGCTTTTAT
ACAAAAGTTTATTTTAATAATAAATGTTTGTCTAACTTGTCTGCTTTTTTAAAAATAATCTTACTGTACTTAA
TTCTAATTTTTTCTCATATTTAAATAAAAGGCCATTTCCACCTTTTCT

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FIGURE 1234

MDARRVPQKDLRVKKNLKKFRYVKLISMETSSSSDDSCDSFASDNFANTKPKFRSDISEELASVFYEDSDNESFC
GFSESEVQDVLDHCGFLQKPRPDVTNELAGIFHADSDDESFCGFSESEIQDGMRLQSVREGCRTRSQCRHSGPLR
VAMKFPARSTRGATNKKAESRQPSSENSVTDSDSEDESGMNFLEKRALNIKQNKAMLAKLMSELESFPGSFGRGR
HPLPGSDSQSRPRRRRTFFPGVASRRNPERRARPLTRSRSRILGSLDALPMEEEEEDKYMLVRKRKTVDGYMNED
DLPRSRRSRSSVTLPHIIRPVEEITEEELENVCNSNSREKIYNRSLGSTCHQCRQKTIDTKTNCNRPDCWGVRGQF
CGPCLRNRYGEEVRDALLDPNWHCPPCRGICNCSFCRQRDGRCATGVLVYLAKYHGFGNVHAYLKSLSKQEFEMQA

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FIGURE 1235

GGCACGAGGCAACTTTGTGTAAAGCAGCTTCTCCACAGAGCTTTCCTGCATTGTTAGTGATGTCGGGCAAAGC
ATCACTCTTTAACCTGGGGCATTGGCCCCAGCAGGGATATCATGGGACCGCAGCCGCTCCGTGCACTGTCTCTGC
CCCCAGAGGAAGCCCTGTCCATGGTTCCCTGGTGCACGGCCACAGGCCTGCCTTGAGGCCACCACATCTGGTGTCTT
AGAACAGCTGCGGGCCCCACTTGGGCAGAAGGAAGAGGTGCTAGCTGCTGCCCCCTGCCTGCTGTGAACACCTGCC
CAGCCCTTCCCTTGCTGTGCTGAGGTGCTCAGACCAGAGTGCCATTAAATACCAACTGATGTCACGGAGCGGACGGT
GCATTGCCAAGGACTCACAGCTGTGGGCCTCCCTTCCAGCTCCTCCCACTTTCTTGGCTGGGTCTTCTGAGGCCTA
CGTGGAATGAACTACACATGTGGCCTCATGCCCAAGGGTTTGTAGATGGCCTCTGACTCTGTGGGATTCAACTT
GACTTTTTTGGCCCAGGAGGCTCTGTCTGGAAACAGGCTTAGCTTTAGTGCTGGGGTGGGACCTGCCCTGTGGGC
CCCAGGGAGGGGACAGTGGGGGTGAGGCCCTGAGGCTGTCCAGGGTCTGAGCTCTTTGCCTCCAACCTGCTTCTG
CCCCAAAAGGAACAGGCTGTTGGTGGCAGGCTCCTCCCGGGGAGCTGTACTGTACAGACCAAGGTGTAAATAAAC
AGTTTGCTCTTCTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1236

MGFQPLRALSLPFEEALSMVPGARPQACLEATTSGV

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FIGURE 1237

CCTCGCCCCGCTACGCGGGAACCCAACCGCGGCGACCGGACGTGCACTCCTCCAGTAGCGGCTGCACGTCGTGC
AATGCCCCGCTATGAGGAGGTGAGCGTGTCCGGCTTCGAGGAGTTCCACCGGGCCGTGGAACAGCACAAATGGCAA
GACCATTTTTCGCCTACTTTACGGGTTCTAAGGACGCCGGGGGAAAAGCTGGTGCCCCGACTGCGTGCAGGCTGA
ACCAGTCGTACGAGAGGGGCTGAAGCACATTAGTGAAGGATGTGTGTTTCATCTACTGCCAAGTAGGAGAAAAGCC
TTATTGGAAAGATCCAAATAATGACTTCAGAAAAA~~ACT~~TGAAAGTAACAGCAGTGCCTACACTACTTAAGTATGG
AACACCTCAAAAACTGGTAGAATCTGAGTGTCTTCAGGCCAACCTGGTGGAATGTTGTTCTCTGAAGATTAAGA
TTTTAGGATGGCAATCATGTCTTGATGTCCTGATTTGTTCTAGTATCAATAAACTGTATACTTGCTTTGAATTCA
TGTTAGCAATAAATGATGTTAAAAAACTGGCATGTGTCTAAACAATAGAGTGCTATTAAATGCCCATGAACCT
TTAGTTTGCCTGTAATACATGGATATTTTTAAGATATAAAGAAGTCTTCAGAAATAGCAGTAAAGGCTCAAAGGA
ACGTGATTCTTGAAGGTGACGGTAATACCTAAAACTCCTAAAGGTGCAGAGC

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FIGURE 1238

MARYEEVSVSGFEEFHRAVEQHNGKTIFAYFTGSKDAGGKSWCPDCVQAEFVVREGLKHISEGCVFIYCQVGEKP
YWKDPNNDFRKNLKVTA VPTLLKYGTPQKLVESECLQANLVEMLFSED

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FIGURE 1239

GGCACGAGGGTTCATCGCCGCGGGGCGGAGGCGACAGTGTCTAGCGGGAGCTCCGCGTGTAGCTACGCCGGCCGCC
TGGCTTTGAGACAACGTGATTCTCCGCAGCTGGTCGCTACCCGTGATGTTCTGCCCACGTGAGACCTGAGCTG
AAATGGCAGACGATCTCGGAGACGAGTGGTGGGAGAACCAGCCGACTGGAGCAGGCAGCAGCCCAGAAGCATCAG
ATGGTGAAGGAGAAGGAGACACAGAAGTGATGCAGCAGGAGACAGTTCCAGTTCCTGTACCTTCAGAGAAAACCA
AACAGCCTAAAGAATGTTTTTTGATACAACCAAAGGAAAAGAAAAGAGAATACCACCAAGACCAGGAAAAAGAGAA
AGAAGAAAATTACTGATGTTCTTGCAAAATCAGAACCAAACCAGGGTTACCTGAAGACCTACAGAAGCTGATGA
AGGACTATTATAGCAGCAGACGCTTGGTGATTGAATTAGAAGAACTGAACCTGCCAGACTCCTGTTTCCTCAAGG
CCAATGATTTGACTCACAGTCTTTCCTCATACCTAAAAGGAATTTGTCCTAAGTGGGTAAAACCTTAGGAAGAACC
ACAGTGAGAAGAAATCGGTCTGTATGCTGATCATCTGCAGCTCGGCCGTCCGAGCCCTGGAGCTCATTAGGTCGA
TGACAGCATTAGAGGAGACGGCAAAGTTATAAAATTATTTGCAAAGCACATAAAGGTCCAGGCGCAGGTAAAGT
TGCTGGAGAAGCGTGTGGTGCACCTGGGTGTAGGAACCTCGGGGAGAATTAAAGAACTTGTAAACAAGGTGGCC
TTAATTTGAGCCCTTAAAATTTCTGGTTTTTTGACTGGAACCTGGAGAGATCAGAAGTTGAGGAGAATGATGGACA
TTCCCGAGATAAGAAAGGAGGTATTCGAACTTCTGGAAATGGGAGTGCTCAGTCTGTGCAAGTCAGAATCCTTGA
AACTGGGCCTTTTCTAAGTCTGTGTCCTAATGAAGATTCCAGTTTTTCACAGTAGAAGTTGCATCTTATTTAATGA
CTCTGATACATTGCAAGCACTCAGTAAATATCAGCAAATAGTTTATGTTAATTGTGTCAACAGATGGATCACTGG
AATGTGGGGATTCTGAAACAGAAATGAAACTGTCCTTTTGACAACTCTCTTATATAATAAAGTATCACCGGCTTG
TGATGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1240

MADDLGDEWWENQPTGAGSSPEASDGE GEGDTEVMQQETVPVPVPSEKTKQPKECF
LIQPKERKENTTKTRKRRK
KKITDVLAKSEPKPGLPEDLQKLMKDYYSSRRLVIELEELNLPDSCFLKANDLTHSLSSYL
KGICPKWVKLRKNH
SEKKSVMMLIICSSAVRALELIRSMTAFRGDGKVIKLF AKHIKVQAQVKLLEKRVVHLG
VGTPGRIKELVKQGGL
NLSPLKFLVFDWNWRDQKLRRMDIPEIRKEVFELLEMGVLSLCKSES LKLG L F

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FIGURE 1241

GTCTACACCCCCTCCTCACACGCACTTCACCTGGGTCGGGATTCTCAGGTCATGAACGGTCCCAGCCACCTCCGG
GCAGGGCGGGTGAGGACGGGGACGGGGCGTGTCCAACCTGGCTGTGGGCTCTTGAAACCCGAGCATGGCACAGCAC
GGGGCGATGGGCGCGTTTCGGGCCCTGTGCGGCCTGGCGCTGCTGTGCGCGCTCAGCCTGGGTGAGCGCCCCACC
GGGGGTCCCGGGTGCGGCCCTGGGCGCCTCCTGCTTGGGACGGGAACGGACGCGCGCTGCTGCCGGGTTACACG
ACGCGCTGCTGCCGCGATTACCCGGGCGAGGAGTGCTGTTCAGAGTGGGACTGCATGTGTGTGCCAGCCTGAATTC
CACTGCGGAGACCCCTTGCTGCACGACCTGCCGGCACCAACCTTGTCCCCAGGCCAGGGGGTACAGTCCCAGGGG
AAATTCAGTTTTGGCTTCCAGTGTATCGACTGTGCCTCGGGGACCTTCTCCGGGGGCCACGAAGGCCACTGCAAA
CCTTGGACAGACTGCACCCAGTTCGGGTTTCTCACTGTGTTCCCTGGGAACAAGACCCACAACGCTGTGTGCGTC
CCAGGGTCCCCGCCGGCAGAGCCGCTTGGGTGGCTGACCGTCGTCCTCCTGGCCGTGGCCGCCTGCGTCTCCTC
CTGACCTCGGCCCAGCTTGGACTGCACATCTGGCAGCTGAGGAGTCAGTGCATGTGGCCCCGAGAGACCCAGCTG
CTGCTGGAGGTGCCGCCGTCGACCGAAGACGCCAGAAGCTGCCAGTTCCCCGAGGAAGAGCGGGGCGAGCGATCG
GCAGAGGAGAAGGGGCGGCTGGGAGACCTGTGGGTGTGAGCCTGGCCGTCCTCCGGGGCCACCGACCGCAGCCAG
CCCCCCCCAGGAGCTCCCCAGGCCGCAGGGGCTCTGCGTTCTGCTCTGGGCCGGGCCCTGCTCCCCTGGCAGCA
GAAGTGGGTGCAGGAAGGTGGCAGTGACAGCGCCCTGGACCATGCAGTTCGGCGGCCCGCGGCTGGGCCCTGCAG
GAGGGAGAGAGAGACACAGTCATGGCCCCCTTCCTCCCTTGCTGGCCCTGATGGGGTGGGGTCTTAGGACGGGAG
GCTGTGTCCGTGGGTGTGCAGTGCCAGCACGGGACCCGGCTGCAGGGGACCTTCAATAAACACTTGTCCAGTGA
AAAAAAAAAAAAAA

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FIGURE 1242

MAQHGMAGAFRALCGLALLCALSLGQRPTGGPGCGPGRLLLGTGTDARCCRVHTTRCCRDYPGEECCSEWDCMCV
QPEFHCGDPCCTTCRHHPCPPGQGVQSQGKFSFGFQCIDCASGTFSGGHEGHCKPWTDCQFGFLTVPGNKTHN
AVCVPGSPPAEPLGWLTVVLLAVAACVLLLTSAQLGLHIWQLRKTQLLLEVPPSTEDARSCQFP EEERGERSAEE
KGRLGDLWV

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FIGURE 1243

CGTTTTTTAATTTTAAAGTTGGGGGGGTCTCAATTTGTTACCCTGCTGGTCTCGAACTCCCGGACTTAAGCGAT
CCTCTGGCTCCAAGCCCACTACCAGTCTCAGGTTTCTTTACTAAAAGATCACTACCTTTTTTCTCTTATCTGCT
GCCATGTGAGATGTGGCTTTACCTTCCGCCATGATTGTGAGGCCTTCCCAGCCACGTAGAAGTGTAAAGTCCAAT
AAACCTCTTTTGTAAATTAATAAAAAAAAAAATCACTATTTAAGATACTAGGATGGATTGTGACTGTTGAGGAGTAC
TTACATATCCTACATTTGACTACATTATTTCCAAACCAAGTATTCCATCCAAAGGAACATACTGCTATCATAGAG
ACCAAGGAGGGACTGTTTAAGGTTGCCAAGGTGAAGCGAGCTGAGAGGCTTTGTCTCGTGCCAGTAACTCTGAA
ATCTCTCTTAATTCCTGCTGTCCAGGCAGCAGAATGCCATGGTTTCCCAAGTAGGTAGCTGCTTTAGCAGTTAA
AGCCCAAATGTCTGTTCTGTTGATCAGAGGTCTCTGAATTTCTGAAGTGGTGTTCGTTTCTGGTGACTGAGTTA
ATCCTTTACAATCCCTCTTGTAAGTGTGCTAATAGAAAGAATCCACCTTTCAAAGCTGCAGAACCAGACCGTGC
CCTAAATTGACCAACGTAGCTGATGTGCCTCAGGAAGTCTCTTGCCAGCTGTCCCTGTGAAGACCCCCCTCCTCC
CCCCAGCTGCTGCCTTGACACTGAAGCATCTCAGACTGTGCAAAGCCGTGTAGTCATCAAGACAGTAAATCCC
AGGGCTTGGTTAAGTGCTGTGTGATAACTTGTGTTGGATGAGACTTAACTTAAAACCACTTACAATAAACTTGGGA
AACTACCGTCAGCTGAGTTCAAATTTACTGACGCCATGATATGAGGATGAAGGTTTATTACCTGGTGACATCATC
CTGTTGGTGACATCATCTGTTGGTGACAAGGTGGTGATACATCTCTAATGGGACTTCCCTCAGTGGCAGGCAGG
CTGCCAAGCAACTAACCCCCATCAAGTGCCAGACCCCTCCAGTGTTCTGAGAGTCATCTCCATGCTAAACAGCCT
GCGTTTTATATGATTTCTCTACCCAGCCAAAAAATAATGGTCCATCATGTACGCAGTTATCTAGTCTTAAGTT
ATATTCTGGCTTTTTTCTCCCACTTTATTATGGAGCAGAAGTAAGCCTATCATGTTCTTAGAAAGGCTCTTAAGA
GGTGTCTGGAGTCCTTGAATCACTTTAGCATCTGGGGTAGGATGTGCCACCAGGAGGATTGGGGCTGGAGCGTG
TGTTTTGCCTTTGACCTGGACTGCTGTCTGATCTTGCTGAACACTCCACCGACATTTCTTAAAGTTGCTCAGTG
CCAATCCAGCAAAGCAGTCCATTTTCCCTTGCCCAAGATTGAGATGTATTGTTTTAGATACAGAAGAGTTCTTGG
ATGAGCCAAGGACAAGCTGGGGTGTCTATATTGAACAGACCTCGATGAAAATCTTGAATTCACCCCACTGCCCCT
CTGTTGGCAAGGGAAGGTGAAGATTGAAAAGTTAAAAAGCTTTTGGCCACTTGAGAGGATCAGGGCCGCAACTC
TTGAAGAAGCAAAGGGCTCAGTGCAATTGGGGTCAGCGCTGGTACAGCTGAAGGATGCCGGCCTTGTGCAGGTCCC
TCCACAGGGCAGCTTCCAGGGACAGATCGTGGTTTGCATAAAATATCAATGGCTTCATTTTTCGTTTCAAATAGT
GGTCGGAATAATTTCCAGTAGTTGCTTGTGATGAATCCATAGGCACTGACCTGGTCACAGGTATGCAAAGCTGTCA
GCAGCATGAGAGCCCCGGTACTAGGCATATATAGGTCTCCAAAATGTGTGTTAATCAACTTTGATTTCAAGAACC
TTTCTGTCAGGTAGCTGATGAAGTCCGGATGTAGCAGCTTGAATTTACTGGCAGAGGCTTCTGGTCCAAAATAGG
CGTGCGGCTGTCCCCCTTATCTAGGCCCTCAGGGACAGGCACGCCCAGAATGGCCGATCTCAGCATCACATAGT
CGCGGATGTCTGAGGGGATGAAGATATACTGCAGGTCTGTCTTGTGGCACGGAGGTGAAGCCCAGATTCCAGT
AGGAGACGAGGGAGTTCTTCATCGTGTTCACAGTGAACCATAGAAGGAAGTCTTGGTGCCACATCGCGCTCGA
AGCCTTTGATCACAGCTCCATTGAGTCTGAATACATAGTCATGGGCATCGATGTTGGGACCCTGGCGGGACCCAT
TCAGAATGCCTCCGTTGCCCACCACGGCACACCGGATACACTTTGGAGGGGTGTCCCTGGGCGGGGCAAACAGCT
TGGCACTCTCTGAGCCGTTTCAAGGCTCAGGGTGGAGGCGATGACTTGGTGAGAGAGCCCCCGCCAGCCATACG
GGGCTTTGTGTTGGCTCAGGCGGTCCCAGAGCGTGGGGTGAAGAGGTCCCCCACAGCAGCACTGGAATGGAGA
GATTGAACAGGCCACGGAAGTGGGGGTGCCGCTGAATGGCCAGGTGAAGCAGGTGTCGGCAGGCCCTGGCCCTTTC
CTGTCCAAGAATTCGATGCCTTGGATTGAAAGAATGCTTCAAATGATGTGGTGTCCCTGGCTCCGGCCGCTGGCC
CCGGGTACCGCTGCACCGCCGAGAAGTACAGGGCAAAGAGGAGCCCCGAGCAGGCAGCCGTGAGCAGGAGCAGCA
GCCAGAAGAACGACCCGCGCGGGAGCCCCATACAGCCCCGGCCCGGAGCGCCCCGTCCGACTGACGTCCCAGGC
AGAAGGGAGAGAACC GG GTGGGCCGGGTGGCACTTGC GG AG

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FIGURE 1244

RFLILKLGGVSICYPAGLELPDLS DPLAPSPLPVSGFFTKRSLPFFLLSAAM

GTGGACCCAGGGTGGGGAACCTACCTCTTCTCTCCACGCGGTTGAGAAGACCGGTCGGCCTGGGCAACCTGCGCT
GAAGATGCCGGGAAAACCTCCGTAGTGACGCTGGTTTGGAAATCAGACACCGCAATGAAAAAAGGGGAGACACTGCG
AAAGCAAACCGAGGAGAAAGAGAAAAAAGAGAAGCCAAAATCTGATAAGACTGAAGAGATAGCAGAAGAGGAAGA
AACTGTTTTCCCAAAGCTAAACAAGTTAAAAAGAAAAGCAGAGCCTTCTGAAGTTGACATGAATTCTCCTAAATC
CAAAAAGGCAAAAAAGAAAAGAGGAGCCATCTCAAAATGACATTTCTCCTAAAAACCAAAGTTTGAGAAAAGAAAA
GGAGCCCATTGAAAAGAAAAGTGGTTTTCTTCTAAAAACAAAAAAGTGACAAAAAATGAGGAGCCTTCTGAGGAAGA
AATAGATGCTCCTAAGCCCAAGAAGATGAAGAAAAGAAAAGGAAATGAATGGAGAACTAGAGAGAAAAGCCCCAA
ACTGAAGAATGGATTTCTCATCTGAACCGGACTGTAACCCCACTGAAGCTGCCAGTGAAGAAAGTAACAGTGA
GATAGAGCAGGAAATACCTGTGGAACAAAAAGAAGGCGCTTCTCTAATTTCCCATATCTGAAGAACTATTAA
ACTTCTCAAAGGCGAGGAGTGACCTTCTATTTCCTATACAAGCAAAGACATTCCATCATGTTTACAGCGGGAA
GGACTTAATTGCACAGGCACGGACAGGAACCTGGGAAGACATTCTCCTTTGCCATCCCTTTGATTGAGAACTTCA
TGGGGAACCTGCAAGACAGGAAGAGAGGCCCGTGCCCTCAGGTACTGGTTCTTGCACCTACAAGAGAGTTGGCAA
TCAAGTAAGCAAAGACTTCAGTGACATCACAAAAAGCTGTCACTGGCTTGTTTTATGGTGGAACTCCCTATGG
AGGTCAATTTGAACGCATGAGGAATGGGATTGATATCCTGGTTGGAACACCAGGTCGTATCAAAGACCACATACA
GAATGGCAAACCTAGATCTCACCAAACCTAAGCATGTTGTCTGGATGAAGTGGACCAGATGTTGGATATGGGATT
TGCTGATCAAGTGGAAAGAGATTTAAGTGTGGCATACAAGAAAGATTCTGAAGACAATCCCCAACATTGCTTTT
TTCTGCAACTTGCCCTCATTGGGTATTTAATGTTGCCAAGAAATACATGAAATCTACATATGAACAGGTGGACCT
GATTGGTAAAAAGACTCAGAAAACGGCAATAACTGTGGAGCATCTGGCTATTAAGTGCCACTGGACTCAGAGGGC
AGCAGTTATTGGGGATGTCATCCGAGTATATAGTGGTCATCAAGGACGCACCTATCATCTTTTGTGAAACCAAGAA
AGAAGCCCAGGAGCTGTCCAGAAATTCAGCTATAAAGCAGGATGCTCAGTCCTTGCAATGGAGACATTCCACAGAA
GCAAAGGGAAATCACCTGAAAGGTTTTAGAAATGGTAGTTTTGGAGTTTTGGTGGCAACCAATGTTGCTGCACG
TGGGTTAGACATCCCTGAGGTTGATTTGGTTATACAAAGCTCTCCACCAAAGGATGTAGAGTCTACATTTCATCG
ATCCGGGCGGACAGGCAGAGCTGGAAGGACGGGGGTGTGCATCTGCTTTTATCAGCACAAAGGAAGAATATCAGTT
AGTACAAGTGGAGCAAAAAGCGGGAATTAAGTTCAAACGAATAGGTGTTCTTCTGCAACAGAAATAATAAAAAGC
TTCCAGCAAAGATGCCATCAGGCTTTTGGATTCCGTGCCTCCCACTGCCATTAGTCACTTCAAACAATCAGCTGA
GAAGCTGATAGAGGAGAAGGGAGCTGTGGAAGCTCTGGCAGCAGCACTGGCCCATATTTAGGTGCCACGTCCGT
AGACCAGCGCTCCTTGATCAACTCAAAATGTGGGTTTTGTGACCATGATCTTGCAAGTGTCAATTGAAATGCCAAA
TATTAGTTATGCTTGGAAAAGAACTTAAAGAGCAGCTGGGCGAGGAGATTGATTCCAAAGTGAAGGGAATGGTTTT
TCTCAAAGGAAAAGCTGGGTGTTTGTCTTGATGTACCTACCGCATCAGTAACAGAAATACAGGAGAAATGGCATGA
TTCACGACGCTGGCAGCTCTCTGTGGCCACAGAGCAACCAGAAGTGAAGGACCACGGGAAGGATATGGAGGCTT
CAGGGGACAGCGGGAAGGCAGTCGAGGCTTCAGGGGACAGCGGGACGGAAACAGAAGATTGAGAGGACAGCGGGA
AGGCAGTAGAGGCCCCGAGAGGACAGCGATCAGGAGGTGGCAACAAAAGTAACAGATCCCAAAACAAAGGCCAGAA
GCGGAGTTTTAGTAAAGCATTTGGTCAATTAAGTGAAGATTTATATAGCAAAAAGAGAATGATGTTTGG
CAATATAGAAGTGAACATTTATTTTTCATGCAAAGTTAAAGACACATTGTGCCTCCTTTTGACCACTTGCCAAGTC
CCTGTCTCTTTTCAGACACAGACAAGCTTCATTTAAATTATTTTCATCTGATCATTATCATTATATACTTTATTGTT
ACTTCTTCATCAGTTTTTCTCTTTTGAAGGTGTATGAATTCATTACATTTTTATTCTAATGTATTATCTGTAGAT
TAGAAGATAAAATCAAGCATGTATCTGCCTATACTTTGTGAGTTCACCTGTCTTTATACTCAAAGTGTCCCTTA
ATAGTGTCTTCCCTGAAATAAATACCTAAGGGAGTGTAAACAGTCTCTGGAGGACCCTTTGAGCCTTTGGAAGT
TAAGGTTTCTCAGCCACCTGCCGAACAGTTTTCTCATGTGGTCTTATTATTGTCTACTGAGACTTAATACTGAG
CAATGTTTTGAAACAAGATTTCAAACCTAATCTGGGTTGTAATACAGTTTATACCAGTGTATGCTCTAGACTTGGA
AGATGTAGTATGTTTGATGTGGATTACCTATACTTATGTTTCGTTTTGATACATTTTTAGCTTCTCATTATAAGGT
GATTCATGCTTTAGTGAATTTCTCATAGATAGTATATATAAAAGTACATTTTAAATAGAAAGCCAGGGTTTTAAGG
AATTTACATGTATAAGGTGGCTCCATAGCTTTATTTGTAAGTAGGCTGGATAAATGGTGTCTAAATGGTAATGT
ACTCCACTTCTTCTTATTGGAAGATTAACATTATTTACCAAGAAGGACTTAAGGGAGTAAGGGGCGCAGATTAGC
ATTGCTCAAGAGTATGTAAAAAAGAAAAAAGAAACCAAAACCCTGGAAATAATCAAATGCAAAAAGGTA
ACAAATTCATAACTGGAAAGCAAAGAGAAGAACAAGTATGATTTGGATGATAAAGCATTGTTTTAATGGTGAAAA
CTTCACAGATCACTAATGTTTCTAGAGGTTAACTTCAAGTGGGCAAGCTGGGGTTTTTAGGTAGTCAGTGGCCTA
GTTCTTAAAGCCACAGTATAGGATCTGTTAACTGAATGTCTGTTGAAAGTTTTGTTTTAGCTGCTTGGAGGCTTC

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FIGURE 1245B

CTTTTAAGACAAACTGTATGTGATTAAGTTGTTTTGAGGGAACCTGAAGAACCTGATGTAGCCCCCTGGCCAGATAA
CTGCCTGATTTCTCAGATATTATTTCTCTGGGAAACATTCTACATAGCACAGGAGCTTAAGAGTGGCATTATCTT
CTCGCCTTAATTTCCAGAGATTATTTCTGTACTGAGAATCCTGGAACCTACTATGCTAGGAAATTTAAAGCTGCAT
GGTCTGTCTTGTTCATTTAATTATTGTGAATACCTAGAATCTTTCTTGGTCCTGATTTCTCTTGCTTAATCCA
GTCTTTATCTCTAACTGCCCCCTTATTTGATCACCATGTACTAGGAGCTCTGATAGCCAGCTCAGCTCCTAATCCT
TGAGGCAACATTCTTTTTCTATTTGAACCTCAGTTCTGTCTTGAATCCCAGCTAGATATTTCTTGCCCTCTGGT
CTCAGAATTCTCTTGGCTTTTTATTCCTTGATCCACTTGCCAGTTTTATCACTTTACCCTTGTTCCCTCATGGCTTC
CCATCAAGCCATGGGTATTAGGTGACAGTGTAATTTATTAGATTCTGGTTTTGCCCAAATACTGGGCATGCTTTA
ATAATAACTGAACCATTTTCATTATTTGGATAGGCATGGGTACCTTATCAAGCAGATTAAAAGGATATGGTACCCG
TCCTTTAGAAAAGAACAGCTAAAACCTTGTTGTGGATTATGGATTTAGCCTAAAGAAAAATAATCTGGCATAAAT
TAAGAGTAAGAGAGAAGATTAAATAGAAATTTCACTTCACATAACTTAAACATGGCTATTTCAATAAAGGACTAA
AGTTTCTCCTGGATCCCAGAATTCAACCTGTATTTATAAATGTATAATGTATTTAGCTACTTTTTGGTTTAAATG
AACTTGTGGGTAGCTTGGTAAATGTTATAATTTTACTGTTTTCTACAAAGAAAATATTTTCTAATTTAAGTT
GGAGCTATCTGTGCAGCAGTTTCTCTACAGTTGTGCATAAATGTTTTTACTATAAAATGAGCTAATGTATAAAAT
ACTGCTGTATACCATAATAAAGATAGTAATACTTGAAAAAAA

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FIGURE 1246

WTQGGELPLPLHAVEKTGRPGQPALKMPGKLRS DAGLES DTAMKKGETLRKQTEEEKKKEKPKSDKTEEIAEEEE
TVFPKAKQVKKKAEPSEVDMNSPKSKKAKKKEEPSQNDISP KTKSLRKKKEPIEKKVVSSKTKKVTKN EEPSEEE
IDAPKPKMKKEKEMNGETREKSPKLKNGFPHPEPDCNPSEAASEESNSEIEQEIPVEQKEGAFSNFPISEETIK
LLKGRGVTF LFPIQAKTFHHVYSGKDLIAQARTGTGKTF SFAIPLIEKLHGELQDRKRGRAPQVLVLAPTRELAN
QVSKDFS DITKKLSVACFYGGTPYGGQFERMRNGIDILVGTPGRIKDHIQNGKLDLTKLKHVVLDEVDQMLDMGF
ADQVEEILSVAYKKDSEDNPQTLLFSATCPHWVFNVAKKYMKSTYEQVDLIGKKTQKTAITVEHLAIKCHWTQRA
AVIGDVIRVYSGHQGRTIIFCETKKEAQELSQNSAIKQDAQSLHGDIPQKQREITLKGFRNGSFGLVATNVAAR
GLDIPEVDLVIQSSPPKDVESYIHRSGRTGRAGRTGVCICFYQHKEEYQLVQVEQKAGIKFKRIGVPSATEI IKA
SSKDAIRLLDSVPPTAIS HFKQSAEKLIEEKGAVEALAAALAHISGATSVDQ RSLINSNVGFVTMILQCSIEMP N
ISYAWKELKEQLGEEIDSKVKGMVFLKGKLGVCFDVPTASVTEIQEKW HDSRRWQLSVATEQPELEGPREGYGGF
RGQREGSRGFRGQRDGNRRFRGQREGSRGPRGQ RSGGKNKSNRSQNKGQKRSFSKAFGQ

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FIGURE 1247A

GCGCGGGGCTGAGCCGCCCGGGATCAGCGCGAGCACCCAGCCCGCCTCGGCCGGGAGGGCCTGAGAACCCCGGGG
GCGTGCTGAGCGTGGAGCTGCCCGGGCTGCTGGCGCAGCTGGCGCGGAGCTTCGCGCTGCTGCTGCCCGTGTACG
CGCTGGGCTACCTGGGGCTCAGCTTCAGCTGGGTTCTCCTCGCGCTCGCGCTGCTCGCCTGGTGTGCGCCGAGCC
GCGGCCCTCAAGGCCCTGCGCCTGTGCCGCGCGCTGGCGCTGCTGGAAGACGAGGAGCGCGTCTGTGCGCCTGGGGG
TGCGCGCCTGCGACCTGCCCGCCTGGGTTCAATTTCCAGACACTGAAAGAGCAGAATGGCTAAATAAGACTGTAA
AACACATGTGGCCTTTCATTTGCCAATTTATAGAGAAGTTGTTTCGAGAAACTATAGAACCAGCCGTGCGGGGAG
CAAAACCCACCTTAGCACCTTTAGTTTCACGAAGGTCGACGTGGGCCAGCAGCCCTCAGGATCAATGGTGTTA
AGGTATACACTGAAAATGTAGACAAAAGGCAAATTATTTGGACCTTCAGATTAGTTTTGTAGGAAATTGTGAGA
TTGATTTGGAGATCAAACGATATTTTGTAGAGCTGGTGTGAAAAGTATCCAGATTCATGGTACCATGCGGGTGA
TCCTGGAACCGTTGATTGGAGATATGCCCTTAGTTGGAGCTTTGTCTATCTTCTTCCTTAGGAAACCACTTTTAG
AAATTAACCTGGACAGGACTGACGAATCTTCTGGATGTCCCTGGATTGAATGGTTTATCAGATACTATCATTTTGG
ATATAATATCAAACCTATCTGGTGTCTCCCAATCGAATCACCGTTCCACTTGTGAGTGAAGTTCAAATAGCTCAGT
TGCGGTTTCTGTACCAAAGGGTGTCTAAGGATACATTTTATTGAAGCTCAGGATCTTCAGGGGAAAGACACTT
ACCTTAAGGGACTTGTCAAGGGAAAGTCAGACCCCTATGGAATCATTAGAGTTGGCAACCAAATCTTCCAAAGCA
GAGTCATCAAGGAGAACCTCAGTCCAAAGTGAATGAAGTCTATGAGGCTTTAGTGTATGAACATCCTGGACAAG
AATTAGAGATTGAGCTCTTTGATGAAGACCCAGACAAGGATGACTTTTTAGGAAGTCTTATGATTGACCTCATTG
AAGTTGAAAAGGAGCGCCTTTTAGATGAATGGTTCACTCTGGACGAGGTTCCCAAGGGGAAGCTACACTTGAGAC
TGGAGTGGCTCACGTTAATGCCAAATGCGTCAAACCTCGACAAGGTGCTAACAGACATCAAAGCTGACAAAGACC
AAGCCAACGATGGTCTTTCTCTGCATTGCTGATCTTGTACTTGGATTGAGCAAGGAACCTTCCGTGAGGGAAGA
AAATAAGCAGCAACCCAAATCCTGTTGTCCAGATGTGAGTTGGGCACAAGGCCCAGGAGAGCAAGATTCGATACA
AAACCAATGAACCTGTGTGGGAGGAAAACCTTCACTTTCTTCATTACAAATCCCAAGCGCCAGGACCTTGAAGTTG
AGGTCAGAGACGAGCAGCACCAGTGTTCCTGGGGAACCTGAAGGTCCCCCTCAGCCAGCTGCTCACCAGTGAGG
ACATGACTGTGAGCCAGCGCTTCCAGCTCAGTAACTCGGGTCCAAACAGCACCATCAAGATGAAGATTGCCCTGC
GGGTGCTCCATCTCGAAAAGCGAGAAAGGCCCTCCAGACCACCAACACTCAGCTCAAGTCAAACGTCCCTCTGTGT
CCAAAGAGGGGAGGAAAACATCCATCAAATCTCATATGTCTGGGTCTCCAGGCCCTGGTGGCAGCAACACAGCTC
CATCCACACCAGTCATTGGGGGAGTGATAAGCCTGGTATGGAAGAAAAGGCCCAGCCCCCTGAGGCCGGCCCTC
AGGGGCTGCACGACCTGGGCAGAAGCTCCTCCAGCCTCCTGGCCTCCCCAGGCCACATCTCAGTCAAGGAGCCGA
CCCCAGCATCGCCTCGGACATCTCGCTGCCCATCGCCACCCAGGAGCTGCGGCAGGCTGAGGCAGCTGGAAA
ACGGGACGACCCCTGGGACAGTCTCCACTGGGGCAGATCCAGCTGACCATCCGGCACAGCTCGCAGAGAAACAAGC
TTATCGTGGTCTGTGATGCTTCAGTGTTCGTTACCAGAAGTCCAGAGGAGAACGCTTGACGTTGCCGTGAAGAACAGTG
ATCAAAGCTTTGATTTAGTGTTCGTTACCAGAAGTCCAGAGGAGAACGCTTGACGTTGCCGTGAAGAACAGTG
GCGGCTTCTGTCCAAAGACAAAGGGCTCCTTGGCAAAGTATTGGTTGCTCTGGCATCTGAAGAACTTGCCAAAG
GCTGGACCCAGTGGTATGACCTCACGGAAGATGGGACGAGGCCTCAGGCGATGACATAGCCGAGCAGGCAGGAG
GCGTCCCTCTTCAGCGTAGCTCTCCACCTCTACCCGGAACACACCCCTCTCACAGACGTACCAATGTTATTTTTATA
ATTTTCATGGATTTAGTTATACATACCTTAATAGTTTTATAAAATTGTTGACATTTAGGCAAAATTTGGCCAATAT
TATCATTGAATTTTCTGTGTTGGATTTCCCTCTAGGATTTGCGCCAGTTCCCTACAACGTGACGTAGGGCGGCGGTAG
CTCTTGTGTCTGTGACTCTGCTCAGCTGTGTCCGTAGGAGTGGATGTGTCTGTGCTTTATTATGGCCTTGTTT
ATATATCACTGAGGTATACTATGCCATGTAAATAGACTATTTTTTATAATCTTTACATGCTGTTTAAATTCAGA
AGGAAATAGATCAAGGAAATATATATATTTTCTTCTAAAACCTTATTAAATTCGTGTGACAAATAATCATTTTCAT
CTTGGCAGCAAAAGTTCTCAGTGACCTATTTTGTGGTGTCTTTTTTAAAAGAAAAGCTGAAATATTATTAAT
GCTAGTATGTTTCTGCCATTATGAAAGATGAAATAAAGTATTCAAATATTAACATTTTCATAAATATAAGGAT
GTATTATTGAGAAGTAAGTTGAAGGGCTTATAAGGAAAATGTTTTATACTGAGTAATATATTAAGAGAATTGT
CATGGTTTATAAATCACATTATGCTAATCTGAAATTTCTTACATAAAAATGAAGTGTCTTATGTTTATTTTAATT
GCTGTTGTAACCTTACTCATGAAACAGTATACAGACACCTTGACTTTTCTCAACTGTAAGAGCAGACTTTCAAT
GTTAGCAATTAAGCTGTTGTCAAACAATCAGTCATGAGCTTTGTTAATTTTCAATGTTTTCCAGCCTATAAAAA
AAGGAAGGTACACGTTGTCTTTTAAAGGTTGTGAGGTAGATTGGAGTGAGTAGACAGGATATTGCATTAAAAAT
TGAAAGCTCGATCTCATTATTGTGAGGAACCCCAAGTGTGACCTCACACATAGGATGTGGGACCTTTGAGCCGAT

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FIGURE 1247B

GTGCACTGGCCACCACCAGGGTTGGGGGCGCCACAGCTGCGAGCCCGGCCCTGCTGTTCTCAGCAGCCACTTCC
CAGGCTGCCTCACTTTATGCCATGACTGACCTTAATATTGGGATATTGTTATGCAATTTTTATCCTGTTTAGACT
GTTAAAAGCAGGTTTCTGTACTTAAGAGTCCCCAGACCTCCTGTGAGGTGAGGCTCTGTTGCAGTGTCTAGGC
TGTGTGTGTCTGTAAAGAAAGAATGCACATATGTAGACGATTAAAGTGTATATTATAAGCTATATGCTGAAAATGG
CTTCCATAGCCATGAGAACATCTTAAACTATGTGTAAATATATTAAGGAAAGTATAGCTTTGTAATTTAAATTG
GAGCTTTTAGCTTGTTTCATGGAATAACAACCTGTGAGGTAACACATGACCAAACAAACCAAGTGCCTGTG
ACGGGGCGGGTGGCGTCTACCCACCCTCCCTTCTAGCAGATTCTTATTTTGTGTTGAATTTATAAACAAGGCTGGT
GGCTGTCTACCCACCCTCCCTTCTAGCAGATTTTGATTTTGTTCATTTTATAACTTACACTTTGAACCATGGGT
TTACTTATAATGGAGTCTGTAGCTTCACAGCATATTTTCATGTAATCATAAAGACCAGTATATTCCTCCTGCTGA
ATGACATGCGACTGTAAAGCCTCTTTATAAACCATTTCATGTTAGTATATAGGATTATTTGGGAAGCGTATCA
ATACCTTTATAGACAAATACGAACATGTATGCACACAAAACATTTAACTATGGTATTTATGGAAGACAGGTAACA
ACATTAAATCTAGTTGCTTTCCCTTAGTATTAGATTTGTTGAGGGTTTTTTAAAAATCAGGTCTGTTGAAAGTCT
TCTGTCATAATCTATAAAGCAGCAGCACTCATGGAAATTGTAGCATGCCAGTAATTTTTACCAACATCCCATAACA
TCTGAGTTCTGCAGTCCAGTGTGTAATCCGCTCCATGTGTATTTTGCTTAATGGAATGCTTTATTTAAGCACTTA
GGCAGAGTAGACACAATTAAAGGTACAAAGCCCAGAGGAAGTGGTAGAGCAGCACCGTGCCTGCCCTGAGGCAGT
GGAGTCAGTAGCGCTGTCCCCAGGGCCTTGAGTGCCTGGAGGTGCTTGGCCTCCAGTAGCTGCCTCCATTCTCTT
TTAAAAAAGGGGGTGATTCTGAGGCACTGAAGTGCTCCAGATGTGGAGGAGTGAAGCCACCATCGAGGCCAC
ACTCAGCACTCCAGGATCCAGCGATGTCAGACACTCTTGAGTTGTCAAACGTTAATTTTCAGTTTTAAATAAT
CAGTTTATCTAAGAAAAGGGAATTTAACTTTTCTACCTTGAGCCAAGCCAATGAAGGGAAAATTAATTAACCTTA
GTAAATTTGAAGTGCAGCTCTGTTAGCTCGTACATGTGGGTCTTATCCTGATCCTGTGCCTTAAAGTAGGAAG
TGTTTCCAAGTTCAGATTAAATAGAACAGCTGGCCGGGTGCGGTGGCTCACGCCTGTAATCCAGCACTTTGG
GAGGCCGAGGCGGGCGGATGACCTGAGGTGAGGAGTTCAAGACCAGCCTGGCCAACATGGAGAAACCCCATCTTT
ACTAAAAATACAAAAATTAGCCGGGCGTGGTGGTGGAGCGCACGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGG
CAGGAGAATTGCTTGAACCCAGGAGGCGGAGGTTGCAGTGAGCCAAGATCGCACCACTGCACTCCAGCCTGGGCA
ACAGAGTGAGACTCCGCTCTCAAAAAATAAATAAAATAGAACAGCCTTGTAACGTGATTTACCATGATAATATAT
TCTGCACGGTAAGAATTCTTTTACAGACATTCTTTATCAAGAGGTGCGCCCTTCTTTTTTCAGGCACATAAGCCA
AATGCAGGCCTGTGTGTAGCTGTGTGTTTTTCTGTGGTTGCCGCATTTATTCCACCTCCAGCTGGACCCCCAC
TGCAAAATAGAGAACAGCGGTGGGGGATGGGGGTAAAAAGTAGAGAACCTCCTTTCTGTTCAACTAATTTACGT
GACAGTGCATGTATTTATTCAATAAAACCTTTATGTTAGCTC

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FIGURE 1248

AGCGGGTTTTCGGGAGCGCCGCGTGGTTAGCGTCGGCGGCTTTTGGCATGGCGACTTTTTCTGGCCCGGCTGGGC
CAATCCTGTCGCTTAATCCGCAGGAAGATGTCGAGTTTCAAAGGAGGTGGCGCAGGTTTCGAAGCGCATAACCC
AGCGAAAAAACAAGAACAACCTACTCCTGGAGTAGTCTATGTGCGCCACCTACCTAACCTACTTGACGAAACCC
AGATCTTTTCATATTTCTCCAGTTTGGCACTGTGACACGGTTCAGGCTGTCCAGAAGTAAAAGGACTGGAAATA
GCAAAGGCTATGCATTTGTGGAGTTTGAGTCTGAGGATGTTGCCAAAATAGTTGCTGAAACAATGAACAACCTACC
TGTTTGGTGAAAGACTCTTGGAGTGTCAATTTATGCCACCTGAAAAAGTACATAAAGAACTCTTTAAAGACTGGA
ATATTCATTTAAGCAGCCATCATATCAATCAGTGAAACGGTATAATCGGAATCGGACACTAACACAAAAGCTAC
GGATGGAGGAGCGATTTAAAAAGAAAGAAAGATTACTCAGGAAGAAATTAGCTAAAAAAGGAATTGACTATGATT
TTCCTTCTTTGATTTTACAGAAAACGGAAAGTATTTCAAAACTAATCGTCAGACGCTACAAAAGGCCAGGTTT
TACGTAAGAAGAAGAAAAAGTTTCAGGTACTCTTGACACTCCTGAGAAGACTGTGGATAGCCAGGGCCCCACAC
CAGTTTGTACACCAACATTTTTGGAGAGGCGAAAAATCTCAAGTGGCTGAACTGAATGATGATGATAAAGATGATG
AAATAGTTTTCAAACAGCCCATATCCTGTGTAAAAGAAGAAATACAAGAGACTCAAACACCTACACATTCACGGA
AAAAAGACGAAGAAGCAGCAATCAGTGATTTTTCAATGTATTATATTTCTTTTGAAAAATATAATATTTTATGA
GAGTGGACTTTGTATTTCACTAGGTACAATGGAATACAACCTTTGACAAGATTTTCAGAGGAAAAATACACTGTT
TGGTCAAGTTAAGGAAAGCAGTGTGTAATTTTGATTGCCTGCCCTTGGCTGAAATACAGGGGTGCATACCATCT
TGCAGTGGCTTGGCTGACATTGCCTCTTTGTCTGCGCTCTAGTTTTCTTTTGATATTTTCATAGCTCTCCTTAGT
TTACTCTGCCTGGATAGAAAGTTGACCACTAACTGCAGGTTTAAGTACTAACTGCAGCCTTTTCTGTGCGCCAGC
AATTAAAGACCACCAATCTTGTGTTGTCCATCTACATGGTTTGTGCGGGACATTTAACTCATGGAGGTGCTTTAGA
TTTCAACATCAGATGGTTGAAGCTGGAAGTTTAATTATATGTAGAGTGAGAAGGCAGTTCCAGTTTTAGCACAGA
TTTGTTTATGTGTTTCAGATTTTAATAGAGATTCAAAAATGACTCATTTTTTACCAATAATGTTAAATTAGTTTTGG
TTGTGCTAGCATGAATTAATAACCACCATTTTATACCAGTATCATCAGTGAAGAATTGTATTTCAAGATTCAAAC
AATAACCAGCAATTAAACTTTTTTCTACAATGTATTTGTTTGCAGTAGGACTTGGGAGTCATTGGAAAAA
ATAATAAATTTTCCCCTTCATTAACAAAAA

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FIGURE 1249

MATFSGPAGPILSLNPQEDVEFQKEVAQVRKRITQRKKQEQLTPGVVYVRHLPNLLDETQIFS YFSQFGTVTRFR
LSRSKRTGNSKGYAFVEFESEDVAKIVAETMNNYLFGERLLECHFMPPEKVHKELFKDOWNIPFKQPSYQSVKRYN
RNRTL TQKL RMEERFKKKERLLRKKLAKKGIDYDFPSLILQKTESISKTNRQTSTKGQVLRKKKKKVSGLDTPE
KTVD SQGPTPVCTPTFLERRKSQVAELNDDDKDDEIVFKQPI SCVKEEIQETQTPTHSRKKRRRSSNQ

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FIGURE 1250

GGCGCTCCGCCTGCTGCGCGTCTACGCGGTCCCCGCGGGCCTTCCGGGCCCCACTGCGCCGCGCGGACCGCCTCGG
GCTCGGACGGCCGGTGTCCCCGGCGCGCCGCTCGCCCGGATCGGCCGCGGCTTCGGCGCCTGGGGCTCGGGGCTC
CGGGGAGGCCGTGCCCCGCGATGCTGCTCTCCAAGTTCGGCTCCCTGGCGCACCTCTGCGGGCCCCGCGGCGTGG
ACCACCTCCCGGTGAAGATCCTGCAGCCAGCCAAGGCGGACAAGGAGAGCTTCGAGAAGGCGTACCAGGTGGGCG
CCGTGCTGGGTAGCGGCGGCTTCGGCACGGTCTACGCGGGTAGCCGCATCGCCGACGGGCTCCCGGTGGCTGTGA
AGCACGTGGTGAAGGAGCGGGTGACCGAGTGGGGCAGCCTGGGCGGCGCGACCGTGCCCCCTGGAGGTGGTGTGCTG
TGCGCAAGGTGGGCGCGGCGGGCGGCGCGCGGCGTTCATCCGCCTGCTGGACTGGTTCGAGCGGCCCGACGGCT
TCCTGCTGGTGTGCTGGAGCGGCCCGAGCCGGCGCAGGACCTCTTCGACTTTATCACGGAGCGCGGCGCCCTGGACG
AGCCGCTGGCGCGCCGCTTCTTCGCGCAGGTGCTGGCCGCCGTGCGCCACTGCCACAGCTGCGGGGTCTGTGCACC
GCGACATTAAGGACGAAAATCTGCTTGTGGACCTGCGCTCCGGAGAGCTCAAGCTCATCGACTTCGGTTCGGGTG
CGCTGCTCAAGGACACGGTCTACACCGACTTCGACGGCACCCGAGTGTACAGCCCCCGGAGTGGATCCGCTACC
ACCGCTACCACGGGCGCTCGGCCACCGTGTGGTGTGCTGGGCGTGTCTCTACGATATGGTGTGTGGGGACATCC
CCTTCGAGCAGGACGAGGAGATCCTCCGAGGCCGCTGCTCTTCGGAGGAGGGTCTCTCCAGAGTGCCAGCAGC
TGATCCGGTGGTGCCTGTCCCTGCGGCCCTCAGAGCGGCCGTGCTGGATCAGATTGCGGGCCATCCCTGGATGC
TGGGGGCTGACGGGGGCGCCCCGGAGAGCTGTGACCTGCGGCTGTGCACCCTCGACCCTGATGACGTGGCCAGCA
CCACGTCCAGCAGCGAGAGCTTGTGAGGAGCTGCACCTGACTGGGAGCTAGGGGACCACCTGCCTTGGCCAGACC
TGGGACGCCCCAGACCCTGACTTTTTCTGCGTGGGCGGTCTCCTCCTGCGGAAGCAGTGACCTCTGACCCCTG
GTGACCTTCGCTTTGAGTGCCTTTTGAACGCTGGTCCCGCGGGACTTGGTTTTCTCAAGCTCTGTCTGTCCAAAG
ACGCTCCGGTCGAGGTCCCGCCTGCCCTGGGTGGATACTTGAACCCAGACGCCCCCTCTGTGCTGCTGTGTCCGG
AGGCGGCCTTCCCATCTGCCTGCCCCACCGGAGCTCTTCCGCGGCGCAGGGTCCCAAGCCACCTCCCGCCCT
CAGTCCTGCGGTGTGCGTCTGGGCACGTCTGCACACACAATGCAAGTCCTGGCYTCCGCGCCCCGCCCCACG
CGAGCCGTACCCGCCGCCAACTCTGTTATTTATGGTGTGACCCCTGGAGGTGCCCTCGGCCCCACGGGGCTATT
TATTGTTTAATTTATTTGTTGAGGTATTTCTCTGAGCAGTCTGCCTCTCCCAAGCCCCAGGGGACAGTGGGA
GGCAGGGGAGGGGGTGGCTGTGGTCCAGGGACCCAGGCCCTGATTCTGTGCTGGCGTCTGTCTGCCCCGC
CTGTCAGAAGATGAACATGTATAGTGGCTAACTTAAGGGAGTGGGTGACCCTGACACTTCAGGCACGTGTGCC
AGGGTTTGGGTTTTAAATTATTGACTTTGTACAGTCTGCTTGTGGGCTCTGAAAGCTGGGGTGGGGCCAGAGCCT
GAGCGTTTAAATTTATTCAGTACCTGTGTTTGTGTGAATGCGGTGTGTGCAGGCATCGCAGATGGGGGTCTTTCA
GTTCAAAAAGTGAGATGTCTGGAGATCATATTTTTTTATACAGGTATTTCAATTAAAATGTTTTTGTACATAGAAA
AAAAAAAAAAAAAAAAAAAAAGGGCGG

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FIGURE 1251

RSACCASTRSPRAFAHCAARTASGSDGRCPRRAARPDRPRLRRLGLGAPGRPSPAMLLSKFGSLAHL CGPGGVD
HLPVKILQPAKADKESFEKAYQVGAVLGSGGFGTVYAGSRIADGLPVAVKHVVKERVTEWGS LGGATVPLEVVLL
RKVGAAGGARGVIRLLDWFERPDGFLLVLERPEPAQDLDFD FITERGALDEPLARRFFAQVLA AVRHC HSCGVVHR
DIKDENLLVDLRS GELKLIDFGSGALLKDTVYTD FDGTRVYSPPEWIRYHRYHGRSATVWSLGVLLYDMVCGDIP
FEQDEEILRGRLLFRRRVSPECQQLIRWCLSLRP SERPSLDQIAAHPWMLGADGGAPESCDLRLCTLD PDDVAST
TSSSESL

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FIGURE 1252A

GACCGCGGCTGCAGGAACGGAGGCGGAAGGGGCCCTGCGGCGACGACGTCGTCGACGGGGGTGGCCGTGGGAGCT
GAGCACGGAGAAGACTCCCTCTCTCGGAAGCCGGATCCCCGAGCCGGGCAGGATGGATCACCACCAGCCGGGGACT
GGGCGCTACCAGGTGCTTCTTAATGAAGAGGATAAAGTCAAGATCATCGGCTATAGAGCAGCCACCTACTTCAAAC
CCAGCACCAGCAGATTGTGCAGGCTGTGTCTTCAGCACCAGCAGCTTGAAACTGACTCTTCCCTCCACCATATAGT
AGTATTACTGTGGAAGTACCTACAACCTTCAGATACAGAAGTTTACGGTGAGTTTTATCCCGTGCCACCTCCCTAT
AGCGTTGCTACCTCTCTTCTACATACGATGAAGCTGAGAAGGCTAAAGCTGCTGCAATGGCAGCTGCAGCAGCA
GAAACATCTCAAAGAATTTCAGGAGGAAGAGTGTCCACCAAGAGATGACTTCAGTGATGCAGACCAGCTCAGAGTG
GGGAATGATGGCATTTCATGCTGGCATTTCATGGCATTATTTTCAACTGGCTTGGATTGTTTATCCTTC
TGTATCACCATAACCATAGCTGGAAGGTATGGTGCTATCTGCGGATTGGCCTTTCCTTGATCAAATGGATCCTT
ATTGTCAGGTTTTCTGATTATTTTACTGGATATTTCAATGGACAGTATTGGCTTTGGTGGATATTTCTTGTA
GGCTGCTCCTTTCTTCAGAGGATTTGTTAATTATCTAAAAGTCAGAAACATGTCTGAAAGTATGGCAGCTGCT
CATAGAACAAGGTATTTCTTCTTATTGTAGAGACTGCATCAACCCGACATTCCTTTCTTATACCAATGTGAAATT
TCCAGATCATCTGTAAACCTACAACCTTAATAGAAGACTACTAATAACAGAAGACAAATTAGTGAAGAAAAGACG
GAGTTTCGAAATTGAATGGCAGGGTGGTTTTTGCTTACAAGCCATTTCTGTTCATTCTTTAAGTATCTATATTT
ATTTGTTTTGCACATATGCATATGTGCCATTTAAGATATTTGCATATACTTGATAGAAACCATAAAGTTGTAGC
AGTTAAGTCCAGTCACATTTGGTTAATCAGTGTTTGATATAATTGAAAGAGTTGAGTGGATAAACAGTCTTCCAG
CTTGTAATGCCATTGACTTCTGACCTGACATTTAGTATAATAAAAAATGAAATTCCTTAACCATGTCAAATGATTT
AGTTCTGGCTCTTAGACTCATCTGGCAGTTCTACACATGAAACATCTTTTGTATATAAGGTGTATTGAAACCT
GCAGTGCTGATTATTAGAAAGGATTTGTGCGATTTTGAACATGATATTTACATTATTATTTAGGAAAACCTTC
CTGTAAATAACCATGCATAACTTACTTTCTGCAATGTTTTCTTAGAAATTGTGTCCAGATAGCTTTCACATAATTT
TAAATTAAGTGAACATAATATATATGTGTATATGTATACACATATATATACACACACATATATATTTAGAA
ACGTGAGTGTTAAAGATAGAATTTGTTTTAGGACAAATTTTAAAGAAATGTGGGAATACCAAATGTCCTTTATAA
GAAAAATAAATTTGTTTTAAGGGACATACCAGTTTTAGGGATTTTCAGATGGGAAGCTGCATTTTAGGATTGC
CCATCTTAAGAGATCTTGCAGGAAGAGATTGTATTAGATATTATATTATTTTATTAAAGATAATTTTCAAAGTT
AATTTCTAAATAAGATAATTTCTCATTTGTGTTTGTCTTTTAAAGGCCAATAAAATATCTTTCAGTATCATTGT
AATAATTTTTTAGAGTTTAAATTTGTAAAGCTTAGCAAATAAAATCTTGTACTATGAATAGCTTCTTGCTTTATGA
CTTTAGGATTAACCTTGTAACCAACATATCCTGAACTGAGATATGCAAAATACTCATTTCAGTTATGGAAATGT
GTTTGTGGCATAATAGGACTGTGGGCTGTGTGTGTAGTGAGAGTGTGTAGCCACTATTATACTGGAATTTAAT
TTACATTATAAACTACTATATTTCCCATCTTGCAATCATTTTATGTCTCATCTGTTTTCTTTCGGTTATAT
CTTTGGTTTTGAATACCAACATTTAAATGATGGTATTTTATCTTTTAACTTAAATTTTAAATACAGCTAT
ATGGACCTTATAAAATGATTTCTTATTTATTATTAGACATTACTACTAAAAGGTACATCTAACTATTCAGGGAC
ATTTTTCCATTTCCAAAAATAAAATTTATTATGCTTTATAACCTCTTCTGTATTTTCTAATTTTTTCAATGTCT
TTGATAAATAAAACAGTTTTGTTTTGCTAATATAGCCTATTTTTGTTTTGTCTCATTTCAGTTTACTTTCTGCG
TAGAATTTTTATTGTTATATTAATTTTATTGTTGTATTAAAGTACCTGTGTACACCCCTTGAAGTAAGACA
GTAGCATGGGGTAAAGAAAAATATTAGTTTAGTTGCCTAATTTGGAAGTTAATTTAAATTTAACTGTACTAAT
AACATATTCAAACCTCATGCTGGATCTCTTTCATATTAATTTCTTATAGACCTGTACTTTATCTTTCAATAATTT
TTAAATGAAATTAAGCTTTGCTACATGGTAATTAATAATTACTAGGAAGCTTAGCTATCAAACATCGACTTACT
AAAATTTCAATTTAGCTTTTATGGTATATGTGCTTGTCTTCTGAATATGGATACATGTTACTTTTGATCCAGCAT
CAAACCTTCATTTTGTGTTGACTTTTCCCCCAATCTGTAAGGTTCAAGTATACATATTACTGAATCCTCTA
TAATGGCATAATTCAATGGTAGCCTTAAATCTCATCATGTAAGCAGGGGAATCAGAATGTTATTTTCAAGAACT
TAATGTTCCCTTCAGATATATAAAATCCTGCATACTTCATTTCTGTGAGCTTGAACAGCTGCTGTTGTGTTTTG
GGGATGCTTGATCATCTTGCACCTCTGCCTTAAAGATTGAAAAATCAAACCTCTGTTAGGGTATCTAAACATTT
TTGAGTGTGAACCTGGGGATTGGAAGTTAATACAAAAAATTTCAAATTATTTCTATTGTAAATGAATAAGCTAGT
CATGGCTAGGATAATCCATTTTCATGTATTTATGCAATAAACTGAATTTTAAAGCAAAAACAACATTTTCTATA
TAGTGTATGCAGGACAGATTTTAGAACTTAGATTAAATACAAATCCCATTACATTGGTTAAATGAATCTCT
GCTTAATGAAAAAATACTAATCTTTAGCCTATTTTGAGTCTATAAGATATATTTCAATTTAGACATGCCTTCTA
AGTTGTTACAGATTTTACCTGCTAAAACAATATTATTTCCAGTAAACCTCTCCTAACAGGAAAAGTGGAGTT
CAAATATCCAATTGGAGAAAAATTCAGAGTTCCTTCATTAAATATAATTTTTTTCATCTAGTATGTACTATTTTC

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FIGURE 1252B

AAGAAGTGCAAAAAGTAATGATAGTGAATGTGATACCATACTTAACTAAGGTAATATATATCCTTAGTTTGCTCA
AAAGAGTCCTGGTTATTCCTGTTTTCTCAGCTTAATAGTGCCTCATCGTACTCTCAAAAGTGTTCTAATTGGAG
GATAAGTTATATGATCATCCTGTGTATAATTGTAGACTGTACCAAGAAGCAACTACCTTAGCTCCACTGCCCTTT
GAGGGATGGAAC TGGGGTAAGGGCAGGAGCCAGTTATTATTGCCACAGTGTTTTCTAATGAACCAATTTGGCCTGT
AGAAGAGGAATAGTATTTTTTTTAATAGTTGTATTTGAATGATTCCAGCTTATCGTAAATACTAAACTGAATGGC
TTTTATATTTTTTAACTGCTGTTAAATGTTATTTTAGCATTATTAGTTGTTTATTATTTAATTCTTCAAATAGTC
ATATGAAAACATATATTTGATAAAGGTCAATTGTTAGATGATAATGTGCCATTCATTATCATAGGAATGTCCTTG
CCCATATATAAAACATGCTGGCATGTATTTTACTTGTTAATAAAGTTGTATAGATGTGGAAGTGTAACCTGTGA
TGCATCCTTTTCAAATCAGTTTAAGATTTCGCATATTATCATGACTGTGACCTCACTAAACTGTTTATGTGACAA
ACCTTTCAAGATTGGAGATGAAAACAACACTTGTGAAATTAGGTTGGGGTTGCAACATCTTTTAACTTCTCAGTT
ATTTGTATGTCAGGAAACAGATTGTGGTTTAATTTTAATAAACAAAATATCATCTTTTTGAAAAT

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FIGURE 1253

DRGCRNGGGRGPAATTSSSTGVAVGAEHGEDSLSRKPDPEPGRMDHHQPGTGGRYQVLLNEEDNSESSAIEQPPTSN
PAPQIVQAVSSAPALETDSSPPPYSSITVEVPTTSDTEVYGEFYVPPPYSVATSLPTYDEAEKAKAAAMAAAAA
ETSQRIQEEECPPRDDFSDADQLRVGNDGIFMLAFFMAFIFNWLGFCLSFCITNTIAGRYGAICGFGLSLIKWIL
IVRFSDYFTGYFNGQYWLWWIFLVLGLLLFFRGFVNLYLKVRNMSESMAAAHRTRYFFLL

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FIGURE 1254A

GACCGCGGCTGCAGGAACGGAGGCGGAAGGGGCCCTGCGGCGACGACGTCGTCGACGGGGGTGGCCGTGGGAGCT
GAGCACGGAGAAGACTCCCTCTCTCGGAAGCCGGATCCCCGAGCCGGGCAGGATGGATCACCACCAGCCGGGGACT
GGGCGCTACCAGGTGCTTCTTAATGAAGAGGATAACTCAGAATCATCGGCTATAGAGCAGCCACCTACTTCAAAC
CCAGCACCGCAGATTGTGCAGGCTGTGTCTTCAGCACCAGCACTTGAAACTGACTCTTCCCTCCACCATATAGT
AGTATTACTGTGGAAGTACCTACAACCTCAGATACAGAAGTTTACGGTGAGTTTTATCCCGTGCCACCTCCCTAT
AGCGTTGCTACCTCTCTTCTACATACGATGAAGCTGAGAAGGCTAAAGCTGCTGCAATGGCAGCTGCAGCAGCA
GAAACATCTCAAAGAATTGAGGAGGAAGAGTGTCCACCAAGAGATGACTTCAGTGATGCAGACCAGCTCAGAGTG
GGGAATGATGGCATTTCATGCTGGCATTTCATGGCATTATTTTCAACTGGCTTGGATTTTGTTCCTTC
TGTATCACCAATACCATAGCTGGAAGGTATGGTGCTATCTGCGGATTGCGCTTTCCTTGATCAAATGGATCCTT
ATTGTCAGGTTTTCTGATTATTTTACTGGATATTTCAATGGACAGTATTGGCTTTGGTGGATATTTCTTGACTT
GGCTGCTCCTTTTCTTCAGAGGATTTGTTAATTATCTAAAAGTCAGAAACATGTCTGAAAGTATGGCAGCTGCT
CATAGAACAAGGTATTTCTTCTTATTGTAGAGACTGCATCAACCCGACATTCCCTTCTTATACCAATGTGAAATT
TCCAGATCATCTGTAAACCTACAACCTTAAATAGAAGACTACTAATAACAGAAGACAAATTAGTGAAGAAAAGACG
GAGTTTCGAAATTGAATGGCAGGGTGGTTTTTGCTTACAAGCCATTTCTGTTTCATTCTTTAAGTATCTATATTTT
ATTTGTTTTGCACATATGCATATGTGCCATTTAAGATATTTGCATATACTTGATAGAAACCATAAAGTTGTAGC
AGTTAAGTCCAGTCACATTTGGTTAATCAGTGTTTGATATAATTGAAAGAGTTGAGTGGATAAACAGTCTTCCAG
CTTGTAATGCCATTGACTTCTGACCTGACATTTAGTATAATAAAATGAAATTCTTAACCATGTCAAATGATTT
AGTTTCTGGCTCTTAGACTCATCTGGCAGTTCTACACATGAAACATCTTTTGTATATAAGGTGTATTGAAACCT
GCAGTGCTGATTATTAGAAAGGATTTGTCGGATTTTGAACATGATATTTACATTATTATTAGGAAAACCTTTC
CTGTAAATAACCATGCATAACTTACTTTCTGCAATGTTTTCTTAGAAATTGTGTCCAGATAGCTTTCACATAATTT
TAAATTAAGTGAACATAATATATATGTGTATATGTATACACATATATATACACACACATATATATATTTAGAA
ACGTGAGTGTTAAAGATAGAATTTGTTTTAGGACAAATTTTAAAGAAATGTGGGAATACCAAATGTCCTTTATAA
GAAAAATAAATTTTGTTTTAAAGGGACATACCAGTTTTAGGGATTTTCAGATGGGAAGCTGCATTTTAGGATTGC
CCATCTTAAGAGATCTTGCGAGGAAGAGATTGTATTAGATATTATATTTATTTTCAATTAAGATAATTTTCAAAGTT
AATTTTCTAAATAAGATAATTTCTCATTGTGTTTTGCTTTTTAAAGGCCAATAAAATATCTTTCAGTATCATTGT
AATAATTTTTTAGAGTTTAAATTTGTAAAGCTTAGCAAATAAAATCTTGACTATGAATAGCTTCTTGCTTTATGA
CTTTAGGATTAACCTGTAAAAAACATATCCTGAACTGAGATATGCAAAATACTCATTTCAGTTATGGAAATGT
GTTTGTGGCATATAGGACTGTGGGGTCTGTGTGTGTAGTGAGAGTGTGTAGCCACTATTATACTGGAATTTAAT
TTACATTCTAAACTACTATATTTCCCATCTTGCAAATCATTTTATGTCTCATCTGTTTTCTCTTCGGTTATAT
CTTTGGTTTTGAATACCAACATTTAAATGATGGTATTTTATCTTTTAACTTAAAAATTTTAAATACAGCTAT
ATGGACCTTATAAAATTGATTTCTTATTATTATTAGACATTACTACTAAAAGGTACATCTAACTATTCAGGGAC
ATTTTTCCATTTTCAAAAAATAAAATTTATTATGCTTTATAACCTCTTCTGTATTTTCTAATTTTTTCATTGTCT
TTGATAAATAAAACAGTTTTGTTTTGCTAATATAGCCTATTTTTTGTGTTTGTCTCATTACAGTTTACTTTCCTGCG
TAGAATTTTTATTGTTATATTAAATTTTATTGTTGTATTAAAGTACCTGTGTTACACCCCTTGAAGTAAGACA
GTAGCATGGGGTAAAGAAAAAATATTTAGTTTAGTTGCCTAATTTGGAAGTTAATTAAAAATTAACCTGTACTAAT
AACATATTCAAACCTCATGCTGGATCTCTTCATATTAATTTCTTATAGACCTGTACTTTATTCTTTCAATAATTT
TTAAATGAAATTAAGCTTTGCTACATGGTAATTAAATAATTACTAGGAAGCTTAGCTATCAAACATCGACTTACT
AAAATTTCAATTTTAGCTTTTATGGTATATGTGCTTGTTTTCTGAATATGGATACATGTTACTTTTGATCCAGCAT
CAAACTTCACTTTTTGTTTTGACTTTTCCCCCAAATCTGTAAGGTTCAAGTATACATATTACTGAATCCTCTA
TAATTGGCATAATTCAATGGTAGCCTTAAATCTCATCATGTAAGCAGGGGAATCAGAATGTTATTTTCAAGAACT
TAATGTTCCCTTCAGATATATAAAATCCTGCATACTTCATTTCTGTGAGCTTGAACAGCTGCTGTTGTGTTTTG
GGGATGCTTGATCATCTTTGCACTCTGCCTTAAAGATTGAAAAATCAAACCTCTTGTTAGGGTATCTAAACATTT
TTGAGTGTGAACCTGGGATTGGAAGTTAATACAAAAAATTTCAAATTATTTCTATTGTAAATGAATAAGCTAGT
CATGGCTAGGATAATCCATTTTCATGTATTTATGCAATAAACTGAATTTTAAAGGCAAAAACAACACTTTTCTATA
TAGTGTATGCAGGACAGATTTTAGAACTTAGATTAAATACAAATCCCATTACATTTGGTTAAATGAATCTCT
GCTTAATGGAAAAATACTAATCTTTAGCCTATTTTGAGTCTATAAGATATATTTCAATTTAGACATGCCTTCTA
AGTTGTTACAGATTTTACCTGCTAAAACAATATTTTCCAGTAAACCTCTCCTAACAGGAAAAGTGGAGTT
CAAAATATCCAATTGGAGAAAAATTCAGAGTTCCTTCATTAAATATAATTTTTTTCATCTAGTATGTACTATTTT

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FIGURE 1254B

AAGAAGTGCAAAAAGTAATGATAGTGAATGTGATACCATACTTAACTAAGGTAATATATATCCTTAGTTTGCTCA
AAAGAGTCCTGGTTATTCCTGTTTTCTCAGCTTAATAGTGCCTCATCGTACTCTCAAAAGTGTCTAATTTGGAG
GATAAGTTATATGATCATCCTGTGTATAATTGTAGACTGTACCAAGAAGCAACTACCTTAGCTCCACTGCCCTTT
GAGGGATGGAAGTGGGGTAAGGGCAGGAGCCAGTTATTATTGCCACAGTGTTTTCTAATGAACCATTTGGCCTGT
AGAAGAGGAATAGTATTTTTTTTAATAGTTGTATTTGAATGATTCCAGCTTATCGTAAATACTAAACTGAATGGC
TTTTATATTTTTTAACTGCTGTAAATGTTATTTTAGCATTTATTAGTTGTTTATTATTTAATTCTTCAAATAGTC
ATATGAAAACATATATTTGATAAAGGTCAATTGTTAGATGATAATGTGCCATTCAATTATCATAGGAATGTCCTTG
CCCATATATAAAACATGCTGGCATGTATTTTACTTGTTAATAAAGTTGTATAGATGTGGAAAGTGTGAACCTGTGA
TGCATCCTTTTCAAATCAGTTTAAAGATTCGCATATTATCATGACTGTGACCTCACTAAACTGTTTATGTGACAA
ACCTTTCAAGATTGGAGATGAAAACAACACTTGTGAAATTAGGTTGGGGTTGCAACATCTTTTAACTTCTCAGTT
ATTTGTATGTCAGGAAACAGATTGTGTTTAAATTTAATAAACAAATATCATCTTTTTGAAAAT

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FIGURE 1255

ACAGGAAGTGAAGAGCTTCCGCCGGGAGACCGCGGCTGCAGGAACGGAGGCGGAAGGGGCCCTGCGGCGACGACG
TCGTCGACGGGGGTGGCCGTGGGAGCTGAGCACGGAGAAGACTCCCTCTCTCGGAAGCCGGATCCCGAGCCGGGC
AGG**ATG**GATCACCACCAGCCGGGGACTGGGCGCTACCAGGTGCTTCTTAATGAAGAGGATAACTCAGAATCATCG
GCTATAGAGCAGCCACCTACTTCAAACCCAGCACCGCAGATTGTGCAGGCTGCGTCTTCAGCACCAGCACTTGAA
ACTGACTCTTCCCCTCCACCATATAGTAGTATTACTGTGGAAGTACCTACAACCTCAGATACAGAAGTTTACGGT
GAGTTTTATCCCGTGCCACCTCCCTATAGCGTTGCTACCTCTCTTCTTACATACGATGAAGCTGAGAAGGCTAAA
GCTGCTGCAATGGCAGCTGCAGCAGCAGAAACATCTCAAAGAATTGAGGAGGAAGAGTGTCCACCAAGAGATGAC
TTCAGTGATGCAGACCAGCTCAGAGTGGGGAATGATGGCATTTCATGCTGGCATTTCATGGCATTATTTTC
AACTGGCTTGGATTTTGTTCCTTCTGTATCACCAATACCATAGCTGGAAGGTATGGTGCTATCTGCGGATTT
GGCCTTTCCTTGATCAAATGGATCCTTATTGTGAGGTTTTCTGATTATTTTACTGGATATTTCAATGGACAGTAT
TGGCTTTGGTGGATAATTTCTGTACTTGGCCTGCTCCTTTTCTTCAGAGGATTTGTTAATTATCTAAAAGTCAGA
AACATGTCTGAAAGTATGGCAGCTGCTCATAGAACAAGGTATTTCTTCTTATTG**TAG**AGACTGCATCAACCCGAC
ATTCTTTCTTATACCAATGTGAAATTTCCAGATCATCTGTAAACCTACAACCTTAATAGAAGACTACTAATAAC
AGAAGACAAAATTAGTGAAGAAAAGACGGAGTTTCGAAATTGAATGGCAGGGTGGTTTTTGTCTTACAAGCCATTTT
TGTTCAATCTTTAAGTATCTATATTTTCAATTTGTTTTGCACATATGCATATGTGCCCATTTAAGATATTTGCATAT
ACTTGATAGAAACCATAAAGTTGTAGCAGTTAAGTCCAGTCACATTTGGTTAATCAGTGTGGTATATAATTGAAA
GAGTTGAGTGGATAAACAGTCTTCCAGCTTGTAATGCCATTGACTTCTGACCTGACATTTAGTATAATAAAAAAT
GAAATTCCTTAACCATGTCAAATGATTTAGTTTCTGGCTCTTAGACTCATCTGGCAGTTCTACACATGAAACATCT
TTTGTATATAAGGTGATTGAAACCTGCAGTGCTGATTATTAGAAAGGATTTGTGAGATTTTGAACATGATAT
TTACATTATTATTTAGGAAAACCTCTTCTGTAAATAACCATGCATAACTTACTTTCTGCAATGTTTTCTTAGAAA
TTGTGTCCAGATAGCTTTCACTAATTTTAAATTAAGTGAACATAATATATGTGTATATGTATACTCATATATA
TACACACACACATATATATATCTAGAAACGTGAGTGTTAAAGATAGAATTTGTTTTAGGACAAATTTTAAGAA
AATGTGGGAATACCAATGTCCTTTATAAGAAAAATAAATTTTATTTTAAGGGACATACTAGTTTTAGGGATTTT
CAGATGGGAAGCTGCATTTTTAGGATTGCCCATCTTAAGAGATCTTGCAGGAAGAGATTGTATTAGATATTATAT
TTATTTCAATTAAGATAATTTTCAAAGTTAATTTTCTAAATAAGATAATTCTCATTTGTGTTTGTCTTTTAAAG
GCCAATAAAATATCTTTTCAGTATCATTGTAATAATTTTTCAGAGTTTAATTTGTAAAGCTTAGCAAATAAAATCT
TGTAATATGAATAGCTTCTTGCTTTATGACTTTAGGATTAACCTGTAAAAACATATCCTGAACTGAGATATGCA
AAATACTCATTTTCAAGTTATGGAAATGTGTTTGTGGCATATAGGACTGTGGGCTCTGTGTGTGTAGTGAGAGTG
TGAGCCACTATTATAACTGGAATTTAATTTACATTCATAAACTACTATATTTCCCATCTTGCAATCATTTTAT
GTCTCATCTGTTTTTCTTTTCGGTTATATCTTTGGTTTTGAATACCAACATTTAAATGATGGTATTTTATCTTT
TAACTTAAAAATTATTTAATACAGCTATATGGACCTTATAAAATTGATTTCTTATTTATTATTAGACATTACTA
CTAAAAGGTACATCTAACTATTTCAGGGACATTTTCCATTTCCAAAAATAAAATTTATTATGCTTTATAACCTC
TTCTGTATTTTCTAATTTTTTCATTGTCTTTGATAAAATAAACAGTTTTGTTTTGCT

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FIGURE 1256

MDHHQPGTGTRYQVLLNEEDNSESSAIEQPPTSNPAPQIVQAASSAPALETDSSPPPYSSITVEVPTTSDTEVYGE
FYPVPPPYSVATSLPTYDEAEKAKAAAMAAAAAETSQRIQEEECPPRDDFSDADQLRVGNDGIFMLAFFMAFIFN
WLGFCLSFCITNTIAGRYGAICGFGLSLIKWILIVRFSYFTGYFNGQYWLWWIFLVLGLLLFFRGFVNYLKVRN
MSESMAAAHRTRYFFLL

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FIGURE 1257A

GCCTTATAAGTGGTTTGTAGTCTCAGTTGGCTCTAGTAACCAGAGGACACAGAAAGTATCTTTTGGAAGTTTAGC
CACCTGTGCTTTCTGACTCGAGTGCATGCAACAGTTAGATCATGCAACAGTTAGATTATGTTTAGGGTTAGGAT
TTTCAAAGAATGGAGGTTGCTGCACTCAGAAAATAATTCAGATCATGTTTATGCATTATTAAGTTGTACTGAATT
CTTTGCAGCTTAATGTGATATATGACTATCTTGAACAAGAGAAAAAACTAGGAGATGTTTCTCCTGAAGAGCTTT
TGGGGTTGGGAAGTATCTTTTTTAATTGCTGTACTACTTAACTTTGTTCTAATTCAGTAGCTTGAGGAACAGGA
ACATTGTTTTCTAGAGCAAGATAATAAAGGAGATGGGCCATACAAATGTTTCTACTTTCTGTTGTGACAACATTG
ATTAGGTGTTGTCAGTACTATAAATGCTTGAGATATAATGAATCCACAGCATTCAAGGTCAGGTCTACTCAAAGT
CTCATGGAAGTGAAGTCTGCTTTCTTTGATCGAGGGTCAAAATACAAAGACATTTTTGCTAGGGCCTAC
AAATTGAATTTAAAACTCACTGCACTGATTCATCTGAGCTTTTGGTTAGTATTCATGGCTAGAGTGAACATAGC
TTTAGTTTTGCTGTGTAAAAGTGTTCATAAGTTCACTCAAGAAAAATGCAGCTGTTCTGAACTGGAATTTTT
CAGCATTCTTTAGAATTTTAAATGAGTAGAGAGCTCAACTTTTATTCTAGCATCTGCTTTTGACTCATTCTAG
GCAGTGCTTATGAAGAAAAATTAAAGCACAAACATTCTGGCATTCAATCGTTGGCAGATTATCTTCTGATGACAC
AGAATGAAAGGGCATCTCAGCCTCTCTGAAGTTGTAATACTGTCCCCAGTTCTTCCATCGGTGTAGTTGTTGC
ATTTGAGTGAATACTCTCTTGATTTATGTATTTTATGTCCAGATTCGCCATTTCTGAAATCCAGATCCAACACAA
GCAGTCTTGCCGTTAGGGCATTTTGAAGCAGATAGTAGAGTAAGAACTTAGTGACTACAGCTTATTCTTCTGTAA
CATATGGTTTTCAAACATCTTGCCAAAAGCTAAGCAGTGGTGAAAGTGAAGGAGGCATATTGCCCAAGGTTACAC
TGAAGCAGCTCATAGCAAGTTAAATATTGTGACAGATTTGAAATCATGTTTGAATTTCATAGTAGGACCAGTAC
AAGAATGTCCCTGCTAGTTTCTGTTTGATGTTTGGTTCTGGCGCTCAGGCATTTTGGGAAGTGTGACAGGGT
GGAGTCAAAACAACCTACATATAAAAAGAGAAAAAGAGAACTTGTCATTTAGCTTTTATAAGAAATCCCATGG
CAAAGGTAATAAAAAGGACCTAATCTTAAAAATACAATTTCTAAGCACTTGTAAGAACCAGTGGGTTGGAGCC
TCCACTTTGTCCCTCCTTTGAAGTGGATGGGAAGTCAAGGTGCAAGAACCTGTTTTGGAAGAAAGCTTGGGGC
CATTCAGCCCCCTGTATTCTCATGATTTTCTCTCAGGAAGCACACACTGTGAATGGCAGACTTTTCATTTAGCC
CCAGGTGACTTACTAAAAATAGTTGAAAATTATTCACCTAAGAATAGAATCTCAGCATTGTGTTAAATAAAAAATG
AAAGCTTTAGAAGGCATGAGATGTTCTATCTTAAATAAAGCATGTTTCTTTCTATAGAGAAATGTATAGTTTG
ACTCTCCAGAATGTACTATCCATCTTGATGAGAAAAGTCTTAAATAGTACCAAACATTTTGAAGTTTAAATTATG
TATTTAAAGTGAGTGTTTAAGAACTGTAGCTGCTTCTTTTACAAGTGGTGCCTATTAAAGTCAGTAATGGCCAT
TATTGTCCATTGTGGAAATTAAATTATGTAAGCTTCTAATATCATAAACATATTAAATTTCTTCTAAATATT
GCTTTTCTTTTAAAGTGACAATTTGACTATTCTTATGATAAGCACATGAGAGTGTCTTACATTTTCCAAAAGCAGG
CTTTAATTGCATAGTTGAGTCTAGGAAAAATAATGTTAAAGTGAATATGCCACCATAAATTACTTAATTATGTT
AGTATAGAACTACAGAATATTTACCCTGGAAAGAAAAATATTGGAATGTTATTATAAACTCTTAGATATTTATAT
AATTCAAAAGATGCATGTTTACATTGTGACAGATAAAGATGTATGATTTCTAAGGCTTTAAAAATTATTCATA
AAACAGTGGGCAATAGATAAAGGAAATTCTGGAGAAAAATGAAGGTATTTAAAGGGTAGTTTCAAAGCTATATATA
TTTTGAAGGATATATTCTTTATGAACAAATATATTGTAATAATTTATACTAAGGTATCTGGTAACTGTGGGATT
AATATGGTTCGAAAACAAATGTTATGGAGAAGCTGTCCCAAGCAAATAATTACCTGTACTTTTTTCCCATTTCA
AGGGAAGAGGCAACCACATGAAGCAATACTTCTTACACATGCCAAGAACGTTTATTGAAAAATAAATTTTTAA
AAGGCATGTGTTTCTATGCCACCAATACTTTTGAAAAATTGTGAACCTTACCCAAAACATTTATCATGTCCAT
TAAGTATATTGGGTATATAATTAGGAAGATATTTACATGTTCCATCTCCACAGTGGAAAACTTATTGAGGCTA
CCAAAGTGTGCCAAGAAATGTAAGTCCTTAGAGTAATTAGAAATGCTGTTTTCTCAAAGCATGAGAACTAGC
ATTTTCATTTCTTATTTACTCCCTTTCTATATCAATGCAATTCACAACCCAATTTTAAATACATCCCTATATCTCA
AGCATTCTATCTTGTACTTTTTTCAGAAAATAAACCACAAAAATAATCCTTGGTCTCTCTATCTTCTGACCTTGTA
GCAACAGAAATGTAAAACAGAAAGGGGTCCAATTTTACACGTTTTTTTCTCAAGTAGCCTTTCTGGGGATTTTT
ATTTTCTTAATGAAGTGCCAAATCAGCTTTTCAAATGTTTTCTATTTCTCAGCATTTCAGGAAGTGATAACGTT
TAGCTAAATGAGTAGAAGTGGACTTCCTTCAACATATTGTTACCTTGTCTAGCCTTAGGAAGAAAAACAAGAGCCA
CCTGAAAATAAATACAGGCTCTTTTCGAGCATCTGCTGAAATACTGTTACAGCAATTTGAAGTTGATGTGGTAGG
AAAGGAAGGTGACTTTTCTTGAAAAGTCTTTCTAAACATTCACTGTCTAAGAGATGAGCTTTCTTGTTTTA
TTCCGGTATATTCCACAAGGTGGCACTTTTAGAGAAAAACAAATCTGATGAAGACTAAAGAGGTACTTCTAAAG
AGATTTTATTCTAACTTTATTTTTCTGCGCATATTTAACTCTTTCTAGCACTTGTTTTTTGGGATGATTAATAG
TCTCTATAATGTTCTGTAAGTTCAATATTTTACTTGTACCTAGGTTCTGAACAATTGTCTGCAATAAATTGTT

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FIGURE 1257B

CTTAAGGATGGATAATACACCCATTTTGATCATTAAAGTAAAGAAAGCCTAGTCATTTCATTTCAGTCAAGAAAAA
TTTTTGAAGTACCCAGTTACCTTACTTTTCTAGATTAAAACAGGCTTAGTTACTAAAAAGGCAGTCCCTCATCTGT
GAACAGGATAGTTTTCGTTAGAAGTATAAACTCCTTTAGTGGCCCCAGTTAAAACACACATACCCCTCTCTGCTGC
TTTCAAATTCCTAGCATGGTGGCCTTTCAACATTGATTAAATTTTAAAATCCTAATTTAAAGATCAGGTGAGCA
AAATGAGTAGCACATCAGTAATTCAGTAGACAAAACCTTTGTCTGAAAAATTGCTGTATTGAAACAGAGCCCTAA
AATACAAAAGACCAGGTAATTTTAAACATTGTGGAATCACAAATGTAAATTCATAAGAAGCTCTAATTAATAA
AAAAAGTCTGAAGTATATGAGCATAACAACCTTAGGAGTGTGTCTACATACTTAACCTTTTGAAGTTTTTGGCAAC
TTTATATACTTTTTTTTAAATTTACAAGTCTACTTAAAGACTTCTTATACCCCAAATGATTAAAGTTAATTTAGAG
GTCACCTTTCTCACAGCAGTGTCACTTGAAATTTAGTAGGGAAGGATATTGCAGTATTTTTTCAGTTTCCTTAGCA
CAGCACCACAGAAAGCAGCTTATTCTTTTGAAGTGGCAGACACTCGACGGTGCCTGCCCCAATTTCTCTCTGAGT
GGCAAGCAGATGAGTCTCAGTAATTCATACTGAACCAAATGCCACATACACTAGGGGCAGTCAGAACTGGCTG
AGAAATCCCCCGCCTCATTGCCCCCTCTGCTCCCGAGGAAGTAAAGCCCCCTATGCGAAAGGCCGA
ATTCCACCCCAGGGTTTGTATAACAGTGGCCAGTCTGAACCCATTTGCTCGTGCTCAAACTTGATTCCCACT
TGAAAGCCTTCCGGGCGCGCTGCCTCGTTGCCCGCCCCCTTTGGCAGGAGAGAGGCAGTGGGCGAGGCCGGGCTG
GGGCCCCGCTCCCACTCACCTGCCGGTGCCTGAAATTATGTGCGCCCCGCGGGCTGCTTTCCGAGGTGAGAGT
GCCCTGCTGCTGTCTCAGAGGCATCTGTTCTGCAAATCTTAGGAAGAAAAATGTCCCTAGTAGCAAACGGGTGTC
TTCTGTGCATAAATAAGTACAACACAATTCTCCGAAAGTTCCGGGTAAAAAGAGATGCGGTAGCAGCTGCCCTGTG
TGAAGCTGTCTACCCCGCATCTCTCAGGCGCTAAGCTCAGTTTTTGTGTTTTGTTTTGTTTTTAAAGAAAAGA
TGTATAATTGCAGGAATTTTTTTTATTTTTTATTTTCCATCATTCTATATATGTGATGGTGAAAGATATGCCT
GGAAAAGTTTTGTTTTGAAAAGTTATTTTCTGCTTCGTCTTCAGTTGGCAAAGCTCTCAATTCCTTAGCTTCC
AGTTTCTTTCTCTCTTTTCTTTGTTAGGTAATTAAGGTATGTAAACAAATTATCTCATGTAGCAGGGGATTT
TCATGTTGAGAGGAATCTTCCGTGTGAGTTGTTTGGTCACACAAATAACCTTTCTCAATTTTAGGAGTTTGAT
TGTCAAATGTAGGTTTTTCTCAAAGGGGGCATATACTACATATTGACTGCCAAGAACTATGACTGTAGCACTAA
TCAGCACACATAGAGCCACACAATTATTTAATTTCTAACTCTCTGTGGTCCCTAGAAAAATTCGGTTGATGTGCT
TAGGTTAAAGTTCTGAAGATACCCGTTGTACCCTTACTTGAAAGTTTCTAATCTTAAGTTTTATGAAATGCAATA
ATATGTATCAGCTAGCAATATTTCTGTGATCACCAACAACCTCTCAGTTTGATCTTAAAGTCTGAATAATAAACA
AATCCCAGCAGTAATACATTTCTTAAACCTCACAGTGCATGATATATCTTTTCATTCTGATCCTGTGTTTGCAAA
AATATACACATGTATATCATAGTTCCCTCACTTTTTATTCAATTTGTTTTCTATTACCTGTAGTAAATATATTAGT
TAGTACATGGAATTTATAGCATCAGCTACCCCCAGGAACAGCACCTGACAGGCGGGGGATTTTTTTTCAAGTTGT
TCTACATTTGCATAAATTATTTCTATTATTATTCATGTATGTTATTTATTTCTGAATCACACTAGTCCCTGTGAAA
GTACAACTGAAGGCAGAAAGTGTTAGGATTTTGCATCTAATGTTTCAATATCATGGTATTGATGGACCTAAGAAAA
TAAAAATTAGACTAAGCCCCCAAATAAGCTGCATGCATTTGTAACATGATTAGTAGATTGAAATATATAGATGTA
GTATTTTGGGTATCTAGGTGTTTTATCATTATGTAAAGGAATTAAAGTAAAGGACTTTGTAGTTGTTTTTATTAA
ATATGCATATAGTAGAGTGCAAAAATATAGCAAAAAATAAAACTAAAGGTAGAAAAGCATTTTAGATATGCCTTA
ATTTAGAACTGTGCCAGGTGGCCCTCGGAATAGATGCCAGGCAGAGACCAGTGCCCTGGGTGGTGCCTCCTCTTG
TCTGCCCTCATGAAGAAGCTTCCCTCACGTGATGTAGTGCCCTCGTAGGTGTATGTGGAGTAGTGGGAACAGGC
AGTACTGTTGAGAGGAGAGCAGTGTGAGAGTTTTTCTGTAGAAGCAGAAGTGTGAGCTTGTGCCTTGAGGCTTCC
AGAACGTGTGAGATGGAGAAGTCCAAGTTTCCATGCTTCAGGCAACTTAGCTGTGTACAGAAGCAATCCAGTGTG
GTAATAAAAAGCAAGGATTGCCTGTATAATTTATTATAAAATAAAAGGGATTTTAAACAACCAACAATTTCCAACA
CCTCAAAAGCTTGTTGCATTTTTTGGTATTTGAGGTTTTTATCTGAAGGTTAAAGGGCAAGTGTGTTGGTATAGAA
GAGCAGTATGTGTTAAGAAAAGAAAAATATTGGTTCGCGTAGAGTGCAAATTAGAACTAGAAAGTTTTATACGAT
TATCATTTTGAGATGTGTTAAAGTAGGTTTTCACTGTAAATGTATTAGTGTCTGCTGATTGCCATAGGGCCTGG
TTAAACTTTCTCTTAGGTTTCAGGAAGACTGTCACATACAGTAAGCTTTTTCTCTGACTTATAATAGAAAA
TGTTTTGAAAGTAAAAAATAAATCTAATTTGGAATTTGACTTGTTAGTTTCTGTGTTTGAATCATGGTTC
TAGAAATGTAGAAATTGTGTATATCAGATACTCATCTAGGCTGTGTGAACCAGCCCAAGATGACCAACATCCCCA
CACCTCTACATCTCTGTCCCCTGTATCTCTCTTTCTACCACTAAAGTGTTCCTGCTACCATCTGGCTTGTC
CACATGGTGTCTCCATCTTCTCCACATCATGGACCACAGGTGTGCTGTCTAGGCCTGGCCACCACTCCCAAC
TTGACCTAGCCACATTCATCTAGAGATGGTTCTGTATGCTGGGCACAGACTGTGCTCATGGCACCCATTAGAAAT

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FIGURE 1257C

GCCTCTAGCATCTTTGTATGCATCTTGATTTTTAAACCAAGTCATTGTACAGAGCATTTCAGTTTTGGCTGTGGTA
CCAAGAGAAAACTAATCAAGAATATAAACACATTCCAGGCTGCTGTTTTCTCTCCATCTACAGGCCACACTTT
TACTGTATTTCTTCATACTTGAAATTCATTCTGCTATTTTCATATCAGGGTACAGACTTATAAGGGTGCATGTTT
CTTAAAGGTGCATAATTATTCTTATTCCGTTTGCTTATATTGCTACAGAATGCTCTGTTTTGGTGCTTTGAGTTC
TGCAGACCCAAGAAGCAGTGTGGAAATTCAGTGCCTGGGACACAGTCTTATAAGAATGTTGGCAGGTGACTTTGT
ATCAGATGTTGCTTCTCTTTTTCTCTGTACACAGATTGAGAGTTACCACAGTGGCCTGTCGGGTCCACCCTGTGGG
TGCAGCACAGCTCTCTGAAAGCAAGAACCTTCCTACCTATTCTAACGTTTTTGCCCTCTAAGAAAAATGGCCTCA
GGTATGGTATAGACATAGCAAGAGGGGAAGGGCTGTCTCACTCTAGCAACCATCCCTCCATTACACACAGAAAGC
CCTCTTGAAGCAAAAGAAGAAGAAAGAAAGCTTATCTCTAAGGCTACTGTCTTCAGAATGCTCTGAGCTGA
ATGCTCTTGCTCCTTTCCCAAGAGGCAGATGAAAATATAGCCAGTTTATCTATACCCTTCCTATCTGAGGAGGAG
AATAGAAAAGTAGGGTAAATATGTAACGTAAAATATGTCATTCAAGGACCACCAAACTTTAAGTACCCTATCAT
TAAAAATCTGGTTTTAAAGTAGCTCAAGTAAGGGATGCTTTGTGACCCAGGGTTTTCTGAAGTCAGATAGCCATT
CTTACCTGCCCTTACTCTGACTTATTGGGAAAGGGAGAAGTGCAGTGGTGTCTGTTGTCAGTGGCAAAGGTAA
CATGTCAGAAAATTCAGAGGGTTGCATACCAATAATCCTTTGGAACTGGATGTCTTACTGGGTGCTAGAATGAA
AATGTAGGTATTTATTGTCAGATGATGAAGTTTATTGTTTTTTTCAAAATTGGTGTGAAATATCACTGTCCAAT
GTGTTCACTTATGTGAAAGCTAAATTGAATGAGGCAAAAAGAGCAAAATAGTTTGTATATTGTAAATACCTTTTGT
ATTTCTTACAATAAAAAATATTGGTAGCAAATAAAAAATAAAAAACAATAACTTTAACTGCTTTCTGGAGATGA
ATTACTCTCCTGGCTATTTTCTTTTTTACTTTAATGTAAATGAGTATAACTGTAGTGAGTAAAATTCATTAAAT
TCCAAGTTTTAGCAGAAAAA

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FIGURE 1258

PYKWFS AQLALVTRGHRKYLLESLATCAF

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FIGURE 1259

GGGGCGGAGAGAGGGCGAGCACCGGGAAGGGGAGCGTGGGGCCGCTGGAATGGGTGAAATTTAAGGTCCATCGAGTA
CGTTTCTTTAATTATGTTCCATCAGGAATCCGCTGTGTGGCTTACAATAACCAGTCAAACAGATTGGCTGTTTCA
CGAACAGATGGCACTGTGGAAATTTATAACTTGTGAGCAAACTACTTTTCAGGAGAAATTTTCCAGGTCATGAG
TCTCGGGCTACAGAAGCTTTGTGCTGGGCAGAAGGACAGCGACTCTTTAGTGCTGGGCTCAATGGCGAGATTATG
GAGTATGATTTACAGGCGTTAAACATCAAGTATGCTATGGATGCCTTTGGAGGACCTATTTGGAGCATGGCTGCC
AGCCCCAGTGGCTCTCAACTTTTGGTTGGTTGTGAAGATGGATCTGTGAAACTATTTCAAATTACCCCAGACAAA
ATCCAGTTTGAAAGAAATTTTGATCGGCAGAAAAGTCGCATCCTGAGTCTCAGCTGGCATCCCTCTGGTACCCAC
ATTGCAGCTGGTTCCATAGACTACATTAGTGTGTTTGATGTCAAATCAGGCAGCGCTGTTTATAAGATGATTGTG
GACAGGCAGTATATGGGCGTGTCTAAGCGGAAGTGCATCGTGTGGGGTGTGCCTTCTTGTCCGATGGCACTATC
ATAAGTGTGGACTCTGCTGGGAAGGTGCAGTTCTGGGACTCAGCCACTGGGACGCTTGTGAAGAGCCATCTCATC
GCTAATGCTGACGTGCAGTCCATTGCTGTAGCTGACCAAGAAGACAGTTTCGTGGTGGGCACAGCCGAGGGAACA
GTCTTCCATTTTCAGCTGGTCCCTGTGACATCTAACAGCAGTGAGAAGCAGTGGGTGCGGACAAAACCGTTCCAG
CATCACACTCATGACATGCGCACTGTGGCCACAGCCCAACAGCGCTGATATCTGGAGGCATGACACCCACTTA
GTCTTTTCGTCTCTCATGGAGAAGGTGGAAGTAAAGAATTACGATGCCGCTCTCCGAAAAATCACCTTTCCCCAC
CGATGTCTCATCTCCTGTTCTAAAAAGAGGCAGCTTCTCCTCTTCCAGTTTGCTCATCACTTAGAACTTTGGCGA
CTGGGATCCACAGTTGCAACAGGCAAGAATGGGGATACTCTTCCACTCTCTAAAAATGCAGATCATTTACTGCAC
CTAAAGACAAAGGGTCTTGAGAACATTATCTGTAGCTGTATCTCCCCATGTGGAAGTTGGATAGCCTATTCTACA
GTTTCTCGGTTTTTTTCTCTATCGGCTGAATTATGAACATGACAACATAAGCCTCAAAGGGTTTTCCAAATGCCA
GCATTCCTTCGCTCTGCCCTTCAGATTTTGTGTTTCTGAAGATTCAACAAAGCTCTTTGTAGCATCAAATCAAGGA
GCTCTGCATATTGTTTCAGCTGTCAGGAGGAAGCTTCAAGCACCTGCATGCTTTCCAGCCTCAGTCAGGAACAGTG
GAGGCCATGTGTCTTTTGGCAGTCAGTCCAGATGGGAATTGGCTAGCTGCATCAGGTACCAGTGCTGGAGTCCAT
GTCTACAACGTAAAACAGCTAAAGCTTCACTGCACGGTGCCTGCTTACAATTTCCAGTGACTGCTATGGCTATT
GCCCCAATACCAACAACCTTGTCTATCGCTCATTTCGGACCAGCAGGTATTTGAGTACAGCATCCAGACAAACAG
TATACAGATTGGAGCCGGACTGTCCAGAAGCAGGGCTTTCACCACCTTTGGCTCCAAAGGGATACTCCTATCACA
CACATCAGTTTTTCATCCCAAGAGACCGATGCACATCCTTCTCCATGATGCCTACATGTTCTGCATCATTGACAAG
TCATTGCCCCTTCCAAATGACAAAACCTTACTCTACAATCCATTTCTCCACGAATGAATCAGATGTCATCCGG
AGGCGCACAGCTCATGCTTTTAAATTTCTAAGATATATAAGCCTCTACTCTTCATGGATCTTTTGGATGAAAGA
ACACTCGTGGCAGTAGAACGGCCTCTGGATGACATCATTGCTCAGCTCCACCACCCATTAAAAAGAAGAAATTT
GGAACCTTAAAACAGGGCACTGTCTGTGTCCTTCCTTGAAGTGTCTACCCTGTTGCTTTTACAAATCATGGTAAT
AAAACAAGTTATTCTTG

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FIGURE 1260

MGEFKVHRVRFFNYVPSGIRCVAYNNQSNRLAVSRDGTVEIYNLSANYFQEKFFPGHESRATEALCWAEGQRLF
SAGLNGEIMEYDLQALNIKYAMDAFGGPIWSMAASPSGSQLLVGCEGDSVKLFQITPDKIQFERNFDRQKSRIIS
LSWHPSGTHIAAGSIDYISVFDVKSGSAVHKMIVDRQYMGVSKRKCIVWGVAFSLDGTIISVDSAGKVQFWD SAT
GTLVKSHLIANADVQSI AVADQEDSFVVGTAE GTVFHFQLVPVTSNSSEKQWVRTKPFQHHTHDMRTVAHSPTAL
ISGGTDTHLVFRPLMEKVEVKNYDAALRKITFPHRCLISCSKKRQLLLLQFAHHLELWRLGSTVATGKN GDTLPL
SKNADHLLHLKTKGPENIICSCISPCGSWIAYSTVSRFFLYRLNYEHDNISLKRVS KMPAFLRSALQILFSEDST
KLFVASNQ GALHIVQLSGGSFKHLHAFQPQSGTVEAMCLLAVSPDGNWLAASGTSAGVHVYNVKQLKLHCTVPAY
NFPVTAMAIAPNTNNLVIAHSDQQVFEYSIPDKQYTDWSRTVQKQGFHHLWLQRDTPITHISFHPKRPMHILLHD
AYMFCIIDKSLPLPNDKTLLYNFPPTNESDVIRRRTAHAFKISKIYKPLLFMDLLDERTLV AVERPLDDIIAQL
PPPIKKKKFGT

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FIGURE 1261

GAATTCGGCACGAGAATGAGCCCCACAGAATAAAGGTTTTTCTCTTGCTGTGGCCTACTGGAAGCCTTCCTAAC
TCTATAGCTGGTAAAGTAGAGCAGAAAGGGCCAGAATGGCTTAAGATGGAGCTAAATCCCTATAGCATTCCATTT
TCTGCTCTTGCCCTCTTGAACCTAGAAAGGCTTGCCCATATATCCTAACAATCTGTTCTCTGAGCTGTTAGGCCAAT
CCCTGGTCTCAAACCTCTGACCTCAGGTGATCCACCCACTATGGCCTCCCAAGGTGCTGGGATTGCAGATGTGAG
CCACCGTGCCTGGCCAGAAAATCTGGATTCTTATTCTAGTTCTTCATTTCTGTCCACATGCACCTTAGTTGACATT
ACATCTACATATATTAGCTTTTTCTACATGAGCCATCTATTTACTTAGTAACCAGTGTTCTTAATGAAGTATTT
AGTCTTGGGTTTCTTGTAATAATTTCTCTGCATTCCCTTAGACAGTGTACTATACATGAAATATTCTTGTTGACCTA
GTAATTTATATTATCCATTTAATTTCTTAAACCTATGGCCTTTTTATTGAGCACACTCTTAAATCATTATTTGGC
TTGTAAACATTCTCTGAATTGTGGCTACAATCCTCTTTAAATAATCTAGGAAAAAGAAAGATAAAGCTTACAT
TTTCACAGTTTTGGCTCTTAAACACATTCCACAAATGCCATTAAGAATTTATTTTGTTTTAGGCCAGTCATGGTG
GCTCATGCCTGTAATCCCAGCAATTTGGGAGGCTGAGGCAAGAACTGCTTGAGCCCAGGAGTTTGAGACTAGCCT
GGGCAACATAGCAAGACCCTGTCTCTACCAAAAAAAAAAAGTTTATTTTGTTTTAGAGTCATTTAATGTGTTTT
TATGCACAATAATAGTGGGAGGTTGTTTTGTGTCATTTGTTTGTGTTTTGTTTTGTTTTGTTTTGTTTTGCTTTCCAT
GTGGGAAAAAGTTAACATTGGAAGTGTCTAGTAAAGATTTTTTTCAGGCTGGGCACGGTGGCTCATGCCTGTG
ATCCCAACACTTTGGGAGACCGAGGGAGCTGGATCACCTGAGGTCAGGAGTTTCGAGACCAGCCTGGCCAACATGG
AAAAACTCCATCTCCACTAGAAATACAAAAGTAGCCTGGTGTGGTGGCACATGCCTGTAATCCCAGCTACTTGGG
AAGCTGAGGCAGGAGAATCACTTGAACCTGGGAGGTGGAGGTTGCAGTGAGCCAAGATCACGCCATTGCACCTCA
GCCTGGGCAACAAGAGTGAAACTCCGTCTCAAAAAAAAAAAAAAAAAAAGATGTTTTTTCATTTTTTTCATGTTATC
TATCCAAGCACTGTTCCATGGTCAGCAAGTCATATTTTATAATGTGGATTTTCCAAAATAATTATTGAATACAGC
TATTCTATGGCTACTTTTAGTGTTTTTGTGGTATGTGGTGTGGGAGTGTTTATGGAATTACCAGTATCTTAAATT
TTCAAAGGAACCTTGGAAGTCTATCACTCTAAATGAAAGTCTGTCACTCTACATGAATTATGTGCTCAAAATTTGA
CCAACCTCAGTTTAAGACACAAAACAGTAATTTGAAGAAGGAAAAATGAAGAGAGTTTCTAGTTTAATGGGTTAA
TTTTTGTGTTGCAATAGTAAGTTTAGTCTTCTTATAATATTTCTAAATGAAAAATCATAGGTATTTGTTACCAT
GTGTGAAGATTACTTTGTTAAAGCAAAAGTGGTCGTGTGATATGCTAAATGTTAATTACTGATTTTATATGTTT
AAATCACGCCAAACAAATTATGTCTGTGCCATCCAGGGTCTGTTGTTAATCTTTTTCTGAGTACTTGGATTGGGA
TAAAGGGCTTGTAATATGCACCTTTTATTAATGAATAAATAGAAAACGTTAGTAACACTTTGTGTTTTCTGTTTG
GCTTTTGTGGGAAGAGAAGCAAGCATCTTTTGCCTAGTAGATGTTAACATTGTGTATTAAACAGTTTCTTTGTAA
GACCTAACTAAAGACATTCTTAAGAGAGAACTTAAGTTTTAAGAAAAGTTGTGAGAAAAATATTCATAAAATATG
CAGTATGGGGCCAGTATTCAGAAGTAGAGTTTCTCTCTTGGAATTAGATTGCAGTCACATTTCTTTGGTTATTT
TCTTTCTCTCTCTCTTCCCTAGAATACCAGGTAAGATAGACATTTACTTTGAGGGACTAATATCCAATAGTGTTAA
TTATTTAAGCAGATATATCTAGCTCAAAAGGAACCAGACATGTCACTGTACCAAAAACACACAAAAGTGAAAATT
TGCTTCTGTTCTGTGACCTAGAATGTGTCCAGACATTAAAGATCATGAATACTCATATACATGTAAAAATAGTAA
CACTGCTCTGGCATGATTTTGACGTCAGTGTTTATGTAATAACTTCAGTGTTATATTTAAATAGATAAATTTGT
GAAATAACAATTTCTTGAGACAGTCAACTTTTTATGATTTAATCTAAAGATTGTCATGTACATGTCAACGGATA
TCTGAATCCTCAGTGAACTGTAAAGTTTTTATTAAATGACTCTGCTGCAATACTAGTTTTCTTCTCAGAAAATG
GAATTCAAATAAAATAAGTTTTTTGGTCTTGGAIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1262

MHLVDITSTYISFFLHEPSIYLVTSVLNEVFSLGFLVKFLCIP

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FIGURE 1263A

AGCGGCCGCCAACGCCGCCCGGACTGGAGCCCTGACATTGCTGCGCTCGGGGGGCTCCAGGCAGCCCGTATCGGG
GCCTTTATTTCTCGTCGGCGGGCGCCCTGCACCGCGCCTCGCAAAGCCAAACACCAGAGCACCCTAGAAGGTTTAA
CTAAAAAGAAATGCTCATGTTTGACCCAGTTCTCTGTCAAGCAAGAGGCCATGGACCCTGTCTCAGTGTACATCCCAT
CTAATTACATGGAATCCATGAAGCCTAACAAGTATGGGGTCATCTACTCCACACCATTGCCTGAGAAGTTCTTTT
AGACCCCAAGAAGTCTGTGCGACGGAATACAGATGGAGCCAGTGGACCTCACGGTGAACAAGCGGAGTTTACCCC
CTTCGGCTGGGAATTCGCCCTCTCTCTGAAGTTCCCGTCTCACACCGGAGAGCCTCGCCTGGGTTGAGCATGC
CTTCTTCCAGCCCACCGATAAAAAATACTACCCCCCTTCTCCAGGCGTGCAGCCCTTCGGCGTGCCGCTGTCCA
TGCCACCAGTGATGGCAGCTGCCCTCTCGCGGCATGGAATACGGAGCCCCGGGGATCCTGCCCGTCATCCAGCCGG
TGGTGGTGCAGCCCGTCCCCTTTATGTACACAAGTCACCTCCAGCAGCCTCTCATGGTCTCCTTATCGGAGGAGA
TGGAAAATTCAGTAGTAGCATGCAAGTACCTGTAATTGAATCATATGAGAAGCCTATATCACAGAAAAAATTA
AAATAGAACCTGGGATCGAACCACAGAGGACAGATTATTATCTGAAAGAAATGTACCCCCCTTAATGAACTCAG
TGTCCCCCGCAAGCATTGTTGCAAGAGAATCACCTTCGGTCATCGTGCAGCCTGGGAAGAGACCTTTACCTG
TGGAAATCCCCGGATACTCAAAGGAAGCGGAGGATACACAGATGTGATTATGATGGATGCAACAAAGTGACACTA
AAAGCTCCCACTTGAAAGCACACAGAAGAACACACACAGGAGAAAAACCCTACAAATGTACATGGGAAGGGTGCA
CATGGAAGTTTGCTCGGTCTGATGAACTAACAAGACATTTCCGAAAAACATACTGGAATCAAACCTTTCCAGTGCC
CGGACTGTGACCGCAGCTTCTCCCGTTCTGACCATCTTGCCCTCCATAGGAAACGCCACATGCTAGTCTGATTGTC
CTCTGTGTCTCGCTCAGCGTGAATCTCCCACTCACCTGGCTCTCTCTCTGTCTGCTGCTCCATTATCTAACACAT
TTTTTACATGTACATTTTAATTTGATTAGCTGGTCTGAATCTCTGAATTTATATCATCCAAACTTCCATATGG
TCAGTAGTAGATGTTCTCTAATCCTCCCTCTCCTTACCACGGGTGACACCTAAAGAATGTGAACACTTTTTTTTT
TTTTTCTGGGGATGCTAAGCAAACCTTCTTACAGATACGTTTAATGTAATAAGAACAAGGGAACATGTAAACTA
ACATAACCAATTGTGAGTTCTCCATGTATTCTCAAAGAATGTCAGAGTAAATGTATTAGAAATACAGTATCCA
GACTGCTAGTCTTGCCAGAGACATTCTTACCTCTGCCCTGTGATAATATTTTATGCTTGACAGTGAAAACAAGT
GTGGCCCCCTGCACCGGTTAGCTAGAAGTACAGCCAGATTTCAAGCTAGTGCAGTCACCTCTTCCGTCATTCTTC
ACAAATCTTGTCAACCTGGATCTTAGACTTCATCTGAATCGAGTTCTTTGCCCTCCTTTGTGCTGCAGCTCATA
TGGAGGTCTTTGCCACCAATGGGAGATGAGCCCAAACCTTCGATCTAGGTGGGTGATGTGTAGCAGTTCAAGGGA
AGGGTGCTGTGTTTTCATAGCATGGAGTCTGGAGGAGAGGGCCATTTAGCAGGGGGAGCAGAAGAGGCAATTCCTC
CTGGGCTAGGGGTTGTCAATGAGGTTTCAACATTTTGTTAGCTGTGTGCAGCATTCCCAGAGCTTCAGTCTCTGT
GCATACTCAGCTTTGTAGAACCATGCTGCAAAGCCATATACCGATGGGGTTATCCATGCAACTATCTCCATTCTT
ACAATGTCCTTAATATGAGATCATCAAACATTGATAGTAGGGACTCCATGGAATATTTGCCCAGTAATGGTAAGA
AATCTTTCGGGTAAGAGTATGGATGGTTCTTCTTTTACCCAATCTGCTTATAGCTTTTTTTGTAAACAGGGAAAT
GTTGAGTGGTACTTGTATTCCCTTATCAAATTAATCACATAGCTTTTATACAGAACTCTTCTGTGTGAGCTGT
TAAGGTGCCAAATTGGCTGTCAATTTGTATTTCATGACACATACCATAAAGCATCTGCTAATGCTTTAATGGATTGA
TTCAATTAAGACCTGAGTGACACTATTTGTAAATATAACTAGTTGTGAAGCACACATACCTTTATTTTGGGAATT
TATGAGAAAAATAGAAAACCACAGATCAGGGATTATATATGTAGCTCAAAAATTCCCAAAAGTTTACTGTTAG
AGTTGGCAATTTCTATCACTATTTCAAGTGTGAGAACAACTGAAAAATAATGGCTCGTGTTTATGTTGAAGATAA
ATAGCACCATTATTGGGGGAAGTTATTCAAAGCAGGCTTTTGAGCACCATAGTCTAAATGCCAATAAAAAATAAT
TCATACATAGAAATGTCATTGGTCTGAAATTTGAAGAAAGTGAGCAACAGTAGTTAAATGTGGGTGCATATAACC
AAATTTCCCTTCATCAAGAATGGAGGAGAAGAGAGAAGAATGAAATCCTGAAGATTCATCCCAGCCGCAACTCAG
GATCCAACACAACCTTTAACTGGGAGGAATACATTGTTTGATCATTTTTTAAACATCTGTGAATGAGTGATTCCGG
AGGCCTGTGAATTGTGTGGGGAGCTTGCTTTGATGGCACTGTGTTAATAAAAGTTGTAGGGACTGTGCACCTAAG
AGGCTAAGAGGTCCCACTCATCCGCCCTGTGAACCAGCTGTAAAGAAATGTAGTTAAGAAATGCAAAGAAATGTG
TTATCTTGGCATTGGGTTTGATTTTCTTTTTTAAAGCACTGCAAACTTCTTTAGGATACTAAAACATCCTA
ATTGGGCTGTTTTTTGTTTTGTTTTGTTTTTACAGCTAAAGGCAAAGATAATTTTTTTTTTACAGTGAAGTTTTTC
TTTTTGCACCTATGACATGAATTGAGTGATAAAATGGCTCTTTGAAAAGTAGATATTGTCTGTATTGTAAATGC
TTAGTCATATTCATGGCAAAGTGTTCAATTTCTTGAGATGGTTCTTTCACAACACACAAGAATCAAGATGGAACGC
AAGGAAAAATCTTTTTGTTTTGACCGAGGTAACAGTTTATGTGTGTTCCAATCCATAGAGAAGTGGGGGAAAGGG
CGAGAAAGGATCAGATTGATCTGGGATCAGCTTTGAGCCTGAGTTCAGTGAATAGCCTCATGGGCATCTCATGGA
ATTGATGCATTTGCTGTGGCATATTTAAATTTTGTTCAAAAGATTGAAGCAAGACCTTGCAAAGACTCTTAACA

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FIGURE 1263B

TTACTGTTTCAGCTTGCTTAGATTGTGTTAACAGTTTCATTTAACAAAGATCCGTTTTAACTCTGAACAAAAGCAAC
CCAGAGCGGCCATTCTCTATTCCCATGCTGGTCAATACGCTTTTCATTACCAATTGGCCCTTACCAAACTTTTCTT
ATATATATATTTGTATTTTACTATGATAGTTGAGAAATTTAGCCTCTTAGTCATTTTTAGCTGTTATTGTGGAAG
ACCTCAAATACAAGATTAGATGCCCTTGAACATGTTTTAATGATGTGTGTCATGTTACTATCAATGGTGATTTC
ATCGCAATATTTTAAATTGATGAGAATGATTTGTAAACATGAAGTTACTATTACGTAAATTCTGTTTGTATAGA
GTTTCTTCAGTTGTTACCCAAGTGTCATCCTAGAGAAGTCAGAAGAATCAGAATCCATCGTATTTTAGAGTTATG
TGAATCTACATCATAAATGGGCATTAACATTCTAAATTGCTTGGTTTGGAGAATGTGTTAGCAGCATAGCTATAT
TCAACTAGGGAGATGCTAAATACACAGAAGTTTCAAGAGCCTTGGAAACAGAATTACAGGGGAACATATATATGTAT
ATGTATATTTTATTAAACACCCATCTGCACATCAGTATTGCACTAATGTGGAATTTGAAAGACTATTTTGCTGA
TACTGTATATATGCGCATCATTCCTGATTAGATTGTTGTAAAGACAATCTGAAAGATCTAAGGTTTTAAATAAT
TTGGTTTGAAAATATACAGTTGCTTGAAGGAATTGCTGTCATACATGAAGTTGCTCCGAGCTGTCTTTATTCTC
TTCTTGGTCAAGGTTAAACAATTGCTAAATGATCGCAAATTCACCTAAACAATACATTTACAAAGCCATCTTTACA
TGCATTAACGAGGGCTACAACAATATTGTTTTACAAATACTAGCACTTTTTTTTCTGTTATGTACTTAGTGTTA
GAGGGTCAAAATAATCTTTCTGCTTAGCATCTCTTAAACCATACTGCAAATATAGCAGGATTATTACATTTACA
GTACTTTAATACTTGTATAAACTATGCAGAAATTTTTAATAAAGTGTAATATATTTTATAAGCTAATAAGACTGA
ATGGGTAAAGGTTTTTAGCATGCGTTAGTATACTTGCAGATACTGAAACATTTTGGTAATCTTTCTTACTAAAGA
TGTGAATGTTTAAATGTACCTTCTCTGTTTCTACTCTGTAGTCCAATGGGAATTCAGTAATGACATTTTGTATGT
CAAACGTGAACATAAATTTGTACTGTACAGTCCTCATATACTATATACAGTATGCAATATATATTATATACTTG
TTAATAAAACCATCAGAATATTAAAAAAATCTATGTCGGGTGCGGAGAAAGAGGTAATGAAATGGCAGGAATTC
GATATCAGC

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FIGURE 1264

MLMFDPVPVKQEAMDPVSVSYPSNYMESMKPNKYGVIYSTPLPEKFFQTPEGLSHGIQMEPVDLTVNKRSSPPSA
GNSPSSLKFPSSSHRRASPGLSMPSSSPPIKKYSPSPGVQPFQVPLSMPPVMAAALSRHGIRSPGILPVIQPVVV
QPVPFMYTSHLQQPLMVSLSEEMENSSSSMQVPVIESYEKPI SQKKIKIEPGIEPQRTDYYPEEMSPPLMNSVSP
PQALLQENHPSVIVQPGKRPLPVESPD TQRKRRIHRCDDGCKNVYTKSSHLKAHRRHTHTGEKPYKCTWEGCTWK
FARSDDELTRHFRKHTGIKPFQCPDCDRSFSRSDHLALHRKRHMLV

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FIGURE 1265

GGCACGAGGCCTTCGGCCACCCCGCTGACCATGGCAGTGTTTCATGACGAGGTGGAAATCGAGGACTTCCAATA
TGACGAGGACTCGGAGACGTATTTCTATCCCTGCCCATGTGGAGATAACTTCTCCATCACCAAGGAAGATTTGGA
GAATGGGGAAGACGTGGCAACGTGTCCTAGCTGCTCTCTCATTATAAAAGTGATTTATGACAAAGATCAGTTTGT
GTGTGGAGAAACAGTCCCAGCCCCTTCAGCCAACAAAGAATTAGTTAAATGCTTGAAAGCCTTCAGGAATCCAA
ATCCTGAACATTTGGAATGAGCCCAGATAGAAATATCGAATGCAAAGCTACTGGCTTCACAGAGACAACCATTTA
TGATTTGCTGTTCTGTAAGAGTGTGGATTCTTTCTATCAACTGCTGATATCATCTTCAGGAAGCAAGTCCATAAC
ATGACATATCTGGATTTTGTGCTTAGAACCTTAAATTGGAAGCATTCTTAATTATGCATCTAAATTTAAAAGAAG
ATAATTTCAAAACAGTAAAAAAAAAAAAAAAAAAAA

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FIGURE 1266

MAVFHDEVEIEDFYDEDESEYFYPCPCGDNFSITKEDLENGEDVATCPSCSLIIKVIYDKDQFVCGETVPAPSA
NKELVKC

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FIGURE 1267

GGCACGAGGCCAGATACTACTGGCCATCAAGGGACAGAAGAAAAAGGCGCTCATTGTGGGGCACTGCATGCCTGG
CCCCGAATGACCCCCAGATTCGACTCCAACAACGTGGTCCTCATTGAGGACAACGGGAACCCTGTGGGGACACG
AATTAAGACACCCATCCCCACCAGCCTGCGCAAGCGGGAAGGCGAGTATTCCAAGGTGCTGGCCATTGCTCAGAA
CTTGTTGTGAGTTGAGCCCAGGCCTCTGGTTGCAGGACTCGTGAATGGAGCAGTTCTGAGAACCACCCTTTTGCT
AAGGGAGCTTGGGAGCCACATGGCTGCTCCCTTCACACTGGGTAACAGTGTAGTATCCTGTGAGAGAATAAATGT
ATTCATTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1268

TCATGGCCGGCTCCTACCCTGAAGGTGCACCTGCAATCCTCGCCGATAAGAGGCAGCAGTTCGGAAGCCGGTTCC
TGAGCGATCCGGCGCGGGTCTTCCACCACAATGCCTGTTGATTATGAGATCAATGCCCACAAATACTGGAATGAC
TTCTACAAAATCCACGAAAATGGGTTTTTCAAGGATAGACATTGGCTTTTTTACCGAATTCCTTGAGCTGGCACCT
AGCCAAAATCAAAATCATTTGAAGGATTGGTTCCTGGAGAACAAGAGTGAAGTATGTGAATGTAGAAACAATGAG
GATGGACCTGGTTTAATAATGGAAGAACAGCACAAAGTGTTCTTCGAAGAGCCTTGAACATAAAACACAGACACCT
CCTGTGGAGGAGAATGTAACCTCAGAAAATTAGTGACCTGGAAATTTGTGCTGATGAGTTTCCTGGATCCTCAGCC
ACCTACCGAATACTGGAGGTTGGCTGTGGTGTGGGAAACACAGTCTTTCCAATTTTACAAACGAACAATGACCCA
GGACTCTTTGTTTATTGCTGTGATTTTTCTTCCACAGCTATAGAAGTGGTCCAGACAAATTCAGAATATGATCCT
TCTCGGTGTTTTGCCTTTGTTTACGACCTGTGTGATGAAGAGAAGAGTTACCCAGTGCCCAAGGGCAGTCTTGAT
ATTATCATTCTCATATTTGTTCTTTTCTCAGCAATTGTTCCAGACAAGATGCAGAAGGCTATCAACAGGCTGAGCAGG
CTTCTGAAACCTGGGGGGATGGTACTTCTGCGAGATTACGGCCGCTATGACATGGCTCAGCTTCGGTTTAAAAAA
GGTCAGTGTCTATCTGGAATTTCTATGTGAGAGGTGATGGAACCAGAGTTTACTTCTTCACACAAGAGGAACTG
GACACGCTTTTTACCACTGCTGGACTGGAAAAAGTTCAGAACCTGGTGGACCGCCGACTGCAGGTGAACCGAGGG
AAGCAACTGACAATGTACCGGGTTTGGATTTCAGTGCAAATACTGCAAGCCCCTTCTGTCCAGCACCAGCTAAGAG
GCACCTGCTGCCAACACGATGCAAGCCCGTTGTGTTTCCGAGCTTTTTTTAAAAAAAATTTGTAGCACCAGGGCA
TGGTGCATGCCTGTAATCCAGCCACTCAGGAGGCTGAGGCAGGGAGGATCCATTGAGCCCAGGAGTCCAGCCTG
GGCAAAATAGCGAGAGACCCTGAATCTGAAAGTAATGATAAAATAAAAAGAATATAAATGAGGTCTCGTTGATGC
TGGACAATTCAAGAATTCAGACTTGAACCTTAAACCTAGGAAAAGTTACTTTGTATCAGGATTCTAACAATTATG
CTTCATATTTGTGAAGTCCTTTAAAAACATAATTTTCTCAAGTTCTTTCTTTGAGACCTCAATCTGTCTTAGCATT
TTGTAACTAATAACTGAAATTTTATTCAAAGGAATTGTAAACCTTAAACCACCAATTTATTTCCATGTGAAAAAG
TGTTATATATGACAAGTGTTTTTTGATTGTAATTGCGTTAAATCTTTTGAGAGTGTAATGCCGGGCTAGGCAAT
TGCAGTTAATACATACAGGGGTTAGTGAAGGGCTTATTAAGTTGTAGGGGAAGCAAGCTGGGAAGAATCAGATCA
GATATTTTCCTGAC

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FIGURE 1269

MPVDYEINAHKYWNDFYKIHENGFFKDRHWLFTEFPELAPSQNQNHLDWFLENKSEVCECRNNEDGPGLIMEEQ
HKCSSKSLEHKTQTPPVEENVTKISDLEICAEDEFPGSSATYRILEVGCGVGNTVFPILQTNNDPGLFVYCCDFS
STAIELVQTNSEYDPSRCFAFVHDLCDDEKSYVPKGSLDIIILIFVLSAIVPDKMQKAINRLSRLKPGGMVLL
RDYGRYDMAQLRFKKGQCLSGNFYVRGDGTRVYFFTQEELDTLFTTAGLEKVQNLVDRRLQVNRGKQLTMYRVWI
QCKYCKPLLSSTS

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FIGURE 1270

GC GCGGACCTTTCAACAAGGGCTTTATTAATTCTCACGCTGCGGCCCTGGAAAGCGATGGAGGTGGCGGCTAATT
GCTCCCTACGGGTGAAGAGACCTCTGTTGGATCCCCGCTTCGAGGGTTACAAGCTCTCTCTTGAGCCGCTGCCTT
GTTACCAGCTGGAGCTTGACGCAGCTGTGGCAGAGGTAAACTTCGAGATGATCAATATACACTGGAACACATGC
ATGCTTTTGGAAATGTATAATTACCTGCACTGTGATTTCATGGTATCAAGACAGTGTCTACTATATTGATACCCTTG
GAAGAATTATGAATTTAACAGTAATGCTGGACACTGCCTTAGGAAAACACGAGAGGTGTTTCGACTTCCTACAG
ATTTGACAGCATGTGACAACCGTCTTTGTGCATCTATCCATTTCTCATCTTCTACCTGGGTACCTTGTGAGATG
GAACTGGAAGATTGTATGTCATTGGAACAGGTGAACGTGGAAATAGCGCTTCTGAAAAATGGGAGATTATGTTTA
ATGAAGAACTGGGGATCCTTTTATTATAATTCACAGTATCTCACTGCTAAATGCTGAAGAACATTCTATAGCTA
CCCTACTTCTTCGAATAGAGAAAGAGGAATTGGATATGAAAGGAAGTGGTTTCTATGTTTCTCTGGAGTGGGTCA
CTATCAGTAAGAAAAATCAAGATAATAAAAAATATGAAATTATTAAGCGTGATATTCTCCGTGGAAAGTCAGTGC
CACATTATGCTGCTATTGAGCCTGATGGAAATGGTCTAATGATTGTATCCTACAAGTCTTTCACATTTGTTTCAGG
CTGGTCAAGATCTTGAAGAAAAATATGGATGAAGACATATCAGAGAAAAATCAAAGAACCTCTGTATTACTGGCAAC
AGACTGAAGATGATTTGACAGTAACCATACGGCTTCCAGAAGACAGTACTAAGGAGGACATTCAAATACAGTTTTT
TGCTTGATCACATCAACATTGTACTGAAGGATCACCAGTTTTTTAGAAGGAAAACCTCTATTTCATCTATTGATCATG
AAAGCAGTACATGGATAATTAAGAGAGTAATAGCTTGGAGATTTCCCTTGATTAGAAGAATGAAGGACTGACCT
GGCCAGAGCTAGTAATTGGAGATAAACAAGGGGAACCTTATAAGAGATTTCAGCCCAGTGTGCTGCAATAGCTGAAC
GTTTGATGCATTTGACCTCTGAAGAAGTGAATCCAAATCCAGATAAAGAAAAACCACTTGCAATGCTCAAGAGT
TAGAAGAAATGTGATATTTTCTTTGAAGAGAGCTCCAGTTTATGCAGATTTGATGGCAATACATTAAAACTACTC
ATGTGGTGAATCTTGGAAGCAACCAGTACCTTTTCTCTGTCATAGTGGATCCTAAAGAAATGCCCTGCTTCTGTT
TGCGCCATGATGTTGATGCCCTACTCTGGCAACCACACTCCAGCAAACAAGATGATATGTGGGAGCACATCGCAA
CTTTCAATGCTTTAGGCTATGTCCAAGCATCAAAGAGAGACAAAAATTTTTTGCTGTGCTCCAAATTACTCGT
ATGCAGCCCTTTGTGAGTGCCTTCGTGAGTATTCATCTATCGTCAGCCTGCTCCCATGTCCACTGTACTTTACA
ACAGAAAGGAAGGCAGGCAAGTAGGACAGGTTGCTAAGCAGCAAGTAGCAAGCCTAGAAACCAATGATCCTATTT
TAGGATTTAGGCAACAAATGAGAGATTATTTGTTCTTACTACCAAAAACCTCTTTTTAATAAAAGTAAATACAG
AGAATTAATTATTCTAACATATTGGCCTCTTTGTACTGGAAAAGTATTCAGTGGTACCTGGAGGTCTGGACAGTT
ATACTGTAACCTCTTAAGTTTTAATGTGCTAAATATATCTTGTATGATTTTTTTATTTTTTAATAACATTGGAAAT
ATATTCAAGAGATTATGATTCTGTAAAGCTGTGGAATGAAGCTGCAGATTTAGAGAACATTGGCTTCTGAAAAAA
AAAAAGAGTGAAGATAGTACTAGCAAGTATACTTATTTTTTAAACAGGCTAGAATCTCATGTTTTTATATGAAAG
ATGTACAATTCAGTGTTTAAAAATAAAAAATTTTATTGTGTAAAAA

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FIGURE 1271

ADLSTRALLILTLRPWKAMEVAANCSLRVKRPLLDPRFEGYKLSLEPLPCYQLELDAAVA EVKLRDDQYTLEHMH
AFGMYNYLHCDSWYQDSVYYIDTLGRIMNLTVMMLDTALGKPREVFRLEPTDLTACDNRLCASIHFSSSTWVTLSDG
TGRLYVIGTGERGNSASEKWEIMFNEELGDPFIIHHSISLLNAEEHSIATLLLRIEKEELDMKSGSFYVSLEWVT
ISKKNQDNKKYEIIKRDILRGKSVPHYAAIEPDGNGLMIVSYKSFTFVQAGQDLEENMDEDISEKIKEPLYYWQQ
TEDDLTVTIRLPEDSTKEDIQIQFLPDHINIVLKDHFLEGKLYSSIDHESSTWIIKESNSLEISLIKKNEGLTW
PELVIGDKQGELIRDSAQCAAIAERLMHMTSEELNPNPDKEKPPCNAQELEECDIFFEESSSLCRFDGNTLKTTH
VVNLGSNQYLF SVIVDPKEMPCFCLRHVDALLWQPHSSKQDDMWEHIATFNALGYVQASKRDKKFFACAPNYSY
AALCECLRRVFIYRQPAPMSTVLYNRKEGRQVGQVAKQQVASLETNDPILGFQATNERLFVLTTKNLFLIKVNTE
N

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FIGURE 1272A

GGGTGGCGGGGGTTGCAAGTGGGAAGCCTGCTGTTTCAGCTGCCCGGGCTCTCCGCCTCCCCCACCCTGTATTG
AGGCTGGGTCTGGGGAACCTGTGCTCAGCATTCACCCCTGGAGCTTGGGCTTGGTCTTCCCTGCGGGTCCCTG
CGCTGACATTACAGGCGGGGAGCCAGGAGGCCTGGGCGCCTCCAGAGCCCGCGGGGGAGCCGGGCGAGGGTTCTG
GGCTCTGACGGCGGGGTGCGAGGGTCCGCCGCCTCCTGGACACGTCTGTAGGCCTAGGGAAGCCTGCCGGCCCGG
GAGGTACAGAGTAGGAGAAGCCAGATCCCAGGGCGGACAACGAGAAGTCGTCAGGCTAAGAAATGGCATTTCAAA
AGGCAGTGAAAGGGACGATTCTTGTGAGGAGGTGCTCTTGCAACTGTTTTAGGACTTTCTCAGTTTGCTCATT
ACAGAAGGAAACAAATGAACCTGGCCTATGTTAAAGCAGCAGACTGCATTTTCAAGACCAGTTAACAGGGAGCCTC
CTTCCAGAGAAGCTCAGCTACTGACTTTGCAAAACACATCTGAATTTGATATCCTTGTATTGGAGGAGGAGCAA
CAGGAAGTGGCTGTGCGCTAGATGCTGTCACCAGAGGACTAAAAACAGCCCTTGTAGAAAAGAGATGATTTCTCAT
CAGGGACCAGCAGCAGAAGCACTAAATTGATCCATGGTGGTGTGAGATATCTGCAGAAGGCCATCATGAAGTTGG
ATATTGAGCAGTATAGGATGGTAAAAGAGCCCTTCATGAGCGTGCCAACCTGCTAGAAAATTGCTCCCCATTTAT
CAGCTCCATTGCCTATAATGCTTCCAGTTTACAAGTGGTGGCAGTTACCTTACTACTGGGTAGGAATCAAGCTGT
ATGATTTGGTTGCAGGAAGCAATTGCCTAAAAAGCAGTTATGTCCTCAGCAAATCAAGAGCCCTTGAACATTTCC
CAATGCTCCAGAAGGACAAACTGGTAGGAGCAATTGTCTACTATGACGGACAACATAACGATGCACGGATGAACC
TTGCCATTGCTCTGACTGCTGCCAGGTATGGGGCTGCCACAGCCAATTACATGGAGGTAGTGAGCTTGCTCAAGA
AGACAGACCCCCAGACAGGGAAAGTGCATGTGAGCGGCGCACGGTGCAAGGATGTCCTCACAGGGCAGGAATTTG
ACGTGAGAGCCAAATGTGTTATCAATGCCACGGGACCTTTACGGACTCTGTGCGCAAAATGGATGATAAAGACG
CAGCAGCTATCTGCCAGCCAAGTGTGCTGGTGTCCATATGTTGATGCCTGGTTATTACAGCCCAGAGAGCATGGGAC
TTCTTGACCCAGCGACCAGTGATGGGCGAGTTATTTTCTTCTTACCCTGGCAAAAGATGACGATCGCTGGCCTA
CTGATACTCCAATGATGTTACACACCATCCAATTCCCTCAGAAGAAGATATCAACTTCATTTTGAATGAAGTGC
GTAATTACCTGAGTTGTGATGTTGAAGTGAGAAGAGGGGATGTCTGGCAGCATGGAGTGGAAATCCGTCCTCTTG
TTACAGACCCCCAAATCTGCAGATACTCAGTCTATCTCCGAAATCATGTTGTTGATATCAGTGAGAGTGGCCTTA
TTACTATAGCAGGTGGAAAGTGGACAACCTATCGGTCTATGGCAGAAGATACCATAAATGCTGCTGTCAAACTC
ATAATTTAAAGCAGGACCAAGTAGAACAGTTGGGCTTTTCCCTCAAGGGGTAAAGATTGGAGCCCCACACTCT
ACATTAGGCTTGTGACAGGATTATGGACTTGAAAGCGAGGTGGCACAGCATCTTGCCGCCACCTATGGTGATAAGG
CCTTTGAGGTGGCCAAATGGCAAGTGTGACTGGCAAAAGGTGGCCTATTGTTGGAGTACGTCTTGTGTCAGAA
TTCCATATATTGAAGCAGAGGTGAAATATGGGATTAAGGAGTATGCCTGCACTGCTGTGGATATGATTTACGTC
GTACTCGCCTGGCCTTTCTAAATGTCCAGGCAGCAGAGGAAGCCCTACCCAGGATTGTTGAACTGATGGGCAGGG
AACTGAATTGGGATGATTATAAGAAGCAGGAACAACCTTGAAACAGCCAGGAAGTTTCTATATTATGAAATGGGCT
ATAAATCTCGATCAGAACAGTTAACAGATCGCTCTGAAATTAGCCTACTGCCTTCAGACATTGACAGGTATAAGA
AGAGATTTTATAAGTTTGATGCAGACCAGAAAGGCTTTATTACCATTGTTGATGTTTCAGCGTGTATTAGAGAGTA
TCAATGTCCAAATGGATGAAAATACACTCCATGAAATTTCTAAATGAAGTTGATTTGAATAAAAAATGGACAGGTTG
AACTCAATGAATTTTGCAGCTGATGAGTGCTATTCAAAAAGGAAGGGTATCTGGAAGCCGGCTTGCTATACTAA
TGAAACTGCAGAAGAGAACCTCGACAGAAAGAGTTCCAATTCCAGTGGACCGTAGTTGTGGAGGATTGTGAGTCT
GGGCAGTAAATCCACAGCCAACAAACATAGAAACGACAAATCACCATGTAACAACCAGAGATGACTGAAACCCT
CTGAAATAATGAATGTGGATAGCTGCCTTTTTTAACACTAGAAAACATTCCAAAACTTTAAGGTGTTGGTGTATT
TGCCAGCTTTATTTGCTGTACTTTATTTGTATTTGCCATTTCAGTCTAGCTTTTAAGTATATTTTTTCTTTTTCT
CATTTTCAATGCACATTAGTTTTGCACTGTGTTTTGTGACCTGTTAGATGTGACACATTCTTTTTTGTATTATCC
CTTATTCTAAATGAGTTCTAAAAACATAATATTTTGGCAAAAATTGAAAAAGCTGGAGACATTTTGTGACATGC
ATACAGATAGCATGTGTTATTAATAAAGAGTTGCCTATTGAAATGATCGTGTCTTGGAGAAATTAAGCTTATAGA
CAGCATGTGTTATTAATAAAGAGTTACCTATTGAAATGATAGTGTCTTGGAGATTTCTCAGCCCCATCTTCTCC
AGCTTGTCTACCTTCCTCATGCAACAATATTCCACATTTTTATATCTAGAGCATGACTGGCTAACTGGAGAGGG
AAGGAAAAGTTTAGATCTGGTTACTGGAGCAAGTCTCAAAGAGAACTCTGAAAGCTTCCAGAATCACAGGTATA
AGATAAGGATAGCATTGACATTTGCTGGGAGTTACAGTGATAGTTTCATCTCAGCAGTTTCAATTTTTCTTCAGT
CACTGCTGGTTTTCTTTGACTATTATAGTTGCCAGGAAGATCCTTGCTCTTCTTACTTTAAACCAGCATTTAAG
TGGCAATTTGGATGTAATAGGATGAGACCAAATTTATCTAATTATTACAGTAGTAATACATTTAAGAGTTAAAA
TGTGTTTTTATATATCCACATATGATAACAAAAGATTCAATTCCCAAGCCTAAATTTTGAAGCATGTGGTATTGT
CAAATCTAGCTTACCATCTTTTTTGGGGGTACTTGCAACCATAGTAAAGGAAGATGGAATAGACTTTAGTTAACT

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FIGURE 1272B

TTAATTATAATTATATGTTAAATAAGGCACATAACCAGTTTCCAAGGTCATCATGGTTGCTTAAAGTCTTTCCCC
TTCTGTACTCCATGGAAATATTCTCAGTAAACCAAAAACAAAATGGAAAAATAATCACCAACCCCATCCCGAC
ACACACACACAGTCCAAAGCAAAGTCAGTGTGTATTGAATTTAACAAGTAATGCAGTTTGGGATGCTTTTGCTA
CATTTTGGTGGCATTTTAACTAGTTATCTGAATATTTATTAATCGTACTTCCTCTTGTAAGTTAACTACTTACT
TTTTTGTGTGTGTTTTTTAACATCAGGTTCTGTATCTAATAGGAGATGTAACACTTTATTTTCATGGCAGGTTTT
TATTGCAGAGACTTGAAGTCTTAGTTTTTTAACTGGCACATAAAACACTTTTTGCTGTTATTTTTATTTATGTC
AATACTGCAGAGTATCTTTATGCCTTATTCAAGTGGATTCTGAGCCTGTATGTCACAATGTAAACACTGGAGGTT
CACTCACCTACGCACTCACCCACCACCTCTGAAAGAAACAGAACTGCAGAGAAAAGACAGCATCTTAGCTCATT
TGTTTTTAAATGAGGTTTTAGACGCTTGCCACTTCCTAAGGGAAATCCTAAAACAGAGCAAGTGATGCTCCCAGG
TATCACTGTGAACTTTTTTCTTTCAAAGTGTGAATTTTACTGCTTTTTTCATTTTTTTAAAGTAATTGAAGC
TTGTGGCTTTACAACCTTAGTGTTTTTGTCTATCCAGATAACAAGTTTCATTGTTTAGAACCCAGTGACACTTAAT
AGGTAGATAAAATGTCTTTTAAATATCCAGATGATATACACAATATGGTACATTTGTGCTCTCTCTCTCTGTT
TTTCTCTCTTTCTCTTTCTAGTTAGATCAAGATAACGATGACTTGTACCCTCCCTGATTCTGTTACAGTAGGGCC
CGGGCAGATCTGTGTTTGTAAACAGGCCTTGTTTGTGCATGCTTTGCTATGAATGAAGTTCCTTTAAGGACAAA
GAAAAGCACACTTTTCTTCTTTTGAGCATATCTGCTTTTACTTTAAATCTGCTAATTTCTAAAATGTAGAGTCTT
TCACCAATCCAGAGACTCAATTTGGAAATGAAGTGAATTTCAAGCCGTTACTGTCAATAAAGCACCCACAGCATT
TGTATAAGCTCTTAATTAACCTGTACAGCTTCTTTACCTGATTTAAGAAAGGGAGACAAGCAATAGGGGGGAAT
AAGCTTCTTCAAAATTCATTCCAAGCACAAAAGAAATTTTTTCCCTTTGCATATAAACTTGACATCAGTTGATT
TGTTGGGGTCGGGGTGGGTATGCAGGGATTGCCTTTTATTATCAAGTGATTTATTTCAAGAGCCTTTGAGGGGAT
TCAGGTGAAGGAACCCCATCTGTGCTGGAGAGTTGGATACTCCTTTAAATAGCCCCACCACAGTCATAACAAT
AATGATAATGCTGGATTATTTGTTAAGCCAAGGTTGTCTGCCTCATATCCATCATGCTGTTTGCAATATTCTTGC
TTCAATCAATTTATACTGAGTGTAACCTTTAGGATTCTGCTATTAAATGCATGCTCTCTATCCTGCTTCAGTTT
CTGGCTTTGCTTTGTCTGTTTCAAATATGTAGCTTCCTCTTTTGTACAACAAAAACTCATTCTCACTTTTACT
AAATATACTGTAGGAGTCATCATTGATGTTATTTTTCTCTTATGTATCTGTAAAGATTTTTGGCATATGAATGTA
ATATTAAAGTCAATGATGCTATAACTTGCGATGTTTGCATCATGTCAACCTTTTTGAAGGAGTGAAAAAGCCCTA
CTATGTTTTTAAATAGCAAGTGTAAGCTCAGTGCTAGAGTGGAATATACACACCGCATGTTTTCATATGTGGCACT
TTTATGTATCATGTTGGGTTATTGTTCTAGACTGGACTGTTAAATACTATGTTTGAGGCTGGGTTGTCATTTTTA
TAACTGTCTTGGTGTTTTATGGCCATTATTTATTACTTTTGATACACAGAATGAGCTGCATGCATTTATAGAGCA
ATAAGAGGATGTATTTAATGTGCCTTGTTTTTAACTGAATAAGAAGTGAAGCATGAATCAATAAACTGATTAA
AATGGTCTATTTGCTAGCATTTTGATGTTACTTGCACTCAGATAACTTTGATTACTGTTGAAGTTTAAAAAAGT
TTGAAAATATTTTTACAACTGTGTTTTTGATGACACAAAAGTGAAATATCTACAGAGATAGATGTAATTTTATA
AGACTGCCAGAATTATTTGTATTAATTTGTTGCTGTAGCCTTTAGGGCATGACTTCTGTATTTGTGCAATCCTAT
TCTACAATTACATTCATCCTATTACAACCTCAAAGAAAAACAAAAAGTCGACGCGG

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FIGURE 1273

MAFQKAVKGITILVGGGALATVLGLSQFAHYRRKQMNLAYVKAADCISEPVNREPPSREAQLLTQNTSEFDILVI
GGGATGSGCALDAVTRGLKTALVERDDFSSGTSSRSTKLIHGGVRYLQKAIMKLDIEQYRMVKEALHERANLLEI
APHL SAPLPIMLPVYKWWQLPYYWVGIKLYDLVAGSNCLKSSYVLSKSRALHFPMLQKDKLVGAIVYYDGQHND
ARMNLAIALTAARYGAATANYMEVVSLKKTDPTGKVHVSGARCKDVL TGQEFDVRAKCVINATGPF TDSVRKM
DDKDAAAICQPSAGVHIVMPGYSPESMGLLDPATSDGRVIFFLPWQKMTIAGTTDTP TDVTHHP IPSEEDINFI
LNEVRNYLSCDVEVRRGDVLAAWSGIRPLVTDPKSADTQSSIRNHVVDISEGLITIAGGKWT TYRSM AEDTINA
AVKTHNLKAGPSRTVGLFLQGGKDWSTLYIRLVQDYGLESEVAQH LAATYGDKA FEYAKMASVTGKRWP IVGVR
LVSEFPYIEAEVKYGIKEYACTAVDMISRRLAFLNVQAAEEALPRIVELMGRELNWDDYKKQE QLETARKFLY
YEMGYKSRSEQLTDRSEISLLPSDIDRYKKRFHKFDADQKGFITIVDVQRVLESINVQMDENTLHEILNEVDLNK
NGQVELNEFLQLMSAIQKGRVSGSRLAILMKTAENLDRRVP IPVDRSCGGL

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FIGURE 1274

TTTTTTTTATCATTGACAATGTTTATTATCAAGAACTTTAGGTTTTTTAAAAGAATGCTCGTTTTAGAAATACAC
CAAGAGGACACTCTGTGACAGGACATATACAAACAAGGATAATTTAAATATTAAATACTATCTAAATTAAAAGAC
CATAATTCAAATTGCTAATTATAATATTTGTGTCGGTAGAAATAACTATAGTTCCCTTCATGAAATTCACCCCC
ACGTTCTCATGAAGACTATGACGTCTCACCACAATTTTCAGTTATTTAATTTACAATAATCAATGCTGAGTTTTCT
GTGCTGAAGCATGCACTGTTACAGAAAGCACAAAATCCTATTTACAGGGATTTTGTAGTTTTCTTTAAAATGTATC
TCAAGCATCTTTTAAAGTGCAGCTACAAATAGGTTGTATCCTTAATGAAAAAGGCTTCTTTCTAAAAGAAGTAT
GAGATAGCTATCCAATACTGCAGGAACAGTTATATAACTAACCGAAGGAACCAGCAGCACTCTGCTAACTCTGTT
TTAGTGTAGCAACCTCCTTCTTGGTGTTCTACTACCAGCCAXACATGTACTCCATTGCTTTGGATACCAGACTTT
CATCTTTTTTTGGCGTTTGCTGTGCAGAAATACCCTGATAATCACTAGTAGAGGC

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FIGURE 1275B

CACATATAAGCCATAGTTACAGTACAGGTGGCAGTATTTAGAGCACTCAGATTTTCAGTTCTGTTAAATGTGAAAAG
AGGGATCGACTGACGTTTCATTGCTGTTCCATAACTAGTGTAATAATGTATATGTTTATCTTTATTTTTATAATA
TGCAAATACATTTAAATTTATACAGTTTGAAGCTTCTAGCGTTAGTTCACACTGGGTGCAATATTCTGCATGAGA
ACTGTGCCAAGATGGGGCTGATTTCTTATTTTAGTATAAGACTTTTTTGTTTTTCTTTATTCTTTAATCCTCTT
CACATTAAAAAAAAAAATCTCTCTGTTAGCCCATGGATTAAGTGTTGGTTCATAGAGATTGCCAATAATCAGAA
AGAACCTTAAATGTGCATTTAAGACAGTGTCCTTCCCTTCTTTTCAATGAAGGTCCCTGCCTATATAAATCATC
TGGCACGCTGGTGGGAAATCCTTTGCTCTTCCAACGTGTTATTAGTGCTGGGCAGAGATGGGGCACACTCAGGGG
CCAAAGAGGACAAAAAGTCCATGCAAACTTGAGTCTTTTAATGGCTTAAGATAATCAGGAGTCAGTTCTGAATC
TTACAAAGTGCTCTGCTTAATAAGTACCTTACTTAGCAGAGCACTTTGCAAACATATTACTTATTAGCAGAGCTC
TTTGTAGACCTTCCACATCTGGCTGTCAGATCTTAAGGTTGTGAATTTAGGCTCCAGTTACATTTACTGGAGAGC
ATAATCCACACGGGTATTTTATAAATACAGAGCCTCTGATTGGACGGTCTCCTGCCAAGAACTAGTAATACCTT
TGTTTTAAATCTTACAAAGGTAAACTTAAAAAGCCAAACCAAAATGCTCTCCATTCTACTTTTAATTGGG
CCAAACAGCATATGCTACAGTAGTAACATGTTTTTCGGAGAGTGTAATAAACTCTGTTTACATTTGCCTCCTCCG
TGGGTTGATCGAAAATGTATAAACTGACTGCTTCTCGCCAGCCTCAGACAAGAAGAGTGAGTTGCTGGTACTCG
CTACTCTTTTACTTCTTTTGTAAAGTATTGACTCTTGGAAGGCTACAGTATACAAAGTCTCAACATGTTTTTTAA
AAGAAATAAGGAGCAAGCGACTGCCCTGCTAGAAATCACAAACCGATTTTTGTAGAATATTTTGTGCCCCAGGCA
TTAATTTCACTGACTCCAGAACCTGCAGTTCAGAGAATGATTTCTTATGATGATAAAAATCGAATGGGATCAGAC
GATGTTTGCATTTTTTTAATACTTGAATAGGACACCTCAAGTTTGAGATTTTCATTTTCTTTTAGAACACAGTCAC
AAGATTAATCTGGTGAATCCTTTTGTACAGTTCCTCGTGTGTGTGTGCGCGTCTCCNNNNNNNNNNNNNNNNNN
NNNNNAAAACCTGAATGGTCACATTTAATTGCTTTTTGGACCATTGAATAGTTGGGAAGTAAGAATTTTTTAATTG
GCATGAGACGGTTCCTCAACTGTAAATTAACCAACTTTGACCTGTCTTTAGAAAAAGGCTTATTTGTATGATTT
TGGGCTAACTCCCCGGGGACCATATTAAATGACAAAAATGCTCCTTTGGGTGACACACCCTACAAAGTATTTGCT
GTTACGAACATAAACGCCACATTCTTAATATCTAATATTTTTGACCAGTGATGTTTTATGCTGTCTATCTGAACC
CTAGAGAAGCAGTGTCAGAGGAAACCTTGGTGTCATGTGTCTTAGCAAAAGGGTTACCATGATCGAGGGTCAT
GTGACCAAAAGATGCTCCAGAGAAGCTTGAGAATTTGTTTCAAGTTGGGAGGAGGGTTGGAGATACAAAAATCAC
TCTGCTCTACAGGACTCTTCAGCTGTCTATGCAAGAAATTCGGTTTTCTCTTTCAGCACCTGGAAGACACAGCA
GCCACCGAGGCGATAGGTGATTCACCTAAGCACAGAGGAATGTTTTCTAAGCAAGGCGTCCCTTGCTCTCAAA
CAAATGCCCTCCAAGTTTGTAGGGTTTCTATTCTGCAACTTGATGATCAAAACCACTTCTGGAATTGTCAA
AGCACTGCCAAAATAAATGTTTTTCCCCCTTCTAAGAAAAAAAATGACAGTGCTCATATTTGACACTTGTGTA
TTGGACTCTCTTTGAATGAATAAAAAGGAAAAGGGGTTGGTGTAATTCCTGATGGGGTGCGTGTTGTTTTCA
TGCCATGGTTTGTGAATTTAATTGTGGTTTCCCATTTCTGTTGTGTAAGTGGGCAGAAATAAAAAAGAAAAAT
CAATAAAAATACAAAGAAATGGTTAAAAA

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FIGURE 1276

AAGRRAREGRQGOEPEGPGRGAACSCGLPRRVRLSARGPAMAGMDSGNLKTARLWRDAALRARKLRSNLRQLTLT
AAGACPGAGADALESPASPQLVLPANLGDIEALNLGNNGLEEVPEGLGSALGSLRVLVLRNRNFARLPPAVAELG
HHLTELDVSHNRLTALGAEVVSALRELKLNLSHNQLPALPAQLGALAHLEELDVSFNRLAHLPDLSLCSRLRT
LDVDHNQLTAFPRQLLQLVALEELDVSNNRLRGLPEDISALRALKILWLSGAELGTLFAGFCELASLESMLDNN
GLQALPAQFSCQLRLKMLNLSNNLFEEFPAALLPLAGLEELYLSSQPAHLGAIRLSRAWAGFLTTLWLDNNRIRYL
PDSIVELTGLEELVLQGNQIAVLDPHFQGLSRVGLWKIKDNPLIQPPYEVCMPGIPYIAAYQKELAHSQPAVQPR
LKLLLMGHKAAGKTLLRHCLTEERVEGCPGGGDKKCYPPSPPPVSKGIEVTSWTADASRGLRFIVYDLAGDESY
EVIQPFFLSPGALYVLVVNLATYEPRHFPTTVGSFLHRVGARVPHAVVCIVGTHADLCGEREELEEKCLDIHRQIA
LQEKHDAEGLSRLAKVVDEALARDFELRSASPHAAYYGVSDKNLRRRKAHFQYLLNHLRLQILSPVLPVSCRDPRH
LRRRLDKLLSVAEHREIFPNLHRVLPERSWQVLEELHFQPPQAQRLWLSWWD SARLGLQAGLTEDRLQSALSYLHE
SGKLLYFEDSPALKEHVFNHLTRLIDILNVFFQORDPSLLLHKLLLGTSGEKGAEGESSPPMARSTPSQELLRATQ
LHQYVEGFLHGLLPAHVIRLLLKPHVQAQDQLQLLELLEKMGCLCYCLNPKGKPLNGSTAWYKFCYVQNEVP
HAEAWINGTNLAGQSFVAEQLOIEYSFPFTFPPGLFARYSVQINSHVVHRSDGKFQIFAYRGKVPVVVSYPARG
VLQPDTLSTASHASLPNIWTAWQAITPLVEELNVLLQEWPGHLYTVHILCSKCLKRGSPNPHAFPGELLSQPRPE
GVAEIIICPKNGSERVNVALVYPPTPTVISPCSKKNVGEKHRNQ

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FIGURE 1277

GCAGCCCCGGCGGCCGAACGCCCGCGGGCGGGACTCCATCGTCAGAGAAGTCATTGAGAATTCAAAAGAAGTTC
TAAGTTTATTGCAAGAAAAAACCTGCTTCAAGCCGTTCTTGCAATTATCCAGGCAGGTGACGACAACCTGA
TGCAGGAAATCAACCAGAATTTGGCTGAGGAGGCTGGTCTGAACATCACTCACATTTGCCCTCCCTCCAGATAGCA
GTGAAGCCGAGATTATAGATGAAATCTTAAAGATCAATGAAGATACCAGAGTACATGGCCTTGCCCTTCAGATCT
CTGAGAACTTGTTTAGCAACAAAGTCTCAATGCCTTGAAACCAGAAAAAGATGTGGATGGAGTAACAGACATAA
ACCTGGGGAAGCTGGTGCAGGGGGATGCCCATGAATGTTTTGTTTACCTGTTGCCAAAGCTGTAATTGAACTTC
TTGAAAAATCAGGTGTCAACCTAGATGGAAAGAAGATTTTGGTAGTGGGGGCCCATGGGTCTTTGGAAGCTGCTC
TACAATGCCTGTTCCAGAGAAAAGGGTCCATGACAATGAGCATCCAGTGGAAAACACGCCAGCTTCAAAGCAAGC
TTCACGAGGCTGACATTGTGGTCCTAGGCTCACCTAAGCCAGAAGAGATTCCCCTTACTTGGATAACAACAGGAA
CTACTGTTCTCAACTGCTCCCATGACTTCCTGTCAGGGAAGGTTGGGTGTGGCTCTCCAAGAATACATTTTGGTG
GACTCATTGAGGAAGATGATGTGATTCTCCTTGCTGCAGCTCTGCGAATTGAGAATGAGTGGTCAAGTGGAGGA
GATGGCTTCGTGAACAGCAGCACAGGCGGTGGAGACTTCAGTGTGAACTTCAGCCTCTCTCCCCTGTGCCAA
GTGACATTGAGATTTCAAGAGGACAACTCCAAAAGCTGTGGATGTCCTTGCCAAGGAGATTGGATTGCTTGCA
ATGAAATTGAAATCTATGGCAAAAGCAAAGCCAAAGTACGTTTGTCCGTGCTAGAAAGGTTAAAGGATCAAGCAG
ATGGAAAATACGTCTTAGTTGCTGGGATCACACCCACCCCTCTTGAGAGAAGGGAAGAGCACAGTCAACATCGGGC
TTGTGCAGGCTCTGACCGCACACCTGAATGTCAACTCCTTTGCCCTGCTTGAGGCAGCCTTCCCAAGGACCGACGT
TTGGAGTGAAAGGAGGAGCCGCGGGTGGTGGATATGCCCAGGTCATCCCCATGGAGGAGTTCAACCTTCACTTGA
CTGGAGACATCCACGCCATCACCGCTGCCAATAACTTGCTGGCTGCCGCCATCGACACGAGGATTCTTCATGAAA
ACACGCAAACAGATAAGGCTCTGTATAATCGGCTGGTTCCCTTTAGTGAATGGTGTGAGAGAATTTTCAGAAATC
AGCTTGCTCGGCTAAAAAACTGGGAATAAATAAGACTGATCCGAGCACACTGACAGAAGAGGAAGTGAGTAAAT
TTGCCCGTCTCGACATCGACCCATCTACCATCACGTGGCAGAGAGTATTGGATACAAATGACCGATTTCTACGAA
AAATAACCATCGGGCAGGGAAACACAGAGAAGGGCCATTACCGGCAGGCGCAGTTTGACATCGCAGTGGCCAGCG
AGATCATGGCGGTGCTGGCCCTGACGGACAGCCTCGCAGACATGAAGGCACGGCTGGGAAGGATGGTGGTGGCCA
GTGACAAAAGCGGGCAGCCTGTGACAGCAGATGATTTGGGGGTGACAGGTGCTTTGACAGTTTGTATGAAAGATG
CAATAAAACCAAACCTGATGCAGACCCTGGAAGGGACACCTGTGTTCTGTCATGCGGGCCCTTTTGCTAACATTG
CTCACGGCAACTCTTCAGTGTTGGCTGATAAAATTGCCCTGAACTGGTTGGTGAAGAAGGATTTGTAGTGACCG
AAGCTGGCTTTGGTGCTGACATCGGAATGGAGAAATCTTCAACATCAAGTGCCGAGCTTCCGGCTTGGTGCCCA
ACGTGGTTGTGTTAGTGGCAACGGTGCGAGCTCTGAAGATGCATGGAGGCGGGCCAAGTGTAACGGCTGGTGTTC
CTCTTAAGAAAGAATATACAGAGGAGAACATCCAGCTGGTGGCAGACGGCTGCTGTAACCTCCAGAAGCAAATTC
AGATCACTCAGCTCTTTGGGGTTCCCGTTGTGGTGGCTCTGAATGTCTTCAAGACCGACACCCGCGCTGAGATTG
ACTTGGTGTGTGAGCTTGCAAAGCGGGCTGGTGCCCTTGATGCAGTCCCCTGCTATCACTGGTCCGTTGGTGGAA
AAGGATCGGTGGACTTGGCTCGGGCTGTGAGAGAGGCTGCGAGTAAAAGAAGCCGATTCCAGTTCCTGTATGATG
TTCAGGTTCCAATTGTGGACAAGATAAGGACCATTGCTCAGGCTGTCTATGGAGCCAAAGATATTGAACTCTCTC
CTGAGGCACAAGCCAAAATAGATCGTTACACTCAACAGGGTTTTGGAAATTTGCCCATCTGCATGGCAAAGACCC
ACCTTTCTCTATCTCACCAACCTGACAAAAAAGGTGTGCCAAGGGACTTCATCTTACCTATCAGTGACGTCCGGG
CCAGCATAGGCGCTGGGTTCAATTTACCCTTTGGTCGGAACGATGAGCACCATGCCAGGACTGCCCACCCGGCCCT
GCTTTTATGACATAGATCTTGATACCGAAACAGAACAAAGTTAAAGGCTTGTTCTAAGTGGACAAGGCTCTCACAG
GACCCGATGCAGACTCCTGAAACAGACTACTCTTTGCCTTTTTGCTGCAGTTGGAGAAGAACTGAATTTGAAAA
ATGCTCTGTTATGCAATGCTGGAGACGTGGTGAATAAGGCCAAAGATTTCTTCTCGTTCAAGATGAATTTCTGTTC
ACAGTGGAGTATGGTGTTCGGCAAAGGACCTCCACCAAGACTGAAAGAACTAATTTATTTCTGTTTCTGTGGA
GTTTCCATTATTTCTACTGCTTACACTTTAGAATGTTTATTTATGGGGACTAAGGGATTAGGAGTGTGAACTAA
AAGGTAACATTTTCCACTCTCAAGTTTTCTACTTTGTCTTTGAACTGAAAATAACATGGATCTAGAAAACCAA
AAAAAAAAAAAAA

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FIGURE 1278A

CGGGGCCGCTGAATGAGATCCTCATCTGCGGGAAGTGTGGCCTGGGTACCACCAGCAGTGCCACATCCCCATAG
CGGGCAGTGCTGACCAGCCCCTGCTCACACCTTGGTTCTGCCGACGCTGCATCTTCGCACTGGCTGTGCGGAAAG
GCGGCGCGCTGAAGAAGGGCGCCATCGCCAGGACGCTGCAGGCCGTGAAGATGGTGTCTCTACCAGCCCGAGG
AGCTCGAGTGGGACTCGCCCCATCGCACCAACCAGCAGCAATGCTACTGCTACTGCGGCGGGCCCGGAGAATGGT
ACCTGCGGATGCTGCAATGTTACCGGTGCAGGCAGTGGTTCCACGAGGCCTGCACCCAGTGCCTCAATGAGCCCCA
TGATGTTTGGAGACCGGTTTTACCTGTTCTTCTGCTCCGTGTGTAACCAGGGCCAGAGTACATCGAGAGGCTGC
CCCTGCGATGGGTGGATGTGGTTACCTGGCCCTCTATAATCTGGGGGTACAGAGCAAGAAGAAGTACTTTGACT
TTGAGGAGATTCTGGCCTTTGTCAACCACCACTGGGAGCTCCTGCAGCTTGGCAAGCTCACCAGCACCCCACTGA
CAGATCGAGGACCACATCTCCTCAACGCTCTGAACAGTTATAAAAGCCGGTTCCTCTGCGGCAAGGAGATCAAGA
AGAAGAAGTGCATCTTCCGCTGCGCATCCGCGTCCCACCCAACCGCCAGGGAAGCTGCTGCCTGACAAAGGAC
TGCTGCCAAATGAGAACAGCGCCTCCTCTGAGCTGCGTAAGAGAGGAAAGAGCAAGCCTGGTTTGTTCCTCACG
AATTCCAGCAGCAGAAAAGGCGAGTTTATAGAAGAAAAAGATCAAAGTTTTTGTGGAAGATGCTATTCCAGTA
GTGACTTCACCTCAGCCTGGAGCACCAACCACCACTGGCTAGCATATTTGACTTCACGCTGGATGAAATTCAA
GTTTAAAAAGTGCCAGCTCAGGCCAGACCTTCTTCTCAGATGTGCACTCCACCGACGCTGCCAGCACCTCTGGCT
CTGCCCTCCACAGCCTCTCCTATGACTCCAGATGGACAGTGGGCAGCCGAAAGAGGAAGCTGGCAGCCAAGGCAT
ACATGCCCCCTGCGGGCAAAGCGGTGGGCAGCTGAGCTGGATGGACGCTGCCCCCTCGGACAGCAGTGCAGAGGGGG
CTTCAGTCCCCGAGCGGCCAGACGAAGGCATTGACAGCCACACATTTGAGAGCATCAGTGAAGATGACTCATCCC
TGTCCACCTCAAGTCATCTATCACCAACTACTTTGGTGCAGCTGGGCGGTTGGCCTGTGGGGAGAAGTACCAGG
TGTTGGCTCGGAGGGTACACCTGAGGGCAAGGTTCACTACCTGGTGGAGTGGGAAGGGACCACCCCTTACTGAC
TAGCCCCCGGGGTGCCAGGGGTCTGAAAACCAAAGGAGGAGCAGCAGAAGCCATAGGCTCCCCAGCTTTCTCC
AGGCTGGGGTGGGAGAAGGAAGCAGGACAGAGCTGCAAGTGCCCTGGCAGAATGCCCTGCCTGCCTGCCTGCCTGC
CAGGCCAAGGCCTGCGTCTCTCTGCTGTACCAGCTCTGTTCCAGGGCCTCCTCAGGCTCGTTACCCCTGTGCCTG
TGTCTCTACACACTCCACACCCCTCAAACCTCTGTTATCTGTTCTCTGACCTTGTGTCCCTGCGCTGGGACCC
TTCTCTCTGAGGCCAGGTCTTTGTCCCCAGTTGTGTGCCTTGACCTCTCTCGCCCTTTCTGGGTGTGTTCCGA
CATCCTGTGTGTGCACAGCTGTCCCTCCACTGGATCCCTTCACACGTGACCCGTGGGGCAGCCAGTCCCTCCAG
GGACTACATAACAGGCACCTTTGAGAGAGCATGGGAGAAGGTGGATAAGAGGATGCTGCTCAGTGCTTTTCTCTT
CCACTTTCTGCCACTCCCCACTACCTCGGAGAGAGGTGGTGGGATGGGAGAGAGCCCTGTGAAAGCCTGTGA
GGATCTGAAGAGTAAAGGGCTGGGTCTGCCTCAGAAAGGCACCAGCACCAGGGCCAGGTATTAAGGCTGAGAGTG
AAGGCTGCCAATGTGAGCTTTGGAGGTCCAGAAAGTCTTCTGTTCTCTGGCCTCACCCCTCAGTCGCCATAGAG
CTGGGCCTGGCCTTGCTGGAATGGAGGCATCCTTCCAAACCTGGGGGACGGGGGTGGGGGGTGGTAGTGGTGGGA
GGGAAACCATGTCTTGCTAAACCTGTTTCTGGTGCTCCCATCCCCAGACCCACCAGACACCACACAGCAGACAA
TACACACCCACTCGCACAAAGCTTCCATCCACATGTGTTGTACTTTAGCTCTAGGCATGCAGACAACCCACACAG
GCCACACCACCATGCCAAGTGACACACACAGAGCCACACCGTCCCTCTGGGCCTGCTGGCTCCTCCCTTGG
CTTTCCCTTGGCCACTTCCAGGGCCCAGGTGCTGCAACTAAATGTGAAAGCTCAGTGGCCGCTCCTTCTTTCAG
CCCATCAACCAGCATTGGTCCCATAGGGAAGCACAGGGGACTCACCTCTTTTCATATCCCTTGCCCTGCCCTGAA
ATGGACAATCACTTTTTTGGGATAGGTTGAAATTTTTTAAAGAGCCTGCATCATTCGGTTCCTCAAAGGGAAGCCC
TTGCTAGTGGGGGTTTGAAGAGAATTTTTTGAACCAACATTCAAATTTCTGCCTCATCTGGAGGGAAACCAAAAT
TGGGAGGGGGAAGAGGACCCCTGATGTTTTGCTGCTTCCAGAGATATTAGAACTGACTCACTTGATTGGAATAAT
GGACAAAAGTGCCTTGACGTGGAGGGTGGGCACCAGATGGGGACCAGCCTTGCCAACTGCTGCTGTGGCCTCCAG
CTTGGCTGGTTTTTGACAGGCCGCCAGCAGGAAGGCGAAGGTGGTAGTACAGCAAGAGGCACTGGCGGGGCAGCAGG
CCTGCAGGAGCTGTTTTTCCATTGCTAGGCCTGACCCCTCTCTACCTGTGAGCGTTTCAAGGGGTCCCTGAGATAG
TTTAGATGCCCCCCCCATCTTAGACCTCAGCTCCCACAGTGCCTTTTAAGGGGGACCTCACCTCCTGTGCACAGC
CCACCCACTTTCTCTGCTTCCCTGGCACAGCCAGGCATAGACGAGCTGGCGTTGGACCCAGTTCTTCCCCCTT
TTCAGCCCCACAGCTGCTGCCACAGGGGCCAACTAGGGCCAGGTGGAAGGGGAGCTGAGAAGCCAACCCCTAGCC
CAGGGGTGCTGTGGGAACTGGGATCCAATTTGTAGCTTCCCGCCTGGCTTCAGAGAGCCAGCAACCTTCTAGGC
CTGCTTTCCAGACTTCTGAGATAGCCTGGGATGAGCAATCCTGTTACAGTACATCTGGACCTTCCCTACCTGGGC
TCTGGGGAGGCTGTGGGCCTGGAGAGGGAAAAGGAGGGAGGGGGTGTCTGCACCACCTGGGAAGATAGCACAAGG
CCTAATGAGGTCACCTGACTCCCCACCCAGCATTTTCATTACATACCAGATAATAGCTGCATTACTGCCAACTGA

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FIGURE 1278B

CCTTATAACCCTCTGCACCTTCAAAAAGATTCATGGTTTTAATTGCTGCTTTTAATAACATTTGTAAAGTTAAA
AAAAAAA

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FIGURE 1279

GPLNEILICGKCGLYHQCHPIAGSADQPLLTPWFCRRCIFALAVRKGGALKKGAIARTLQAVKMVLSYQPEE
LEWDSPHRTNQQQCYCYCGGPGEWYLRMLQCYRCRQWFHEACTQCLNEPMMFGDRFYLFCSVCNQGPEYIERLP
LRWVDVVHLALYNLGVQSKKKYFD FEEILAFVNHHWELLQLGKLTSTPVTDRGPHLLNALNSYKSRFLCGKEIKK
KKCIFRLRIRVPPNPPGKLLPDKGLLPNENSASSELRKRKSKPGLLPHEFQQQKRRVYRRKRSKFLEDAIPSS
DFTSAWSTNHHLASIFDFTLDEIQSLKSASSGQTFFSDVDSTDAASTSGSASTSLSYDSRWTVGSRKRKLAAY
MPLRAKRWAAELDGRCPDSSAEGASVPERPDEGIDSHTFESISSEDDSSLHLKSSITNYFGAAGRLACGEKYQV
LARRVTPEGKVQYLVEWEGTTPY

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FIGURE 1280

CTGTTTATAGATAATGTCTGCAGTTTCTGTTTGAGAGAGATAATTATGACACTTAGCATTGGAAAATAAGAAGA
ACGTAAGCAGGTCAGCTATCAGAAGTCTTCAGACTGGAGAGATTCTGGAGGGGGAGTGGCCCTTTAATCCATCA
GCTGAAGCCATCTGGTAGGACGCTCGTTGCAGAAATGGTTAGTTCTGAAATGTTGTAGCTCAGCAACATCACTGA
ATGTCACAGAATTGACAGGCACGGAGCTAAAAGGGCCTCTAGCCACCCCCACAACCTCCGCTCTACCTCTGTCTCC
CTAACACATGACTTGGAACAAATACACTCTAGGTACAAAGATGGCTACCTGAAGTTTATGATCCCTACTCATGGA
GCTGCTTGAGGACTTCACATTTTTTAAAAGCTGCTTTGGGCACCCCCATTCCTGAGGAGTTTTGTAGCTTGGTT
TCTCTTTGCCACATTACGTTTGTAAAGACTAACATTTTATAACCATAAGCAGTTAGGCCTTTTTATTTTGAGAAAT
TTATCTGTAGCTTCCTTTTTATTTACACTTGGGGACTATTTTAAAGTAACCGATTGAAATATTTTTGTTTCTCCAT
TGCAAGTGAAATCCTTGTTGCTAATCTTTTGCCACATGTAAATTTGTTCACTTGTTATCAAGCAGGTAGTTCAAT
ATCTGTAATTCCTGAGTTCTTTTCAACTAGCATGATGCTAGGTGTCACCTCACTGTTTTTTAATTGTGGGAGATTG
ATGCGTCAGTGCATGAAGTGGGGGGTGGTCACCAGCATCTAACTCAAAGTGTGATTATAGCTATCTTACCACATT
TTTTTTTTCTTTCTCACTCTGTCACCCAGGCTGGAGTGCAGTGGTGTAACTCTCAGCTCACTGCAGCCTCGACCTC
CTGGGCTCAAGCGATCCTCCTACCTCAGCCTCCCAAATAGCTGGGACCACAGGCGCATGCCACCCCACTAAGCTA
ATTTTTCTATTTTTTGAGAGACAGGGTTTTGCGGTGTTGCCTAGGTTGTTCTCAAACCTCCTGAGCTCAAGCCTG
CCTCAGCCTCCCAAAGTGCTGGGATTACATGTGTGAGCCACCATGCCTGGCCGTCCTAATCTTCAAGGTTAATA
TTTGGAGGACCCATCCAGAGTCCAAAGGTGGTCTTCGAGGGATAGCACGAGGTGGTCTGACAGGACTAACACTTA
CCAGCCTCTATGCACTATATAATAACTGGGAGCACATGAAAGGCTCCTTGCTCCAACAGTCACTCTGAAGATTTT
GCCAACTCATGAATGGAGGACACTTCAGTAGTCATCTAGATCCTTTTATAAGACAGTTTGAGATTATTCTCTCTC
TTCTACCTACAATTAGTTTGAAAAATTGGAGATTTTGATTTGCTGTGATGAAATCCTGGATGGCTGACCAAGAC
TGGCACTTGTTCCAGCCATTAGTGAGTTGAAGCCAAAGCCCTTTGGTGACTCACTGAGTACCATGGTTCTGTTCT
CCTCTGGAGATCTTGACGTATCTGTTTTCTCCCCATGAACTAGAAAACCACTTACTCCCAGAATTCAGGTCTG
TGCTTGTTAGTACTATATCACCAAGTCCATTCAATTAATGATCCAAAACCTGTAATGTTGCACTGTATTCCAAATA
AAGGGTAAAAACAGAACCAAAGGTATAACTCCAAAAAAAAAAAAAAAAA

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FIGURE 1281

GTCCTCTCTGCTCTCGCGGCCGACTCGCAAGATGGCGCCGCAGAAAGACAGGAAGCCCAAGAGGTCAACCTGGAG
GTTTAATTTGGACCTTACTCATCCAGTAGAAGATGGAATTTTTGATTCTGGAAATTTTGAGCAATTTCTACGGGA
GAAGGTTAAAGTCAATGGCAAACTGGAAATCTCGGGAATGTTGTTTACATTGAACGCTTCAAGAATAAAATCAC
AGTTGTTTCTGAGAAACAGTTCTCTAAAAGGTATTTGAAATACCTTACCAAGAAATACCTTAAGAAGAACAATCT
TCGTGATTGGCTTCGAGTGGTTGCATCTGACAAGGAGACCTACGAACCTTCGTTACTTCCAGATTAGTCAAGATGA
AGATGAATCAGAGTCGGAGGACTTAGGCAAAGGCTCCCCTTACAGGGCTTTGCTTATTAATAAAATAAATGAAGTA
TACATGAGAAATACCAAGAAATTGGCTTTTAGTTTATCAGTGAATAAAAAATATTATACTCTTG

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FIGURE 1282

SSLLSRPTRKMAPQKDRKPKRSTWRFNLDLTHPVEDGIFDSGNFEQFLREKVKVNGKTGNLGNVVHIERFKNKIT
VVSEKQFSKRYLKYLTKKYLKKNLRLDWLRVVASDKETYELRYFQISQDEDESESED

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FIGURE 1283

CTAACTTTGAGTCAACGCTGACTACAGCACCAGGACTGCTCACTTCCAGCTTCTGCTGACACCTGCCCTCGTTTA
GTCTTTCTTGGTGGCTGCAGGTTTCAGTAGAACTCTATGCCAGGCTTTGTCTCCGGGACATAGGAGAGTGCTGGT
GCTCAGTCATGTTTGTGAATGAGTAATAAATGGTAAAGGTTGTTGCTGCCCGAGACGCTTCAAGAGGAAGCAG
CCCCCTAACCCAGCTGGGAGGAGGAGGAAGAATCCTGGGCTGGTCAGTTGGGGAAGGAGCTGAGCAGGCCGGGC
CACCTGGGCTGACACAGCAGCAGCACCACGTGGATGGGATGCCTGCAGTCAGCTGCAGGAGGGCCTCGTCGGGAG
GCCACAGGGCCCCCTCTTTTGTCTTGAATGGAGACCTCCAAGGCTCCAGGACATAAAGGGCCTTGCCAAGCTGTT
CCTGGCCACCTGGCCACATCTCCAGCTGCACCAGTTCTCACCTCCATTCCCCACGGCCCCAGCTGTGAGGTTTTA
GGGTGGCAGAGAGCTCCATGCACCCCTGGCCTTGGCCTCTTCTGGGGCTTAGAGCTCCAGGACTTTTGGGCCTG
TGCACCTCAGCGTCCCCCTCTTACGACTCCGGCGAGGACGGCCAGGTGCCTGGTGGACTCTTGACGTGCTCAGC
CACGAGACCTCATGTGCGTGTCTGAGCCACCTGTGTCTCAGATGTTCCAGGTCATCCAGCCAGAGCGTGCG
CTGTACATCCAGGCCAACAACTGCGTGGAGGCCAAGGACTGGATCGACATTCTACCAAAGTGAGCCAGTGCAAC
CAGAAGCGCCTCACCGTCTACCACCCGTCCGCTACCTGAGCGGCCACTGGCTGTGCTGTAGGGCGCCATCCGAC
TCGGCTCCGGGCTGCTCGCCCTGCACTGGCGGCCTCCAGCCAACATCCAGCTGGACATTGATGGGGACCGTGAG
ACGGAGCGTATCTACTCCCTCTTCAACTTGTACATGAGCAAGCTGGAGAAGATGCAGGAGGCCTGTGGGAGCAAA
TCTGTGTATGACGGCCCGGAGCAGGAGGAGTATTGACGTTTCGTCATTGACGACCCCCAGGAGACCTACAAGACG
CTAAAGCAAGTCATCGCTGGGGTTGGGGCTTTGGAGCAGGAGCACGCCAGTATAAGAGGGACAAGTTCAAGAAG
ACGAAATATGGAAGCCAGGAGCACCCCATCGGAGACAAGAGCTTCCAGAATAACATCCGGCAGCAGTCCGAGACC
TCCACTCATTCCATTTAAAGTCTGCGGGACGCGCCAGTGCGCCAGCAAGCTGCCCATGCAAAGCCGCAGCCTT
TGGGAGGGAGAAGAGAAGGAAGAGCGCAGAGCCGGCAAAGTGAGATGCACGCCGTCCGGCCCATAGACAAGTGG
CGCTGGGGTTTTCCCTCTCCAGAACCGCTGCCACCACCGCCACGCCCTCCGCAGAAAGCCACCTGGCCCTGTGG
AACGTGTGCTCATTTGATTCTGTGCTTTTTGCTCCTTGTGTGGGGATCTGGGGATCAGCTGAAGGATCAGGAA
GTGTGGGCTGTGCCCTAGCCACACCACAGCCAGCCTCAGGGAGCCACGGCCCGTCTAGTCGACTGTGACATGCAC
CTCCGGCCGTGTGTGCGTCAGTCTCGTGCACGTCTGTCTGCGTTGCACGGTGCCTGTGACGCTGGGCTCTGTGG
CTCTGTGCCCCGGGAGGCCGTGCTGGCCCCGCCTCGGCTTTCGGCTTCATCACATTGGGAGGTTTCAGAGCATTACTC
TCCACTGTGCCCTGCCATCCAGGCAGCCATGGGAGGCGGCCCTCCCTGTTCCACTTTCGAGGTTTCGTTTGATTCTT
GGCTGAGGGGTCAGTTTTATGGCTGGGAGGTGCAGAAATACACAGAAGTCCCAGTCTGAGGATGTCCTTGGTGCT
TGGGGGATACGGGTTCTGTCCACAGAGTCCCTTGGAGGGAAAGGTGTGGGCTCCAGCTTCTCCAGGCGTCTGCGG
AGCCACAGTTGAAGCCACATCGTTTTGCTGTTGAATGGGGTTTAAATCAGAATTAACATTTGCCACCCCCCG
TGGAAGTTTGAAGATTTTAAAAATAGAAATGTACATTTTCAAGCTGTTTTTCTTTATGTTTTTGAAGGACCATT
TTAATTAGCTCTTTGATACAAAGTAACTCAGAACGTCAAAACCTATACCCACTAAAGGGAAGGCTGCCGGGAAG
GCAATGGAACAGGAATGGAGCCTGTCTCAGGAAGGCCAGCTGCAGGTCTCCAGAAAATCAAAGAAGGGAAGAA
ACTCTGAGTTTGAGGTACAGGGGCTTCGGGGTGACAGCTCCCTCCAGGGCCCATGGTCAGTATTGCACCTGTGT
TATGAACCCCAAGATGCTGTGCAGGGCAGGGGCGGGGGCTGCTGTTTTATTGGGGAGGGGAGCATCCTAAAAATG
GGGTCCAGGCAGACCCCTCCAGACCTCACACTGCCGAGGAGGCCTTTCCCAAAGGGCGTCTCCCGGGATGCAGA
CGGCAGGTGTGTGGGAAGCGCCGTTTAAATACACAGCACGACGTATCCTTGTACCGACTTCTCCCGGTTCTTGT
TGAAAATACTGTAGTTTCAAGCTCTTGATCTAGATGGCAGATAGGAACCTTCTTGTACAAAAATACTGGAGGAAA
ATGTTGTAAAAATAGACTTTTGGACACACAGCTGTTGGGGCTGCACTGAGCTGCAATTTTTAACATGGATTTATA
ACTTAATGTTTCTGTTTTATAAAATACTAATGATTGTCAATGTATTTTACTGGCCAATTAACAGATGTTTTATT
CTTTCTGAA

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FIGURE 1284

MFQVIQPERALYIQANNCVEAKDWIDILTKVSQCNQKRLTVYHPSAYLSGHWLCCRAPSDSAPGCSPCTGGLPAN
IQLDIDGDRETERIYSLFNLYMSKLEKMQEACGSKSVYDGPEQEEYSTFVIDDPQETYKTLKQVIAGVGALEQEH
AQYKRDKFKKTKYGSQEHPIGDKSFQNYIRQQSETSTHSI

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FIGURE 1285

GTGCAGTTGCGGCTCCAGGGCCATGGCGGAGGAGCAGGGCCGGGAACGGGACTCGGTTCCCAAGCCGTCGGTGCT
GTTCCCTCCACCCAGACCTGGGCGTGGGCGGCGCTGAGCGGCTGGTGTGGACGCGGCGCTGGCGCTGCAGGCGCG
CGGGTGTAGCGTGAAGATCTGGACAGCGCACTACGACCCGGGCCACTGTTTCGCCGAGAGCCGCGAGCTACCGGT
GCGCTGTGCCGGGGACTGGCTGCCGCGAGGCCTGGGCTGGGGCGGCCGCGGCGCCCGCTCTGCGCCTACGTGCG
CATGGTTTTCTGGCGCTCTACGTGCTGTTCCCTCGCCGACGAGGAGTTCGACGTGGTAGTGTGCGACCAGGTGTC
TGCCTGTATCCAGTGTTTCAGGCTGGCTAGACGGCGGAAGAAGATCCTATTTTACTGTCACTTCCCAGATCTGCT
TCTACCAAGAGAGATTCTTTTCTTAAACGACTATACAGGGCCCCAATTGACTGGATAGAGGAATACACCACAGG
CATGGCAGACTGCATCTTAGTCAACAGCCAGTTCACAGCTGCTGTTTTTAAGGAAACATTCAAGTCCCTGTCTCA
CATAGACCCTGATGTCTCTATCCATCTCTAAATGTCACCAGCTTTGACTCAGTTGTTCTGAAAAGCTGGATGA
CCTAGTCCCCAAGGGGAAAAAATTCCTGCTGCTCTCCATCAACAGATACGAAAGGAAGAAAAATCTGACTTTGGC
ACTGGAAGCCCTAGTACAGCTGCGTGGAAGATTGACATCCCAAGATTGGGAGAGGGTTCATCTGATCGTGGCAGG
TGGTTATGACGAGAGAGTCTGGAGAATGTGGAACATTATCAGGAATTGAAGAAAATGGTCCAACAGTCCGACCT
TGGCCAGTATGTGACCTTCTTGAGGTCTTTCTCAGACAAACAGAAAATCTCCCTCCTCCACAGCTGCACGTGTGT
GCTTTACACACCAAGCAATGAGCACTTTGGCATTGTCCCTCTGGAAGCCATGTACATGCAGTGGCCAGTCATTGC
TGTTAATTCGGGTGGACCCTTGAGTCCATTGACCACAGTGTACAGGGTTTTCTGTGTGAGCCTGACCCGGTGCA
CTTCTCAGAAGCAATAGAAAAGTTTATCCGTGAACCTTCCTTAAAAGCCACCATGGGCCTGGCTGGAAGAGCCAG
AGTGAAGGAAAAATTTTCCCTGAAGCATTACAGAACAGCTCTACCGATATGTTACCAAATGCTGGTATTAATC
AGATTGTTTTTAAGATCTCCATTAATGTCATTTTTATGGATTGTAGACCCAGTTTTGAAACCAAAAAAGAAACCT
AGAATCTAATGCAGAAGAGATCTTTTAAAAAATAAACCCTTGAGTCTTGAATGTGAGCCACTTTCCTATATACCACA
CCTCCCTGTCCACTTTTTCAGAAAAACCATGTCTTTTATGCTATAATCATTCCAAATTTTGCCAGTGTTAAGTTAC
AAATGTGGTGTCAATTCATGTTTCAGCAGAGTATTTTAATTATATTTTCTCGGGATTATTGCTCTTCTGTCTATAA
ATTTTGAATGATACTGTGCCTTAATTGGTTTTCATAGTTTAAGTGTGTATCATTATCAAAGTTGATTAATTTGGC
TTCATAGTATAATGAGAGCAGGGCTATTGTAGTTCCCAGATTCAATCCACCGAAGTGTTCACTGTCACTGTGTAG
GGAATTTTTGTTTGTCTGTCTTTGCCTGGATCCATAGCGAGAGTGCTCTGTATTTTTTTTAAGATAATTTGTAT
TTTTGCACACTGAGATATAATAAAAGGTGTTTATC

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FIGURE 1286

MAEEQGRERDSVPKPSVLFLHPDLGVGGAERLVLDAAALQARGCSVKIWTAHYDPGHCF AESREL PVR CAGDWL
PRGLGWGGRGA AVCA YVRMVFLALYVLF LADEEFDVVVCDQVSACIPV FRLARRRKKILFYCHFPD LLLTKRDSF
LKRLYRAPIDWIEEYTTGMADCILVNSQFTAAVFKETFKSLSHIDPDVLYPSLNVTSFDSVVP EKLD DLVPKGKK
FLLLSINRYERKKNLTLALEALVQLRGRLTSQDW ERVHLIVAGGYDERVLENVEHYQELKKMVQQSDLGQYVTF L
RSFSDKQKISLLHSC TCVL YTPSNEHFGIVPLEAMYMQCPVIAVNSGGPLESIDHSVTGFLCEPDPVHFSEAIEK
FIREPSLKATMGLAGRARVKEKFSPEAFTEQLYRYVTKLLV

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FIGURE 1287

AAGTAAGAATTATAAATCTATCTCAGTTAAAAGTAGGATCTTTGTTTTTATTTCAGATATTTTGAAAGTTTAGAAG
CATTTTGTATGCTACTTTGGTATTTCTTAAGTATAGTCAGCAGGAAAGGGTAACCTGTTTTATGCAAAATTTTTT
TAATTTGTCAAATGTTTTTAGTGTGTCTACTTTCTGAAATAGTCTCAATATCCTGTCTGTATCCTAGGCAGATAA
CTACACAAGAACAAAACGCTATATAGAAAAGAAAATATTTGAGGAAATCTTAAATTCATAAGAAAGTAATTCTT
GCAAGAATGTTGGCTACATATTTTTTTTTCTGTCTGAATAAATTACATCATTAGGTCTGTTGAAGCTTTTGAAG
CTACCACTATTCTTTCTGGGATAAAGGCTAATTACTGATTTATCTGCCCTCAAATCCCAGAGTTAATTCTAATT
GAGTACTAAATTAACAGTAAGTAGTTAACACAGAGAACTAAAATTTAACCGCATTATATCACTGTATATATTTCT
CATGATTTTTGCTAATTAGAGCATTACTTAACCAGTAATAAACTNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNGTGTGTGTGTATATACTTGGCTCTGACACAACCTCTGGTGCTTAATTAGGATATGTTCTATTATGTATTTTG
AATGTTTATCCTGCTAGTGCATGAACTTTTGTTGGAAAAGCAGAATTAGAAGGAACAGTTTTTCAATCAGTTTC
ATTTGGTAATTACAGGAAAACCTTGAGTTGCTCTAATTTAATTTTTCCAATTAATACATTTAGACTTTAAATTGC
ATCCGTAATTCTCTTGGCTGAAAAACAGTGGTATTTTAAGACAGTTTTGTTATACATGTGACTTACTTTTGACTC
AGCCTGAGAGGAGGAAATGTAAAGAGATAAGAGATTTGGCCCAAAGCAGCAAGAGACTAGTAACCTTGAGCCAGG
ACGAAGCCAAGACAACGTGACTCCCAAGTAGCAGGAGCAGAGGTCGGTCACCTGTGGCATTCTGTTTCATTCCCT
TTTAAAATTATGAGACTTTATAGGCAGTGTAACATCAGCAGGCAGCGATGTGATAGGATGTGCGAAAAAGCTG
GTCTGATACCATGGCTATAATTACAGAGCTTTAGTTCAATTAGGATTTTGTAAATGAGCAAATGACCTTTTTTTC
CAGTGCCCTTGTAATAGTTAATATGAGTCCATGCAATCTTGTGATGCCATTCTCCTGAAGGTGTTGATTTCTGG
TACCCAGCCAGCTTAGCTTTGGCTGCTGGAAGCACAGTAGGTACTGATGATTACTTCTGGAATCTTGACAGGC
TTATTGTACTGTGTAATGGGGAAAAGTTAAAGTATAATGTTTGGTGTTAATAAATGACTGATGTGAAAATAGGAA
CATGTGTCTTTAATATCAAATATGGCTTTATTTGCAGTGAAATCTAAATTCCTTATTCTACAGTAGTATTTCTT
GCCCTGTGTTGTATATTTTCTAAATACATTTTTTCTGACAGTGGCTTTAGGCCAGTTGAACACACTTAGACTGA
AAGTGTTTAACTTAAAGAGATCAGTCCAGAAACCATGATAAATTAGAATCTTTATCTGGAATTACCAAATTA
TTAAAATCATGGTCCAGAAGAGAACAACATTCATGGTTTTTTTTATCCTACTGCTCATTTTTAGGTCTGTGTT
TACATCTAGTCTCTACTATTTGTGAAGTATGTCATTATTTTTTCAAGTTCTTCTTTGACTTAACTGAAAAATA
TATTCAAAATCTTAATGTAACATGAAAAGAGAAATACAATTTTGCTTAAAAGACATTTTTTAAAAGCGTTCA
ATTCAGTAATCATTCTGTTAATACAGGAAGTTTTTTGGCTTGCCAGTTATATACTGTGGGTATTTTTTAAAT
GTGCTACCTTGGGTGTCTCATATCACCTTGCGTAATCATGTATTACAAAGGTTGATAATTGTCATTTCTCAGA
TGCTGTATGTTACATTGGCAGCAGTAAAATGTTTTAATGTTGTACCTTTTAAATAATTGTGTTGTATTACAT
GCCTCATATTTCTGGGGAACTTGAAATATATCTAAACAAAAAAGGTCTGTTATAAATAGGAATTGGCATTTC
TTGTTAATGTTTTTCTCATAAAAATAGTTACACAAAAGTGACATATTGTCTATTACATGGGCCCAATCAGTA
TTAAAGTACTCCCTTACTCAAAAATATTAATAAATAATTATCATGACACTTAGTAGCATTTTCATTGATTGTTTCA
AAAGATCTTCATAATGGTCAAATTGTCCAATTCACAAAAGAGTGAGAAAGTTGTTTTCAGTACTGGGAATTTTTA
AACCTTAGTTTTAAGACCAAAAATATCTTATTAGCTTGAACATTTTGTGATTACTTTTCCCTCCCGGATCTA
GTCCTTTTAAGGAGTAAGTCTAAAGAATGAGGCCATGAAGTCACTATTTCCCTCCACCTCAGTTTGTCTCCTGGT
ACTTAGCTGGCTATCGCTTTGTGTGGCAATACCCCTGGGTCGCTTCCCACTCAGCCTTCTGTATCTGCTGTT
ACAGGACATGCCATTATGTCTTT

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FIGURE 1288

MKSLFPPTSVCLLVLSWPIALCGNTPGSLPHSAFCICCSQDMPLC

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FIGURE 1289A

TACTGGACAAACATTTCTCTCCAAGGACACAGCTCTCTGCCTCCATGTCACCACCTTTGAAGGACTGACTGATTCC
CTCGGCTGGTGCCAGTGCCCTGCTCCTGCCATGGGGGCCCGGGGAGCCTGCTGGGCAGCGGACAGATGCAGATCA
CCCTGTGGGGAAGTCTGGCAGCTGTGCGCCATTTCTTCGTATCACCTTCCTCATCTTCCCGTGCTCTAGTTGTG
ACAGGGAAAAGAAGCCGCGACAGCATAGTGGGGACCATGAGAACCTGATGAACGTGCCTTCAGACAAGGAGATGT
TCAGCCGTTTCAGTTACTAGCCTGGCAACAGATGCTCCTGCCAGCAGTGAGCAGAATGGGGCACTCACCAATGGGG
ACATTCTTTTCAGAGGACAGTACTCTGACCTGCATGCAGCATTACGAGGAAGTCCAGACATCGGCCTCGGATCTGC
TGGATTCCCAGGACAGCACAGGGAAACCAAAATGTCATCAGAGTCGGGAGCTGCCAGAATCCCTCCCGAGAGCG
CAGTGGATACCATGCTCACGGCGAGAAGTGTGGACGGGGACCAGGGGCTGGGGATGGAAGGGCCCTATGAAGTGC
TCAAGGACAGCTCCTCCCAAGAAAACATGGTGGAGGACTGCTTGATGAACTGTGAAGGAGATCAAGGAGGTGG
CTGCAGCTGCACACCTGGAGAAAGGCCACAGTGGCAAGGCCAAAATCTACTTCTGCCTCGAAAGAGCTCCCAGGGC
CCCAGACTGAAGGCAAAGCTGAGTTTGCTGAATATGCCTCGGTGGACAGAAACAAAAAATGTCGTCAAAGTGTTA
ATGTAGAGAGTATCCTTGGAATTCATGTGATCCAGAAGAGGAGGCCACCACCTGTCCCTGTTAAGCTTCTGG
ACGAGAATGAAAACCTTCAGGAGAAGGAAGGGGGAGAGGCGGAAGAGAGTGCCACAGACACGACCAGTGAAACTA
ACAAGAGATTTAGCTCATTGTATACAAGTCTCGGGAAGAAGACCCCACTCTCACAGAAGAAGAGATCTCAGCTA
TGTAATCATCAGTAAATAAACCTGGACAGTTAGTGAATAAATCGGGGCAGTCGCTTACAGTTCCGGAGTCCACCT
ACACCTCCATTCAAGGGGACCCACAGAGGTACCCCTCCTCTGTAATGATCTCTATGCTACTGTTAAAGACTTCG
AAAAAACTCCAAACAGCACACTTCCACCAGCAGGGAGGCCAGCGAGGAGCCAGAGCCTGATTATGAAGCGATAC
AGACTCTCAACAGAGAGGAAGAAAAGGCCACCCTGGGGACCAATGGCCACCACGGTCTCGTCCCAAAGGAGAACG
ACTACGAGAGCATAAGTGACTTGCAGCAAGGCAGAGATATTACCAGGCTCTAGCAACCCAGAAGACAACCTGGG
TAGCCTGTGATCAGTGTCTGGAGACGTTTCTTCTGTGGAAGAGAAGAAGTGACACAAACCTATACTTCATATGCT
GCTTTAGTCACCTGAAGATGGTTGGAGAGGCCCTGTCGACTGTTCTCCAGTTGTTTCAGTTTCTGAGACAGAGAG
GTACGGACTAGGCTGCACCTGAGTGTGCCCTGCCTGCCAGATGGACAGGTACACCCAAGCACATCTCCCTGCTG
CACCTCACCAACCCACAAAAGATCCCAGCTGTAGTGGTCTCATCTCATTAGTGAGGAAAGCCAAGCTGTATGGA
AAAGCTGCACCTACCAAGGACCACAATGCCCCCGGCCATAAGTACTGCCATTAGAAAAGCAGGTTTTCTTCTCT
CTCTTTCTTTCTCTGTCTGCTACTGACTTTAAGGCTTTTTCCCCCTTGAATGTCCAGATTCTGTGGTTTCAT
CCCAAGGAAATTTTACACAAAAGCTTGGCCTTTGCCCTCAATATAGGTGTTTTAGGATGGTGACAAACCATGGCT
GCTGCTTTCTGCCAGCTCGCCAGTCTCCCCAAAGAGTTGCGCATCAGCACCTGGGGATCTGGACCCTGCGGGT
GAAGGGATGGGGAGGGACGTCCCTGGAGTCTCTTCTGTCTTTGTTCTTCTTATTTTGGCATTGCATATCAGCAG
CCTCTCCCCAAAGTACTTGAAGTCAGTTTTAGATGCTTTATTTTATTTTCTAGTCAAAAACGTGTTTCCCCAG
TGTTTGAAACTCGTCCGAATCTTTTCAGTATTTTCCATGAGTATTGTGGTACTTCTAGACTTGTTTAAAGCCAG
AACTCATTCCTTCAAAACAGAGAGCCTTAATCTTTATGTTGGGACACAGACCACATATTTGGACGGCAGCCATGC
ATCCATCGCTGAAGGGCTGTGGACATGAATGTGTATTTCCCATGGTCTCCGCTGCCACACCAACAGTGTGGCAT
CTCATAAGTTAACTGCTACCCTAAGGTAATCTAAGATTAAATGTAAACATTTATTTTTGTTATGTAAGTTTATA
AGATGTTTTATGTTCAATGCCTAATTTCTCAAAAGTGCCAGAAAAAATGTATATTAGCTATTTTGATTTTATGT
ACAATGATTTTATACTCTCTTTTGAAGATAACCATAAAGCACATAAGCTAGATCACTACAAGGAGCTGTTATCT
TTTTTCTAATCAAGTGTTTTAAACACTGATGGTTTTTAAAGACTCACCTTTTTAAATGGTACTTGGAGCTCCTGA
TTCAAAATTACCTAGACCCCTAGAGAAATAAATGGAATATACATAAATAATCATTTTCAGTGGTTTATGGTGGGC
AATATTGCAATATTTGAAATGGTAAAAATGGAAGAAGAACAAAAATATGATGAGAGGTGGCTGTGAATTATAAAC
CTCATAAAAGTGTCATAATTCATTAAAGGTTTAATTATATTTTTTCAGAAAACAGTGATGAATTCTGTAGTCCAG
TGCTTGCCATGCAAATTGCCTATTGGAATCTTCTTCTATATTTTACAAACATCAGTGGCTGAAATAGCTCAGA
GTAAGAGCTCAGCCTGGTTTGAATTTAATCATCTCTTTAGATCTTATAAGGCCAGCATTAGGAACTTGTTCACT
TTTCATTTTCAAAGGAGCCTAGTTGAAGTGCTATTATGAGTGTGGGCTATGGAAAGACAGCTTTTCTTACACTGA
TAAAGAAAAAATGAGGAAATATTTTATCCCCTGTGACATCTGTGACTTTTTGGATTTAATAATCTTGCTGT
TTTTCTCTTTATGACAAAGAATATAATTGGGAGGATGAAGTGCTTAAAAATGTAGAGACCAGCTCACTGGAA
TGTTTTTCCATCCCTGTATTATGGCTTGACTTTGTGACTGCTCTACACTGCATGTCTGACATTGCAGAGTGAGC
TATGTTGAGGTAACTGGTTGGTTGTCATTATTTTGAATCAGCCTGGTCTCTCCCATGAAGATGTCGTGTGCAT
AAGCACAATCATCACTGATTAGAAGATCACAGCAGAATACCCTTGGATTAGAGAGAAGTTCGTACCTTGCAATTC
TCTGAATTCAGTCTCTCATAAGCACTGCTTTGCTGGATGATTTTCACTGCTTTGTGTTAATGACTTTGAGCGAT

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FIGURE 1289B

CTCTCACATGATGGGGTTCTTTAGTACATGGTAACAGCCATGTCATCTTACACACCTAGCATTGTGAATGCTGTA
GTGACATCCTTTATAGGCACCTTACAGCTCAAAACTTTTGTTCATTCATGCCTTACTTATCAAAAAGGCAGGA
AAGTAGGTATGATCTCTAAAGTAAAAAAA

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FIGURE 1290

MGPAGSLLGSGQMQITLWGSLAAVAIFFFVITFLIFPCSSCDREKKPRQHSGDHENLMNVPSDKEMFSRSVTSLAT
DAPASSEQNGALTNGDILSEDSTLTCMQHYYEEVQTSASDLLDSQDSTGKPKCHQSRELPRIPPESAVDTMLTARS
VDGDQGLGMEGPYEVLDSSSQENMVEDCLYETVKEIKEVAAAAHLEKGHSGKAKSTSASKELPGPQTEGKAIFA
EYASVDRNKKCRQSVNVEISLGNSCDPEEEAPPPVPVKLLDENENLQKEGGEAEESATDTTSETNKRFSLSYK
SREEDPTLTEEEISAMYSSVNKPGQLVNKSGQSLTVPESTYTSIQGDPQRSPSSCNDLYATVKDFEKTNPSTLPP
AGRPSEEPEDYEAIQTLNREEEKATLGTNGHHGLVLPKENDYESISDLQQGRDITRL

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FIGURE 1291

AGCTATTTCAAGGCGCGCGCCTCGTGGTGGACTCACCCTAGCCCGCAGCGCTCGGGCTTCCTGGTAATTCTTCAC
CTCTTTTCTCAGCTCCCTGCAGCATGGGTGCTGGGCCCTCCTTGCTGCTCGCCGCCCTCCTGCTGCTTCTCTCCG
GCGACGGCGCCGTGCGCTGCGACACACCTGCCAACTGCACCTATCTTGACCTGCTGGGCACCTGGGTCTTCCAGG
TGGGCTCCAGCGGTTCCAGCGCGATGTCAACTGCTCGGTTATGGGACCACAAGAAAAAAGTAGTGGTGTACC
TTCAGAAGCTGGATACAGCATATGATGACCTTGGCAATTCTGGCCATTTACCATCATTTACAACCAAGGCTTTG
AGATTGTGTTGAATGACTACAAGTGGTTTGCCTTTTTTAAGTATAAAGAAGAGGGCAGCAAGGTGACCACTTACT
GCAACGAGACAATGACTGGGTGGGTGCATGATGTGTTGGGCCGGAAGTGGGCTTGTTTACCAGGAAAGAAGGTGG
GAACTGCCTCTGAGAATGTGTATGTCAACACAGCACACCTTAAGAATTCTCAGGAAAAGTATTCTAATAGGCTCT
ACAAGTATGATCACAACCTTTGTGAAAGCTATCAATGCCATTGAGAAGTCTTGGACTGCAACTACATACATGGAAT
ATGAGACTCTTACCCTGGGAGATATGATTAGGAGAAGTGGTGGCCACAGTCGAAAAATCCCAAGGCCCAAACCTG
CACCCTGACTGCTGAAATACAGCAAAAGATTTTGCATTTGCCAACATCTTGGGACTGGAGAAATGTTTCATGGTA
TCAATTTTGTGAGTCTGTTTCGAAACCAAGCATCCTGTGGCAGCTGCTACTCATTGCTTCTATGGGTATGCTAG
AAGCGAGAATCCGTATACTAACCAACAATTCTCAGACCCCAATCCTAAGCCCTCAGGAGGTTGTGTCTTGTAGCC
AGTATGCTCAAGGCTGTGAAGGCGGCTTCCCATACCTTATTGCAGGAAAGTACGCCCAAGATTTTGGGCTGGTGG
AAGAAGCTTGCTTCCCCTACACAGGCACTGATTCTCCATGCAAAATGAAGGAAGACTGCTTTCGTTATTACTCCT
CTGAGTACCACTATGTAGGAGGTTTCTATGGAGGCTGCAATGAAGCCCTGATGAAGCTTGAGTTGGTCCATCATG
GGCCCATGGCAGTTGCTTTTGAAGTATATGATGACTTCTCCACTACAAAAGGGGATCTACCACCACACTGGTC
TAAGAGACCCTTTCAACCCCTTTGAGCTGACTAATCATGCTGTTCTGCTTGTGGGCTATGGCACTGACTCAGCCT
CTGGGATGGATTACTGGATTGTTAAAAACAGCTGGGGCACCGGCTGGGGTGAGAATGGCTACTTCCGGATCCGCA
GAGGAAGTATGAGTGTGCAATTGAGAGCATAGCAGTGGCAGCCACACCAATTCCTAAATTGTAGGGATGCCTT
CCAGTATTTTATAATGATCTGCATCAGTTGTAAAGGGGAATTGGTATATTACAGACTGTAGACTTTCAGCAGCA
ATCTCAGAAGCTTACAAATAGATTTCCATGAAGATATTTGTCTTCAGAATTAAAGTGCCTTAAATTTAATATA
CCTTTCAATCGGCCACTGGCCATTTTTTTCTAAGTATTCAATTAAGTGGGAATTTTCTGGAAGATGGTCAGCTAT
GAAGTAATAGAGTTTGCTTAATCATTGTAAATCAAACATGCTATATTTTTTAAATCAATGTGAAAACATAGAC
TTATTTTTTAAATTGTACCAATCACAAGAAAAATAATGGCAATAATTATCAAACTTTTTAAATAGATGCTCATATT
TTTAAATAAAGTTTTTAAATAAAGTGA

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FIGURE 1292

MGAGPSLLLAALLLLLSGDGAVRCDTPANCTYLDLLGTWVFQVGSSGSQRDVNCSVMGPQEKKVVVYLQKLD TAY
DDLGN SGHFTIIYNQGF EIVLNDYKWF AFFKYKEEGSKVT TYCNETMTGWVHDVLGRNWACFTGKKVGTASENVY
VNTAHLKNSQEKYSNRLYKYDHN FVKAINAIQKSWTATTYMEYETLTLGDMIRRS GGHSRKIPRPKPAPLTAEIQ
QKILHLEP TSWDWRNVHGINFVSPVRNQASCGSCYSFASMGMLEARIRILTNN SQTPILSPQEVVSCSQYAQGCEG
GFPYLIAGKYAQDFGLVEEACFPYTGTDSPCKMKEDCFRYSSEYHYVGGFYGGCNEALMKLELVHHGPM AVAFE
VYDDFLHYKKGIYHHTGLRDPFNP FELTNHAVLLVGYGTD SASGMDYWIVKNSWGTGWGENGYFRIRRG TDECAI
ESIAVAATPIPKL

1425/1629
FIGURE 1293A

CGACTCCTTAGAGCATGGCATGGCTCAGAGGTGCTGGTAAACTGATGGGGGTTTTTGGCTGTCCCTCCCTCAGC
GCCGACACC**ATGT**GGATCCAGGTTCCGACCATGGACGGGAGGCAGACCCACACGGTGGACTCGCTGTCCAGGCTG
ACCAAGGTGGAGGAGCTGAGGCGGAAGATCCAGGAGCTGTTCCACGTGGAGCCAGGCCTGCAGAGGCTGTTCTAC
AGGGGCAAACAGATGGAGGACGGCCATACCTCTTCGACTACGAGGTCCGCCTGAATGACACCATCCAGCTCCTG
GTCCGCCAGAGCCTCGTGCTCCCCACAGCACCAAGGAGCGGGACTCCGAGCTCTCCGACACCGACTCCGGCTGC
TGCCTGGGCCAGAGTGAGTCAGACAAGTCCTCCACCCACGGCGAGGCGGCCGCCGAGACTGACAGCAGGCCAGCC
GATGAGGACATGTGGGATGAGACGGAATTGGGGCTGTACAAGTCAATGAGTACGTGATGCTCGGGACACGAAC
ATGGGGGCGTGGTTTGAGGCGCAGGTGGTCAGGGTGACGCGGAAGGCCCCCTCCCGGGACGAGCCCTGCAGCTCC
ACGTCCAGGCCGGCGCTGGAGGAGGACGTCAATTTACCACGTGAAATACGACGACTACCCGGAGAACGGCGTGGTC
CAGATGAATCCAGGGACGTCCGAGCGCGCGCCCGACCATCATCAAGTGGCAGGACCTGGAGGTGGGCCAGGTG
GTCATGCTCAACTACAACCCCGACAACCCCAAGGAGCGGGGCTTCTGGTACGACGCGGAGATCTCCAGGAAGCGC
GAGACCAGGACGGCGCGGGAACCTCTACGCCAACGTGGTGCTGGGGGATGATTCTCTGAACGACTGTCCGATCATC
TTCGTGGACGAAGTCTTCAAGATTGAGCGGCCGGGTGAAGGGAGCCCCATGGTTGACAACCCCATGAGACGGAAG
AGCGGGCCGTCTGCAAGCACTGCAAGGACGACGTGAACAGACTCTGCCGGGTCTGCGCCTGCCACCTGTGCGGG
GGCCGGCAGGACCCCGACAAGCAGCTCATGTGCGATGAGTGCAGCATGGCCTTCCACATCTACTGCCTGGACCCG
CCCCTCAGCAGTGTTCAGCGAGGACGAGTGGTACTGCCCTGAGTGCCGGAATGATGCCAGCGAGGTGGTACTG
GCGGGAGAGCGGCTGAGAGAGAGCAAGAAGAAGGCGAAGATGGCCTCGGCCACATCGTCTCACAGCGGGACTGG
GGCAAGGGCATGGCCTGTGTGGGCCGACCAAGGAATGTACCATCGTCCCGTCCAACCACTACGGACCCATCCCG
GGGATCCCGTGGGCACCATGTGGCGGTTCCGAGTCCAGGTGACGAGTCCGGGTGTCCATCGGCCCCACGTGGCT
GGCATAACGGCCGGAGCAACGACGAGCGTACTCCCTAGTCTGGCGGGGGCTATGAGGATGACGTGGACCAT
GGGAATTTTTTACATACACGGGTAGTGGTGGTCGAGATCTTTCGGCAACAAGAGGACCGCGGAACAGTCTTGT
GATCAGAAACTCACCAACACCAACAGGGCGCTGGCTCTCAACTGCTTTGCTCCCATCAATGACCAAGAAGGGGCC
GAGGCCAAGGACTGGCGGTGCGGGAAGCCGGTCAGGGTGGTGCGCAATGTCAAGGGTGGCAAGAATAGCAAGTAC
GCCCCGCTGAGGGCAACCGCTACGATGGCATCTACAAGTTGTGAAATACTGGCCCGAGAAGGGGAAGTCCGGG
TTTCTCGTGTGGCGCTACCTTCTGCGGAGGGACGATGATGAGCCTGGCCCTTGACGAAGGAGGGGAAGGACCGG
ATCAAGAAGCTGGGGCTGACCATGCAGTATCCAGAAGGCTACCTGGAAGCCCTGGCCAACCGAGAGCGAGAGAAG
GAGAACAGCAAGAGGGAGGAGGAGGAGCAGCAGGAGGGGGGCTTCGCGTCCCCAGGACGGGCAAGGGCAAGTGG
AAGCGGAAGTGGCGAGGAGGTGGCCGAGCAGGGCCGGTCCCCGCGCCGACATCCAAGAAAACCAAGGTGGAG
CCCTACAGTCTCACGGCCAGCAGAGCAGCCTCATCAGAGAGGACAAGAGCAACGCCAAGCTGTGGAATGAGGTC
CTGGCGTCACTCAAGGACCGGCCGGCGAGCGGCAGCCGTTCCAGTTGTTCTGAGTAAAGTGGAGGAGACGTTT
CAGTGTATCTGCTGTGAGGAGCTGGTGTTCGGGCCCATCACGACCGTGTGCCAGCACACGTGTGCAAGGACTGC
CTGGACAGATCCTTTCGGGCACAGGTGTTAGCTGCCCTGCCTGCCGCTACGACCTGGGCCGAGCTATGCCATG
CAGGTGAACCAGCCTCTGCAGACCGTCTCAACCAGCTCTTCCCCGGCTACGGCAATGGCCGGT**GTAT**CTCCAAGC
ACTTCTCGACAGGCGTTTGTGAAAACGTGTGCGAGGGCTCGTTTCATCGGCACTGATTTTGTCTTTAGTGGGCT
TAACCTAACAGGTAGTGTTCCTCCGTTCCCTAAAAAGGTTTGTCTTCCTTTTTTTTTATTTTTATTTTTCAAA
TCTATACATTTTACGAATTTATGTATTCTGGCTAAAAGTTGGACTTCTCAGTATTGTGTTTAGTTCTTTGAAAA
CATAAAAGCCTGCAATTTCTCGACAAAACAACAAGATTTTTTAAAGATGGAATCAGAACTACGTGGTGTGGA
GGCTGTTGATGTTTCTGGTGTCAAGTTCTCAGAAGTTGCTGCCACCAACTCTTTAAGAAGGGCAGAGGATCAGTC
CTTCTTAGGGTCTGGCCCCAAGGTGAGAGCAAGCATCTTCTGACAGCATTTTGTCTATCTAAAGTCCAGTGA
CATGGTTCCTCGTGGTGGCCCGTGGCAGCCCGTGGCATGGCGTGGCTCAGCTGTCTGTTGAAGTTGTTGCAAGGA
AAAGAGGAAACATCTCGGGCCTAGTTCAAACCTTTGCCTCAAAGCCATCCCCACCAGACTGCTTAGCGTCTGAG
ATCCGCGTGAAGATCCTCTGCCCACGAGAGCAGGGAGTTGGGGCCACGCAGAAATGGCCTCAAGGGGACTCTGC
TCCAGTGGGGCCAGGCGTGTGACTGACGCTGTCCGACGAAGGCGGCCACGGACGGACGCCAGCACACGAAGTCA
CGTGCAAGTGCCTTTGATTCTGTTCTTTCTTAAAGACGACAGTCTTTGTTGTTAGCACTGAATTATTGAAAT
GTCAACCAGATTCTAGAACTGCGGTTCATCCAGTTCTTCTGACACCGGATGGGTGCTTGGGAACCGTTTGAGCC
TTATAGATCATTTACATTCAATTTTTTAACTCAGCAAGTGAGAACTTACAAGAGGGTTTTTTTTTAATTTTTTT
TTCTCTTAATGAACACATTTTCTAAATGAATTTTTTTGTAGTTACTGTATATGTACCAAGAAAGATATAACGTT
AGGGTTTGGTTGTTTTTGTATTTTTTTCTTTTGAAAGGGTTTGTTAATTTTTCTAATTTTACCAAAGT

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FIGURE 1293B

TTGCAGCCTATACCTCAATAAAACAGGGATATTTTAAATCACATACCTGCAGACAAACTGGAGCAATGTTATTTT
TAAAGGGTTTTTTTTCACCTCCTTATTCTTAGATTATTAATGTATTAGGGAAGAATGAGACAATTTTGTGTAGGCT
TTTTCTAAAGTCCAGTACTTTGTCCAGATTTTAGATTCTCAGAATAAATGTTTTTCACAGATTGAAAAAAAAAAAA
AAA

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FIGURE 1294

MWIQVRTMDGRQTHTVDSLRLTKVEELRRKIQELFHVEPGLQRLFYRGKQMEDGHTLFDYEVRLNDTIQLLVRO
SLVLPHSTKERDSELSDTDSGCCLGQSESDKSSTHGEAAAETDSRPADEDMWDETELGLYKVNEYVDARDTNMGA
WFEAQVVRVTRKAPSRDEPCSSSTRPALEEDVIYHVKYDDYPENGVVQMNSRDVRRARTIIKWQDLEVGQVVML
NYPNPNPKERGFWDYDAEISRKRETRTARELYANVVLGDDSLNDCRIIFVDEVFKIERPGEESPMVDNPMRRKSGP
SCKHCKDDVNRLCRVCACHLCGGRQDPDKQLMCDECDMAFHIYCLDPPLSSVPSEDEWYCPECRNDASEVVLAGE
RLRESKKKAKMASATSSSQRDWKGGMACVGRTKECTIVPSNHYGPIPGIPVGTMRFRVQVSESGVHRPHVAGIH
GRSNDGAYSLVLAGGYEDDVDHGNFFTYTGSGGRDLSGNKRTAEQSCDQKLTNTNRLALNCFAPINDQEGAEAK
DWRSGKPVRVVRNVKGGKNSKYAPAEGNRYDGIYKVVKYWPEKGKSGFLVWRYLLRRDDDEPGPWTKEGKDRIKK
LGLTMQYPEGYLEALANREREKENSKEEEEEQQEGGFASPRGTGKGKWKRSAGGGPSRAGSPRRTSKKTKVEPYS
LTAQQSSLIREDKSNAKLWNEVLASLKDRPASGSPFQLFLSKVEETFQCICQELVFRPITTVQCQHNVCCKDCLDR
SFRAQVFSCPACRYDLGRSYAMQVNQPLQTVLNQLFPGYGNGR

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FIGURE 1295A

GCGGCCGCAGCCCCGGCCGAGCAGGCGCCGCGGGCCAAAGGGCCGCCCCGAGACGGTCCCCAGAGAGCCACCGGAGG
AGCAGCTCACCTGAGAGACGGAGCCCCGGCTCGCCCGTGTGCAGAGCGGACAAGGCAAAATCTCAGCAAGTTCGG
ACCTCTAGTACAATAAGGCGAACCTCCTCTTTGGATACAATAACAGGACCTTACCTCAGAGACAGTGGCCACGG
GATCCTCATGTTCACTACCTTTCATGCATGAAAGACAAAGCTACTCAGACACCTAGCTGTTGGGCAGAAGAGGGT
GCAGAAAAGAGGTCACATCAGCGTTCTGCGTCATGGGGGAGTGCTGATCAACTAAAAGAGCAGATCGCCAAACTG
AGGCAGCAACTACAACGCAGTAAACAGAGTAGTCGTCACAGTAAGGAGAAAGATCGCCAGTCACCTCTTCATGGC
AACCATATAACAATCAGTCACACTCAGGCTACTGGATCAAGGTCAGTTCCTATGCCACTGTCAAATATATCAGTG
CCAAAATCATCTGTTTCGCGTGTGCCCTGCAATGTAGAAGGAATAAGTCCTGAATTAGAAAAGGTATTTCATTAA
GAAAATAATGGGAAGGAAGAAGTATCCAAGCCGTTGGACATACCAGATGGTTCGAAGAGCTCCACTTCTGCTCAT
TACCGGAGCAGTAGTACTCGCAGCATTGACACTCAGACTCCTTCTGTCCAGGAGCGCAGCAGTAGCTGCAGCAGT
CATTACCCCTGTGTCTCCCCTTTTTGTCCCCCGGAATCCCAGGATGGTAGCCCTTGCTCAACAGAAGATTTGCTC
TATGATCGTGATAAAGACAGTGGGAGTAGCTCACCCTTACCCAAGTATGCTTCATCTCCCAAACCAACACAGC
TACATGTTCAAACGGGAGCCCCCAGAGGGATGTGAGCGAGTGAAGGTCTTTGAGGAAATGGCGTCTCGTCAGCCT
ATCTCGGCCCCCTCTCTTTTCATGTCTTGACAAAAACAAGGTTAATTTTCATCCCAACCGGATCAGCTTTCTGTCT
GTAAACTTCTAGGCCCTCTTACCTGCTTCTGACCTTATGCTCAAGAACTCTCCTAACTCTGGCCAGAGCTCA
GCTTTGGCAACTCTGACCGTTGAGCAGCTCTCATCCCCGGGTTTCCTTTACGTCTCTTTCTGATGACACCAGCACA
GCGGGCTCCATGGAGGCTCTGTCCAGCAGCCATCCCAGCAGCAGCAGCTCCTGCAGGAAGTGCAGGGTGAGGAC
CACATCTCTGCTCAGAACTATGTGATCATCTTAAAAAAGGGGAGCTGGCCTCCACCCTGTGTTCCATGGATTCCG
AACAAGATTTAGACATCTGCATGAGTGACAACTTCTGAACACCACCACCACCAATAATACTTATCAGCATCA
TAAAGTATCTCTTAAACACTGATCTTGGCAGGGACGGAACCTTATTAGCAGTTTTTTGTGGAAGCAGTAATGC
TTGCAAAACGTGTGTGTCATTTCAGCATTTTAAAGTGGAGACTATGCATTTTCATAGTATATTTGACAGATTAGTACT
GTGTCTGTGTTTTGTTCCAGATTCTTCAGTATAAATAAGCTCTATATCAAAAAGTTGCCTGTCTAAATAGAAAA
TGTCTTGTGTGTTTTGTCCTATGGAATACTGTAATTCAGGATTATGTTTACAATTGATCCAGGTGTTTGT
CTAACTTCTGTAATACATACAATGCAAAAAAAAAAAAAAAAAATGGCCACAACAGTTGCACAGTGCCACCCTATG
GCCTAGCTTCAGGTACTTCAGTTGAAGTCTAAACTCAGGTAACCTGGAATGTATATCATATTGGGATATTAAATA
TTTCACAGCTAAAAAGCTAAAGAGGGAACATCACTCTTTGCCCTTCTTATTTTATGCATTTCCCTTTCTCAT
TACATTCCACATTCTTAGAATAAGAAGTGCATTCAATCCTAGGAGAATGATAATCCTGGACATGGGTGAACATGA
GGAGAACCAGCAAAATCTGTGGTGTGTTGACATCACTTTGTGATGTGGTTACAAGTAAAACAACTGTTGCATTAC
TGTTTCAACATGTGTACATGTGGCTTTTTTAAAGTTCAGGTGTTGCTCAGTAAAGGACTGTGACAATGTTGCAA
ATAAAGTGTTCAGTACTGGACTGTACATAAACATTCACATTGTGTGTGATGAAATTTAAAGACAAGAATGTCTA
GAGTTAATTTCAAATAAGTGAAGTGTGTTGACGGAATGGTTGAGATTTTTTGTGTTATGTTAGCCATCAGGGTCA
TAACTGTTACATTTTATCTAAAGACATATTTATATTTAGTTTCTCCCTTGGAATTTCTTTATTTTGCAGGTGAA
AAAGTGACATACTTTTGTATTGTCTTCTCAAGCAGTTTAGGTGCATGATCTTCATTTACATAGAATACTTGG
GTCTCAGAATTGATGCAACATAAGCAGGTTTTTTTGGTGACTTACAAGAGCAATAGTTTGAAGCTATCTCATTTA
AGCCTCTCATAATGCATAATCATGAGTAGTTTTGAAATTTGCAACCTGTGAGGTAGAGCATAAACTCAAGAAAAAT
AGCCTTGAACCTGCAGACTTTTGACACAAGTTCTCCACAAAAGTGTGAAGAGAGCCCCAGGCATTCTGATTGGTC
AATGGGAGAGCCTAACTTTCAATTGTTTTCTTCAGTACAAAGAGTATCCAAAAGCTAAGTTTTTGTATTCCACTAC
TTTCAGTTCAATAAAACCTAGAGTTGTTTCATCTGCGCTTAAAGTGTATGGCACAATTTTCTTAAGAATTAGGGG
AACCAGGTGCCCTACAGTTAAAGGAACGTTTCAGTTCCTTTTCATTCATTCTCGGTTTTTTCTTTTATTTTCTAAGA
AGGTTGAAGAAGGATGAGTGATAGAGAAGAAAGCAACACCATTGATTTTTTTTTTTAAGAAATGATATATATATG
TATATGTTTGNNNNNNNNNNNNNNNNNNNNNNNNAGTATTCTGTGCATTATTTTGTGATGATCTCAATTCTCTCTT
TCCACCAAAGTTTGTGCGTAATATTTTCTCCTGAAGGTGCATTCTGGCTCCTTTAAATTAGTCAGTGTTATATTGT
AGGAGACTGTGATGGAAGAAAGGACTCAGTTTACTTTCTGTCATTTTCACAGGGGAACCTTTTAAACAATCTTTT
CAGCAGCAGATACCTTTAACCTAATAATCTCAGGCCCTGATGAAAATACTATATTTTGTAGATTATGGTTAAAG
GGGGAATTTACTAGTTCCGTAAGATAAATATGAGCTCCATTGACTTCTGATGTCTGGTTTAGCATTACATAAT
ATGTTGATCTTACACTCTGCTTTTGTCCAAATAAAATGCAATAGTATCAATATCAATTTAGAAAAATGGACTGA
ATATGCTTTTTTGGTGATGAAATCTCATGTACGATATTTATAGTGATGTGCTTTTATTTTCTCATGAGATACTAA
ATATTAATTGTGTTGTACATTTGTTCTTAGCATATATTAAAGTTTTGAACCAATGTGTTAAAGCTTACGCTTTG

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FIGURE 1295B

CCATGTAAATTTCCCAGAAGTTGTTGAGCTCAAATGTATCCTACATCCAGCTGTAGAAATTTGTCAGAAATTGTT
TAAATTTTGTATATAATTGTACTGTTTAATTCTAGCCATTGCGCTGAACAGTATTTGAGTTACCATATAATATGG
CTTTACACAAGGAAATGTGTGGCTTTTGTGTTTGTATTTTTCAGTATAGAAGTTCCTGTGTCTTATTTAAATAAA
GTTATTAGTAAACTGAAAA

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FIGURE 1296

AAAAPAEQAPRAKGRPRRSPESHRRSSSPERRSPGSPVCRADKAKSQQVRTSSTIRRTSSLDTITGPYLTGQWPR
DPHVHYPSCMKDKATQTPSCWAEEGA EKRS HQRSASWGSADQLKEQIAKL RQQLQ RSKQSSRHSKEKDRQSPLHG
NHITISHTQATGSRSVPMPLSNISVPKSSVSRVPCNVEGISPELEKVF IKENNGKEEVSKPLDIPDGRRAPLPAH
YRSSSTRSIDTQTPSVQERSSSCSSHSPCVSPFCPPESQDGSPCSTEDLLYDRDKDSGSSSP LPKYASSPKPNNS
YMFKREPPEGCERVKVFEEMASRQPI SAPLFSCPDKNKVNFIPTGSAFCPVKLLGP LLPASDLMLKN SPNSGQSS
ALATLTVEQLSSRVSFTSLSDDTSTAGSMEASVQQPSQQQQLLQELQGEDHISAQNYVII

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FIGURE 1297

GAGTAGCTCACCGTTACCCAAGTATGCTTCATCTCCCAAACCAAACAACAGCTACATGTTCAAACGGGAGCCCCC
AGAGGGATGTGAGCGAGTGAAGGTCTTTGAGGAAATGGCGTCTCGTCAGCCTATCTCGGCCCCCTCTCTTTTCATG
TCCTGACAAAAACAAGGTAAATTTTCATCCCAACCGGATCAGCTTTCTGTCCTGTAAAACTTCTAGGCCCCCTCTT
ACCTGCTTCTGACCTTATGCTCAAGAACTCTCCTAACTCTGGCCAGAGCTCAGCTTTGGCAACTCTGACCGTTGA
GCAGCTCTCATCCCGGGTTTCCTTTACGTCTCTTTCTGATGACACCAGCACAGCGGGCTCCATGGAGGCCTCTGT
CCAGCAGCCATCCCAGCAGCAGCAGCTCCTGCAGGAAGTGCAGGGTGAGGACCACATCTCTGCTCAGAACTATGT
GATCATCTAAAAAAGGGGGAGCTGGCCTCCACCCTATGTTCCATGGATTTCGGAACAAGATTTTCAGACATCTGCAT
GAGTGACAAACTTTTCTGAACACCACCACCACCAATAATACTTATCAGCATCATAAAGTATCTCTTAAACACTGAT
CTTGGCAGGGACGGAAGTCTTATTCAGCAGTTTTTGTGGAAAGCAGTAATGCTTGCAAAACGTGTGTGTTCATTCA
GCATTTTAAAGTGGAGACTATGCATTTTCATAGTATATTTGACAGATTAGTACTGTGTCTGTGTTTTGTTCAGAT
TCTTCAGTATAAATAAGCTCTATATCAAAAAGTTGCCTGTCTAAATAGAAAATGTCTTGCTGTGTTTTGTCCTAT
GGAAAATACTGTAATTCAGGATTATGTTTACAATTGATCCAGGTGTTTGTTCCTAACTTCTGTAATACATACAAT
GCAAAAAAAAAAAAAAAAAA

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FIGURE 1298

CGGTGCTCGAGGCGGAGGGGAGGAGGCGGGGAAGGCGAAAGGAGGGGTTCGGAGGAGAGGGTTCGATCTCCGTAC
GCACCAGGTGGAGAGCGCGCGCCTGGGGAAGGAGGCGTGTTCGAGTAGCGGGAGGGAAGTTGTAGTACGGGTGGGG
AGAACCACACTAAAGGAGATGGGGGTGAGCAGTTAAGGAACCGCGAGAGCGCCAGGTAGAGAGCTGCCCTTAAT
GGGGGAACCTGGAGAAGAGTGTGAGCGTAGTGGGGAAGAAGGGAGAAAGACAAATAGGTTTCGGGAATGTGTCTCCG
AGGGCGCGAGCGGGCGCTAGGACCCGGCGTTCGAAAAGATGAGGCTTTGGGGCTGTTCGGGGCGCGCGCTCCCGTTG
GTGACGCGGGGGTGGCGGAGGTCTCCGGCCGGGACGAAGCCCCGAGGGAGTGGATACTCGACAGCCTTCGGCCT
CCGCTCGCTTCTCCCTGCGCGCTTTCTGTCTCCCTTTCCGGCTACAGCCCTGGGGTTCGAGCTCTGGTTCGAAGCG
CATTCCGCCTCTCCTTTGGCCCTGCGGCTTCTTTGCAACCCGCCGCCACCCTTGCTCTCCGTGGTTTACCCCT
GGGCTCTGAGGCCTGGTGGTAGCGGCCACTGCCGCGGATTGGCTGTTGCGGACCCGGGGCGGGGCAGGTGGGAGA
GGCTCGTTCTCCGCGGGTTTCGTTGTGTTTCGCGCCATGTCGTTTGTGAGAGCGGGTGGCGGTTCGGCTCTGCGG
CGCCGCGGTCCCGGCACCCCGGGCCCTGTGGCTCGGCCATCGTATTCCTCCTTTACTCAGGGGGACAGCTGGGGT
GAAGGCGAAGTCGACGAGGAGGAGGGATGCGACCAAGTGGCCCCGCGACCTGCGGGCGGAGTTCTCGGCTGGGGCG
TGGTCAGAGCCCAGAAAGCGCTCGGTGCTCCCGCCGACGGGAACGGGTTCGCCCGTTCTGCCCGATAAGCGCAAT
GGTATCTTTCCCGCGGCCCGGGCAGCAGAGCCAGCCTCGGCGGTGGCCGGTCCAGGTCTCTCTATTCTCTGC
TCGCTGCTCTTCGCCATTCTTCTCGCCTTCTCCTCGCCATCGCCTACTTGATCGTTAAAGAGTTGCATGCTGAG
AATTTGAAAAATGAAGATGATGTAGACACTGGACTATTAGGATTCTGGACTCTACTTATAATATCCCTAACTGCT
GGATTCTCCTGTTGCAGCTTTTCTTGGACAGTGACTTACTTTGATTCTTTTGAACCAGGAATGTTTCTCCTACT
CCTCTTTCACCTGCCAGGTTCAAGAACTGACTGGACATTCTTTCACATGGGCTATAGCGTGGCGATTTTGAAT
GGCATCGTAGCTGCTCTTACTGTAGCATGGTGCCTCATGTAAACCCACACTGGAGCGATATTGTTGGCAAAACTT
AATCATGATTGTTTTGTAATAACAAGAAGGAGCATCACTGTCTACTCAGAAGACTGAGAAACCTGCTGTTTATTA
TGAGTTTCAGATATTTATCACAATCATCCTCATTATGGAAGACCTTTTAAAGCATTGTTTTAGAATGTCTGAGTA
TTAAGATACAGATTAATTGGGAATATCTGAGTATTAAGTACTTTCTTCAGAGTATAAGATGTTTACCTCATCTTT
TTACTTTTGTGTGTGTAGTTCTTTCAAGTTGTAGGAAACATTTTAAATGGAATTTAAACTCAAAAACCTGAATACA
GGACAATGCTTGCCTTTTTCATGTATGTACTACATTTTTTGTCTAAGAAATACTGATATTTCTGTTTAGTTGAGCTA
GAAATACTTCTTATTTATACATTTAGGAAAGCAAATAATGCCTACTACTCCGACTTTTATAGAAGCTACTTTTAA
ATCAGAATATTTAATTTTTGATATTCATATAATTAATAGAAGTTGCATTTATATTTTTTATGGGGCATAGTTCCCT
TATGTGTTTTTTAATGTATTTTCACTACTACATACTGAATTTGTATGTTTTTAAATTTGTTACATCTAGACAAC
GTAAACATTATTTTTTTAGCTAGTGCAAACCTAGTACCTGCCATTTTTACTAATTTTTGTCTTTAAAAAAGCAA
AAAAGCACATTGACCTAAGTTGAAAATTAAGTAAGTTTATTTTTAACAAAAATGCCTGAAAAAAGCTAAATTAT
TTAAGTCATTAAGATATTGAGAAAAAATTTGAAATTTTACTATCTCTGTTTCCACAATTTCAAATATTTATCTT
GGTGATATATTGTTACTTTAACAGAACTTGCAATATTTGTTTTTAATAAATATAAACATGAAATTTTTGTATG
TGAGAATGATTGAAGTAGTTTGTCTTAATCTCAAAAATTTAGTTACCAAAGTAGAAAAGGTATTTTGATACTAG
ATATTAAAACTACATATAGTTAATATAATTTTATAATTTTGTAAATTAATGTGCTTCTGTAATTGTGATATTT
TGTTTTCTAAGTAATTAAGCCTTAATTTTTCCCTATGTTACTAAAGACTTTTAAATGTTTAGAAAGTTACCTCAG
TTTTAGAAAGATGGACTACTTACAAAGCTGTTTTCCCTGGCCATAGGAAAACCTTACAATAAGAAACCATTAAAGTA
GTCAAACCTGCTTATTCAGGCTAAGTGGGAAATGAATTTGTGCAAGTGTGTTCCCTTAATTATCTACTGAATGTTGT
TACCGACTAAACAAGGTTTCTAAAAGTCT

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FIGURE 1299

MSFAESGWRSALRRRGPGTPGPVARPSYSSFTQGDSWGEGEVDEEEGCDQVARDLRAEFSAGAWSEPRKRSVLPP
DGNGSPVLPDKRNGIFPAAAGSRAQPRRWPVQVLSILCSLLFAILLAFLLAIAYLIVKELHAENLKNEDDVD TGL
LGFWTLLIISLTAGFSCCSFSWTVTYFDSFEPGMFPPTPLSPARFKKLTGHSFHMGYSVAILNGIVAALTVAWCL
M

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FIGURE 1300

AGTAACATGACTAAAAAGAAGCGGGAGAACTCTGGGCGTCGCTCTAGAGATCGATGGGCTAGAGGAGAAGCTGTCC
CAGTGTCGGAGAGACCTGGAGGCCGTGAACTCCAGACTCCACAGCCGGGAGCTGAGCCCAGAGGCCAGGAGGTCC
CTGGAGAAGGAGAAAAACAGCCTAATGAACAAAGCCTCCAACCTACGAGAAGGAACTGAAAGTTTCTTCGGCAAGAG
AACCGGAAGAACATGCTGCTCTCTGTGGCCATCTTTATCCTCCTGACGCTCGTCTATGCCTACTGGACCATGTGA
GCCTGGCACTTCCCCACAACCAGCACAGGCTTCCACTTGGCCCCCTTGATCAGGATCAAGCAGGCACCTCAAGCCT
CAATAGGACCAAGGTGCTGGGGTGTTCCCTCCCAACCTAGTGTTCAAGCATGGCTTCCTGGCGGCCCAGGCCTT
GCCTCCCTGGCCTGCTGGGGGGTTCCGGGTCTCCAGAAGGACATGGTGCTGGTCCCTCCCTTAGCCCAAGGGAGA
GGCAATAAAGAACACAAAGCTGAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1301

GGGAGTTGACAGGGGAGAGATGGAAGGCTAGCAGCTGAAAAAAATAGGTAAATAACCAGTGTATTCCATGTAG
CTGTTAATCTAGTTTGTGTGCTTCCATCAGCTGCAGGAGTATTCCATAGTATGCATCCACCATAGTAAATTTATCC
ATTCACCTGGTTGCCTCAAATTTCTTGGCTACCTGGAGAAATTAAAACCCCTGAAGCTAGGGTTCTGAGTACAAGA
TCAGTTCCACCAATTAGATTTCTTCATTTGAGATTTGGGAGGTAAAGGCTGTCTTTCTGCTGTTTGGGTTGTTGC
TGCTGGAAAGCAAGTTTATGTACATATGGGGCTTTCTGCAACAGCTTTCCAGCTTTGAAAACCTGCNNNNNNNN
NN
AAAATAAATCTACTCTGTAATAGTATAAGTTTGACTACAATAAACTGTGGTTAAGAAGAAAAATTGGCCGGGCAT
GGTGGCTCATGCCTGCCTGTAANNN
NCCAGAGTAATGGTTTCTTGACTTTCTGTAGCCCTTGTTCCCTAGTCTGCTGTGATATTTATGTTGACCTTTATC
ATTTTCTATTCTGAACCCCTCTTAGCATTTAATGTGAAATCTAAGAAATTAGAAGTAGAATGGCTTTTATTGTTT
TGACACCTTTGAAATTATTATTAATAATTTTTCCAGAGCAAAAAAGCAAACACGCTCAATAAGACTAAACAAAAC
AAAATATAAATGTACATCATTTAATGTCCCAGTGGCTCTATTCTACCTGTAAGAAAATGATACAAAACCACCTAA
GATATTTTGAAGCCTGACAAATCAGCTTCATGGAAAAAGGTAAAAAATGCATTTTCAACCGAAAGGGCAGATCC
AATAGAAGACCCGCTCCTTAAATAAACATAAAATGTAAAAAGTTGGAAAAATTAAGAGTAATGTTCCATCTGGAAA
CTGAACTTTGTCTTGAACCTGTGTTGGCACCAAGCCTCATACACAGTGAGCTCAATAACTGTTGGGACAAAGG
AAGGAAGGACAAAATGTGTAACCTCCCAGCATCTGGGAGATGCTGTCTCTTGCCCTCACTGAGTGTTCCTTTTCTT
TGCTCTCATGTTCATTCCCTGAGAACAAATGAATTCTGGGACAGGCTAAACATCATGATGAAGTTTCTTAAACAGAC
TTTCTTAGTGGAAATCCATTTAGATCTGGGTGTGCTCTATGGGGAGTGCTGACGTCAAAGAGCAAATGTCTATAA
GGGGCCCTTTTAAATGAACATTTTCTCATTGAGCAAGCTGGGATTCTCTAATGTAGAAATCAAGCCATCTTTA
TAATTTCACTTCAGATGTTTATGTTTTTGTTTTTTTTTTGTCTCCAATGATGGTAAAAATAAAACTACGCATTAC
TTAAAGGAGTTTCCCTCACATGTAAACACTGTTAGGAAGTCTGGATTAAGTTGAAAGTCCTGTTTTAACTTTTTT
TCTCTCATATACCAAACACTCTGTATTTCTCTTAAAGAAGCCCTTTAAGAGAAAGCCCTAATTTTATATCTGACA
GTAAAGTTTGTCTGCAAGTGTATGAGTTCAAACACATCCCTTGTTTTCTGTCCCTAGGGGAAAAGTCATGTAGTTT
TAGCTTGGCTCCAGTGTTAATATTATATTAGTAGCAGCCTTAGAAGAGTGGTCTAAGACTTGAACCTGGAGCAA
TTTTATAGCACAGAATCCTACGAAGATAGGACTGTGAACATTTGTTTTCTTTTTCTGTGTGTGCAAACTAACTGG
TTTTTGCTTTACCAATAAAATGTCTCGGCAGAGTAAATTTAAACGTGAAAATTATAGATCTTGATATTGAATC
CATCAGTGATTCAAGAGATACACCTATTTGCCTAAAACAACCTAAGATGTATTGGTTATGGAATCATGTGTTGGA
TAGGTTCTTAAGACCTGTTTCTCAAATCTTGACACAGTTTTCAAGGGTGGCTTATTGACTTGCACGGTTGGGCA
GATAATCCAGATTTACCTAAGATTGGGTAAAAAAGTCATCTGTGACTTTGCTGGCAGGGCATTGCTAAGTGGAG
TACAGGATCTAAAAGGGTTTTCTTAGAAAGGGCAATATTGTCCAATGAAGTAAGCAGAAGGACTCTGGGTTAGAA
GCATCTGCACAAAACCTGGTGAGACCTACTCTCCACTGCTCTGCAGCTGGATGGCTGATGGCAGGCTGAGCAGTG
GGGAAGCAGGTTTTTAACAACAGGGAGTCCTTCCAGGTCAGTGATATTGAGAAGAAACATAAACTATTGTCTGT
TACATTCCGAGGTCAGCCTTCTTCTTAACGTTTTATAATATGCAAATGCCAGCTTCTGGAAAGCAAGTATCATCA
TGTACCAAATGCTTTATACACCATCACATTCATGAATTTTTTAGCATGGTCAGAAGTTGTGTAAATATGTCTCTT
AGATGATTTTGGGGAGATGTGATTTATTTTTCATATTTTCAAAATGCATTTCAATTCAAATAAAGTTATCTATTG
AGACAACCGAAAAAAGCGG

1436/1629
FIGURE 1302

MILGRCDLFFIFSKCISFQIKLSIETTEKKKKS

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FIGURE 1303A

AAAATACTTTGCCAAATGAAATAGACTAGTCAATACATCTGATGTCCATAATTATTGGTAACTCAGTTACCTTCT
AACTAATAGGCTGGTTCAGGAGACTCTCCAGTTTATAAATGGTTCCTTGGGAGCCTTTGGAAGCTGTATTAA
TCTTTCAGTCTTTTATTTCTAATTTTTTCTCTTAATCTAAATAGAGGCCAGTTATCTATTTTATCAGCTTTTATT
CTTGAAGATTCTCAGATTATGTTTTAGTCCCTTTTAGCTTTAATAGTCCTTGAAAAATACATTACTGTATAATGT
GGCAATTCTGTAAACAGAGACTTATTACTTTGAATGAATAATCCTAAAAATTTAATATTTTAGCTGAAGTTTGAGAT
TTGTGGAATGAACAAAAGAATTAGAAACTTTTCATATGTTACTTTGTTTCAGTCATCTGCAAAGTATGAAGCTGTA
ATTCTGAAATACACATCCAAGTGAATGAGAATTAATAATTTTCTAAATATTAATACTAACTGGGAAAAAAAAC
AGTGTGAAGTTTACAGTTAGAAGAAACAGACCCAAAGTTGCCAGAAGGTAATAATAAATGTAGTTTTCTACTGTA
AGTAAGTTATTGACGTAAGATGCTTTATTTGTAATATATTTAGATTTTGAAAGTTATTGAGAGATGAATGTATAA
AAGCTAAATTTTCTTTTCTGAAGCAGTGAAACAAAATTTGGGGTAAACAAGGAAGCTCTGTTGTGGCAACATGTCT
ATGAGGAATATTAAACTAAGCATACTCCACAGGCTTTAAACTCAAACCATGAACATTTAAATTAAGTTGTTCC
TTATTTTGCCTATACCCATTTTTATCTTTTCATTGTCGTTTTTGCTTGACAGTATGGTGACAGAGTATTTTTATTT
GGAAAGTCCTCAGCAAGATGAATTAGCCAAAAGCAATAATGGTTCAGATTAAACAATAAAGTGAATGATTCAA
TCCCAGGCTCAACTAAGAACAGTCGCTCTCTGGATGTTTCATTTTAGACGATAGATAAGTTGAGATGTTGTAATA
TTTATGGGGGGTTAAGCCTGTGTGCTAGTTATGGGATGAAGACTTGTAGTACCAGTACCATCAGTGGTCATACTTTT
TTTTAACTTTTTACTAACTAATACAGTTAGACATTTCCACTCTATCGTGATTATATTTTTATGATGGGAAAATA
AAAACACTTCCATGTTTTTATAAATAGTCTCTGCAAAGATTTTCAAGATGTTATTGGTATCTCGGTTTGGCAGTATC
TGAAAAATTGAGATTGTCTTTGAAATGTTTGTGCTACTTTTACTTAAAGTAAACCCCCACTGTGCAAGACCCAGGC
CGGCTTCAGCTAATACCAAGGTTTCTGTGTGCATAATAGTTTACAGAGAACCTTAAGAGTAAGGACTGCGGATTAA
AAACAAAACTTTTTTTAACTTTAAATTTTTAGTTTTTGTTCAAAAGTACCTGGTTTTATAAAGTCAAATCTTTTA
TTAGTTCCTTTCTCGTTTTAAATTGACTGATGTTGCTGATGAAGCTTAAAGTCCCAGGCACGGTTGTGGCGATATA
CTGATAAAATTGGTGCCTAGTGGTGGGAGGAGCTCCAGTGTGACGACTTTTATTAAAGGCCCTTGTTTTCCCAA
ATGCCAATCTAGCCACATTTAGATTTTATTATTCAATAAAAACAGATGAAAAATCATCCATAAATGAATGTTGAG
GTTACCAAAGTACATCACCTGCTGAGGAAGGATAAATCTTCTGCTTTAAGGGAGCCCTGTCTCTCTCTCTTA
ATGCACGTTTCCCTTGGTATTAGTGGAAGCTGTGTTCAAGATGGGAAGCCTTTCCTGCAGTTCTTAGAAACACCT
GCTTTCTAAGGAGAGCCTTTTCTAGGATTAGCTTATGTGTGTTTTCTCTAGGCGATTTTTTATTTTCAAGTTACCA
TTTAATTTTCAAGTTGACAGATGCTGTGTAAAGTCTCTCATAATGAGAGTAGTCCATTAAATTGTTGAAAGTTGC
ACTGCTTTTCTCTTTTCAAGGTACCTGAAATGAGTGACATCAGGTATTGGAAGGAGTAAGATCATAAACTGTATT
CATTTTCTTCTTGTACAAAGTGATGACTTCTAATGCTTATATCTCAAGGTATTTTTTAAAAAAGCAACGGTCCC
TAATAGAGTAAAAATTTGGTTTTGGTCCAAGTTCCCAATAATGTATTTAATGTTTCTGTTGTTTACTGGTGCCTCC
CGTTGCATCAGGTAGAGATTGCCTGCCTCTTTGTAGGGCAGCCTTGTGGCACCTTATGTCCAACCTTGGAGGATAG
TATATGGCTTCTTTGTGCCTCTACTATCTTTTCAAAGCCATTTTATAAAAAATCCTAGGTAGCCTATTTTAAATAT
TTAAATATATATATTTGTGAAAGAACTTTTAGAACAGACCTTTTCTTTTACTTTAAATTTCCCTGTATTTCATT
TTTAAGAGTAAATTTAATCTCCAGGATTTAGAAGTGTCTTTCCAGAGAAGCATAATGAGAAAGTCAGACTGAGGT
AATAAGACCAGAATTAAGTGATAGAAGAACTGTTGTTTGGTTAAAGGACACAGATTTGAAGGAAAAAATTTTGA
TGTAACAATTTTTTAAATAAAATTTTGTTTTTCTGTAATGTCATATTTGCTGCTACAGTAGCTCAATATTTTACA
GGGCTAACATAAAGCTGGCTCCATTTAAAACTGGAGTACTTCTAGTGCAGCCAGCCTAGGCGGAACTGTACA
CCATGGTCTTCCAGATGGGTGACTGATGGCTTTGGGTAGCTGATGCATGCTTTAATATTTGCCTATAGCCCGGCA
GCAAGGAAGTCGGGGCGGGGGGACTTTTTTACCCTGCCAGTTATAGCATTGTGATTCTTTCTGGGCACCTGGCATT
TTGTGAAACTCTCAAGGGAAGGTGATGCAGGGGAGAAAATGTGAATTAATAATACATAGATGGGTGTTTTATGTC
TTCTACCCCTTTCTAGAAATAGTACAACCTCTTAAGTGTGCCAGTCCCCAGTTTACCAGCTTTGTATCCAGTCGT
CATCTCATTCAAGTATGGCTTTACTTGGTGACACTGGCCATAGCTAAGTTAACTTGGCATGTTTGACTTTTGACA
ATAACAAAAATGGTTTTGGATTTTGTTTTTATTTCCAAAAATGTATACAATATCAGAACTTCACATTTTATATAC
TAGTATCTGGCTATTAGTATTTTACAGGAACCATAGTTCTTGGTGACTACATATATATATATATTTTTGTGACCT
TTTTTGTAACATAAGTGCCGTTTCAACGTTACAATCATTTTTAGGGTTATTGTAATCAATGTGAATATCATGTTT
TTTCAAATCTGTTCTGAGCCTATAGTGTGTTGCTTTGTGAACATGTGTATTGTATATATCTGTATAGTTATATTG
TACTGAAATTAGCTTGTGTTGATATAAGGAAAATATGTATTGAGTACCTTTTTGCTAGCCTGATTGTTTAATCTTT
TTAAAAAAGGTTTTAAACTTTTTTTTAAAAAAAATCTTTAAACTGGCCTTTATTACATGGTCACACATAAAGTTG

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FIGURE 1303B

CAGTTAGGAAAGGGATGGGCAGGGAAAACTAGTTTTGAGTGTCTTTAGATAGAAACATGAGACTAAGGTTTGAT
TTTGTTTTCGTTTTCTCATTAAAATACTTATGCTTTATGGAATAAAAAAAAAACAAAGGG

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FIGURE 1304

MRLRFDFVFVFSKYLMLYGIKKQ

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FIGURE 1305

TTCCGGCCTTGTAATCGCCGAGGGCACGTGCATGCCCCCTGGTTAAGAGTTGCAGGTAGCGGTAGCGATGGACAC
TCTGGATCGAGTAGTAAAGCCCCAAAACGAAAAGAGCCAAGAGATTCCCTTGAGAAGAGAGAACCGAAACTCAATGA
AAATATTAAAAATGCCATGCTGATTAAAGGGGGAAATGCAAAATGCAACAGTGACAAAAGTACTTAAAGATGTGTA
TGCACTGAAAAAACCATACGGTGTACTATATAAAAAAGAAAAATATTACAAGACCTTTTGAGGATCAGACATCACT
GGAATTCTTTTCAAAGAAGTCAGATTGTTCTTTATTCATGTTTGGCTCCCATAATAAGAAGCGGCCAAATAATCT
AGTAATAGGTCGTATGTATGACTACCATGTGCTGGATATGATTGAATTAGGTATTGAGAATTTTGTCTCTCTAAA
AGACATTAAGAACAGTAAATGTCCTGAGGGAACAAAACCCATGCTGATATTTGCTGGCGATGATTTTCGATGTAAC
AGAAGATTATAGAAGACTAAAAAGTCTTCTTATTGATTTCCTTCAGAGGCCCCACAGTATCAAATATCCGCCTGGC
TGGATTAGAGTATGTTCTGCACTTCACTGCACTGAATGGGAAGATTTACTTTTGAAGCTATAAGTTGCTGTTGAA
GAAATCTGGTTGCAGAACACCACGGATTGAATTGGAAGAGATGGGACCCTCATTGGATCTGGTTCTGAGGAGGAC
ACACCTGGCATCGGATGACCTTTATAAATTATCTATGAAAATGCCAAAAGCTCTCAAGCCAAAAAAAAAAAAAAAAA

A

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FIGURE 1306

MDTLDRVVKPKTKRAKRFLEKREPKLNENIKNAMLIKGGNANATVTKVLKDVYALKKPYGVLYKKKNITRPFEDQ
TSLEFFSKKSDCSLFMFGSHNKKRPNNLVIGRMYDYHVLDMIELGIENFVSLKDIKNSKCPEGTKPMLIFAGDDF
DVTEDYRRLKSLLIDFFRGPTVSNIRLAGLEYVLHFTALNGKIYFRSYKLLLKKSGCRTPRIELEEMGPSLDLVL
RRTHLASDDLYKLSMKMPKALKPKKKKK

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FIGURE 1307A

CAACAACAAAAGGACTTGGACTGGCCGGCCTGGGCGCACGACCCGAGGGCTGGAGTCGGCCCCGCGCCTGCCGTC
TGGGTACCTGAACGAGGTGCAGCGCAGCCGGCCCCACCGCAGCTACCTCAGCAGTCCC GCCCCGCCCCGCTCCTT
CCCCGCCGAGCCGGCCTCGCTCCCTTCCCCGCGCACCCCGCACGGCCCGGGCCACGTACAATGACTCTTCTTGC
TTTTACCTAAGTTGAATAAGCACCCCTGTGCACTTTAATCTCCTGTCGGTACCATTGGGCCAACTAAAGACAAGG
TTTTGAAATCTCAGCTATAAAAGACATCCAGCCAACTCTCAGTCTTGCCTTAACAATGTTCCAGAGGCTGAATA
AAATGTTTGTGGGTGAAGTCAGTTCTTCTCCAACCAAGAACCAGAATTCAATGAGAAAGAAGATGATGAATGGA
TTCTTGTGACTTCATAGATACTTGCACTGGTTTCTCAGCAGAAGAAGAAGAAGAGGAGGACATCAGTGAAG
AGTCACCTACTGAGCACCTTTCAGTCTTTTCTGTTTACCGGCATCTCTTGAGTGCTTGGCTGATACAAGTGATT
CCTGCTTTCTCCAGTTTGAGTCATGTCCAATGGAGGAGAGCTGGTTTATCACCCACCCCATGTTTTACTGCGAG
GTGGATTAACCACTATCAAGGTGGAACAAGTCCTATGGAACCTTCTCATTGAACATCCCAGCATGTCTGTCT
ATGCTGTGCATAACTCCTGCCCTGGTCTCAGTGAGGCCACCCGTGGGACTGATGAATTACATAGCCCAAGTAGTC
CCAGAGTGGAAGCTCAAAATGAAATGGGGCAGCATATTCATTGTTATGTTGCAGCTCTTGCTGCTCATACAACTT
TTCTGGAACAACCCAAGAGCTTTCGCCCTTCCAGTGGAATAAAGAACACAGTGAAAGACAGCCTCTTAACAGAA
ATAGCCTTCGTCGCCAAAATCTTACCAGGGATTGCCACCCTCGGCAAGTCAAGCACAATGGCTGGGTTGTTTCATC
AGCCCTGCCCGCTCAGTACAATTACTAATAGTTTTCAAGTTTTGTTGGTTGGTTTTCTCTTGGTTTTGTGCTTACAT
GTATGGATGTGTATATGTACAGTGAAAATGTTGTCTCTTTACAACCAATTGATAACCAATCACATAGTTTTAT
CAGTGTATTTAGACACTATCTTGAAAATCAGATTTATATGCTGTGTATCACATAATGCCTTGCCTTAACATTTA
CTTTTTTTGTACACTTTTTTCAGATTATTTCTGGAACATATCAATATAATTACAGTGTTTTGGGGGTGTCTTTAAA
TATATTAGGTTATACATTAGTCAGCATTTTAAAGACATTTCTTCCCAAGTACGAGAATAGGCATCTTTCATTTTC
ATTTTATTTTGTATTACTTAATCTTTTTAAGCAAGCAAAAATTTATTCTCAGGGTCAGCTGTACACTTTATTGACC
AGTACTTGATAATCTCTCTGTATATGATGAATACATTTTTACACACTAACATTAGCATTAAACAGGTGATAGTTGC
CATGGATATAATGGAATTATGGCTGGACTTTCTTTTGAAAGAAAACCTTGATGTATTCTGTGTGTATGGTTTTTCC
CCAGATTAGTCATACAGTTTCATTTGGAATTCAGGTACATTAAGCTTTAGTGAAGAGTGCATGCAGTAATTCCAAT
GTGACTGCATGACGTGGTACAGACATTACAGGTGTTGTAGACAGAGGCACTTGTCTCGTGCAGAGGGATTAAAT
AGACCTGTGAGATTATATTTGGA AAAAATTCATGTCTGTAACCTAACCCATTAGTGCAGTATTTAATTTGTTACTAT
TCCTTCCCGCCAATTCGTCTCACTCCTCACCTCGCATCAGCTATAAATTTGGAAGTACTTGTCCAGGCACTCAAG
TGACTTCATATTTCTCTCTGCCCATGGGAAAAGAGATAGGCTTTATATTTCCACAGAGTGAAAAATCCTCTGTCA
TGGAGCCTGTCTGCCAAGTGGCAAGAGTGTGGGACTGTCTGGTGATGATGTCTTTCATGGCATCTGAGTGAAG
AGTGACAGGTTGGCTCAACTTTTTTCTTTTTTTTTTTAATTGCCTTGATTGTAAGTATTCTTCCCTGCAGTC
CAAGTGACTTTTTCATTTTTTGTTTTAACTTCAGGCAAAATCTTTAACCCTCTGGCCTCTGTTTTCCCCACCAAC
GGGAGCAGTGACATTTACCTCCCTCACAGAGTCACTGTGAGGATTCTATACTGATTTGAAGTGGAGCTGTTTCAG
AACTGAACCTTG TAGGAAATTC AAGGGCCTTCTACTGAATCTGGTGATGGGGTGGGGCCGTGGCACTTTCTCT
GCCACAGCTGTTCTTCACAGTGTTGGTGCTAATGAGGCCAGGGTGCAGGGTTCGATTACACAGTAGGCCAGTTAA
CTTAGAGAAAATCTATTTCTTACCTCTAGCCAGTCACTTCCTTTTTCCGCAGTTGTGATGGGTTTTGCTGAGCC
ATCCACTCTGACTGATTTCTCTGAAGTAAACATATTTACAATCCAAAGCAATTC TACTGACAGAAGTGTTGCCCT
TCATAATCAAACAGCTTGTTTTTCCATCTCCTCTGCAACCTAATTAATGAGTACAGGTCTACAAAATGTTTTTC
AAGGAGAAAAGCAGCATATCCTTAAGTGAAGTATTATATTTTTCAATAACCCTGTAGTGGCTTGATGCAGGGAAC
CTGGGGGACTTTCAGCGAAGAGCTGTGCTCTTTTCTGACTAGATTAGAGCGTTTGGAGTGAAGACGTCAAATG
TG TAGTGAGATGGAGGTTTTACATTGTTCTTCTACTGGCTGTGATGAAGTGCCAGAATGTCTCTTTAGAACAAGA
GTTAGATTCCCCCTTTCTCCTTATTGCCCTTCCGTTTTGACTTCCCTTTATTTATTTGTTGTCTAATTAGGGG
CCAAGTCTGTAAAGTTTTGTCAAAGTGAGTTAGAAGTTGTTTTCTTCTTACTATTTGTGTTTACCAGAGTTGGGAG
ATAAGATAGTTTCCATGAAGGTGTGTATGTTTTATACGATGTTGTTATAGGGCCATGCATTGGTAACTTGAAAA
TAGACCAGCTTAATGTCTTCAGGATGTAAACTCTGAATACACGGCGTCTCTTTTTTCATACATTGCATGTAAGTT
GTTAGTACCTCACAAGCTACAGAAGTTCAGCCATGAGATTTTGTGTTGGCAACATGAACAGATTTGTGTATAACTG
CAATGGCCTTTTTTTCCAGATTTCTTATTGACTTTTTGTTTGCCTTACCTGGGGCTAGTTTTTTATGCTTTGTA
CCTAGAAAACAAAAAATTACATTCGTTGGGCTTTTTTTCAAGGTTGGGATTACCACACCACCTGGAATATCATAC
TGTGGTTTTCTGCCTAAAATTGGCACATGTAAGTATTGAAGAAAATGGTTATATAATTCAGTTGAAACTCTTGGTT
ATTAGATGTTAGGCATCTCCTGTATGTAAGACACAAGGCCAACCACAACACAGAACGATGTTGACCTGTTAAGTA

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FIGURE 1307B

TTCTCTGAAACATGGCCAAAATGCATTTTATGAGCTTTTTTTTTTGCTATTGTAAATATTAGTGGTTTACAATGC
GCTTTAGACATATTTCTTTAAAATGCAAGCAGTGAGAAATAAGACCTCTCTGAATTAGTAGCTCTAAACTGTTAA
CATAGAATGTTACTTGGAAAAAGTCTGGAATATGTGGTGTACACAAGCAGTGCTTCGTGAATGAGTTTCTTAGCT
TTTATAGTGCGCCATGTTTCTCAAAGTTTGTTTTTGTGACAAAACATTTTATAATATATATCTTATGTTTATTT
TTTTTCTCAACTAATTGTGTACTGCACTGTAAGGTGAAAATTAGCCATCCATTATTTATCTTCTGTGGCAATGCA
TTTATATGGTTGATTGGGTGGGGAATTTTTTGCAGAAAGATGCAAAGTGATTGGGTTTTCGACTTCCTATCGCAG
GGAGCTTTTAAGAAATATTAATTTTCTATACATTTTCCAATCCCCATGCAAAGTGTTCTGTTCACATACCTTC
TCTGTTGTATCAGTACTTTGAGTGAGAAGACAGTTTATTTAAAACCTTGAGCAGGCTGTTTCAGCATTGTTTCTGCT
TCTGAAATCTGTATAGTACACTGGTTTGTAATCATTATGTCTTCATTGAAATCCTTGCTACTTCTCTTCCTCCTC
AATGAAATACATTATATATTATCTTTATGTACTCTTAAGAAAACGAGCAAGGAAGAGTATCTTCATTATTCTCA
TTTTCTCTGAGTTGGAAACAAAACATGAAGGACTCCAAC TAGAAGACAGATATTTACATTTAAATAGATTAGTG
GGAAAACTTTAAGAGTTTCCACATATTAGTTTTCATTTTTTGTAGTCAAGAGACTGCTCCTTGCTACTGGGAGACAC
TAGTAGTATATGTTTGTAATGTTACTTTAAAATTATCTTTTTATTTTATAAGGCCCATAAATACTGGTTAAACTC
TGTTAAAAGTGGGCCTTCTATCTTGGATGGTTTCACTGCCATCAGCCATGCTGATATATTAGAAATGGCATCCCT
ATCTACTTACTTTAATGCTTAAAATTATACATAAAATGCTTTATTTAGAAAACCTACATGATACAGTGGTGTGACG
CCTTGCCATGTATCAGTTTCACTTGAAATTTGAGACCAATTAAATTTCAACTGTTTAGGGTGGAGAAAAGAGGTAC
TGGA AACATGCAGATGAGGATATCTTTTATGTGCAACAGTATCCTTTGCATGGGAGGAGAGTTACTCTTGAAAG
GCAGGCAGCTTAAGTGGACAATGTTTTGTATATAGTTGAGAATTTTACGACACTTTTAAAAATTGTGTAATTGTT
AAATGTCAGTTTTGCTCTGTTTTGCCTGAAGTTTAGTATTTGTTTTCTAGGTGGACCTCTGAAAACCAAACCA
GTACCTGGGGAGGTAGATGTGTGTTTTCAGGCTTGGAGTGTATGAGTGGTTTTGCTTGATTTTCTCCAGAGAT
TTTGAACTTTAATAATTGCGTGTGTGTTTTTTTTTTTTTTTAAAGTGGCTTTGTTTTTTTTCTCAAGTAAAATTGT
GAACATATTTCTTTTATAGGGGCAGGGCATGAGTTAGGGGAGACTGAAGAGTATTGTAGACTGTACATGTGCCTTC
TTAATGTGTTTCTCGACACATTTTTTTTTCAGTAACTTGAAAATTCAAAAGGGACATTTGGTTAGGTTACTGTACA
TCAATCTATGCATAAATGGCAGCTTGTTTTCTTGAGCCACGGTCTAAATTTTGTTTTTATAGAAATTTTTTATAC
TGATTGGTTTCATAGATGGTCAGTTTTGTACACAGACTGAACAATACAGCACTTTGCCAAAAATGAGTGTAGCATT
GTTTAAACATTGTGTGTTAACACCTGTTCTTTGTAATTGGGTTGTGGTGCATTTTGCACTACCTGGAGTTACAGT
TTTCAATCTGTCAGTAAATAAAGTGTCTTTAACTTC

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FIGURE 1308

MFQRLNKM FVGEVSSSSNQEPFNEKEDDEWILVDFIDTCTGFSAAAAAEEEDISEESPTEHPSVFSCLPASLEC
LADTSDSCFLQFESCPMEESWFITPPPCFTAGGLTTIKVETSPMENLLIEHPSMSVYAVHNSCPGLSEATRGTDE
LHSPSSPRVEAQNEMGQHIHCYVAALAAHTTFLEQPKSFRPSQWIKHSEHQPLNRNSLRRQNLTRDCHPRQVKH
NGWVVHQPCPRQYNY

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FIGURE 1309A

CAACTTGGGTGAACAGCCAACCTAAATGCAGTCCTGAAGAAGATGAGGAGGACGAGGAGGATGTTGATGATGAGGA
CCATGATGAAGGATTTCGGCAGTGAGCATGAACTGTCTGAAAATGAGGAGGAGGAAGAAGTGAAGAGGATTATGA
AGATGACAAGGATGATGATATTAGTGATACTTTCTCTGAACCAGGCTATGAAAATGATTCTGTAGAAGACCTGAA
GGAGGTGACTTCAATATCTTCACGGAAGAGAGGTAAAAGAAGATACTTCTGGGAGTATAGTGAACAACTTACACC
ATCACAGCAAGAGAGGATGCTGAGACCATCTGAGTGAACCGAGATACTTTGCCAAGTAATATGTATCAGAAAAA
TGGCTTACATCATGGAATAATATGCAGTAAAGAAGTCACGGAGAAGTATGATGTAGAAGACCTGACTCCAAATCTAA
AAACTCCTCCAGATAGGCAATGAACCTTCGGAAGTGAATAAGGTGATTAGTGACCTGACTCCAGTCAGTGAGCT
TCCCTTAACAGCCCGACCAAGGTCAAGGAAGGAAAAAATAAGCTGGCTTCCAGAGCTTGTGGTTAAAGAAGAA
AGCCCAGTATGAAGCTAATAAAGTGAAATTATGGGGCCTCAACACAGAATATGATAATTTATTGTTTGTAAATCAA
CTCCATCAAGCAAGAGATTGTAAACCGGGTACAGAATCCAAGAGATGAGAGAGGACCAACATGGGGCAGAAAGCT
TGAAATCCTCATTAAAGATACTCTCGGTCTACCAGTTGCTGGGCAAACCTCAGAATTTGTTAAACCAAGTGTTAGA
GAAGACTGCAGAAGGGAATCCCACTGGAGGCCTTGTAGGATTAAGGATACCAACATCAAAGGTGTAATCAGCCTC
ATTGGACCACTGGTCAGAAATGTCTGCGTTTTGTACGTTATCCATTGTAAATTTTCTATTCTGTTTTGCATGTCA
GTTAGCATTATGTAAACATTTACAATTAGGTTACATTGTTTTAAGAACTAAGTAGCATAAGTGAAGCATGATCCA
AAATACTTGATTATTGCATTTTCAGAGCATAAAACCATGATTAAACTGCTACTGGCATCAGAATTGAAATCATA
TGTTAAGTAAATGTTAGGTACAGATTACAAAAATCTGTTAAAGCAAACATTTTGGAGGAGTGAAATAGTAAAA
TGCCAAGTATTGTGGCAGATTTATGCTCTGAACCACACAAAAAATTGAGGAAGCATTTTTTTTAAACAGTCGGTT
TAAATTGTTTTTAGAATTATTGCTTTTTGTTCTAATTTTCCACAACCATTAACTCTCACTTGTATATGGCACACCC
AGCACTTGTGCCTGTGGGCCATATTAGATGTTTCATTGTCTAGAGCTCAAGATGNNNNNNNNNNNNNNNNNNNN
NN
TGGGGAAACTCTAAACTGGTAATATTTTGTATGATGAAAACCTAATGAGAAAAACAAGATATATAGATGGAA
AAATTATGGGGTTTTAAATGTTTTTGTCTCAACTCTTTTTTCAGATTTTTTGAATGTATATAGGACTATGTTGAA
ATGTAGATATATGCCACAGAGTCTGTGATTGTATAAAAAACAAAAACAAAAACAAAAAAGATGGCTCTA
GAAAACCTCATATTTCCGTACTTGACCGGAAGAAGACAAATACTTGCACATTATTGCGATTGTTTTATTTTTTGTA
CCAAAGACAAATGCAACTGATATGGCAAACCTGCCAGTCTAAGTAAAGTTTGCACAGCTTACATGATACTGTATG
AATGTATGAAAAAAGGAGAAAAAAGAAAAAAGGTGAGGGTATAGGATCTTACTGAAGTGTGAATTTTA
TTTCTGTTTGGGTCCAATTATCTACAGAAGGAGCATCCATACATAAAATATTATTTTGTCTGTTCTCTAGTTCTG
CTTCCATAGTAGATAAGTTGGTGGCCATTTAGATGTCTTTTATTTCTGCACTTATTGTAGGAAATTTTAATATAT
TTCATTTTAGTAAGCTATTGATAAAATAGTTTTTGTACTTTGAAAATTAATAATGTTTATTTAGCTTATTGTAGTAT
ACTTCCACCAGACAACAAATAGATTATTTTTATTGTATTATGTATATATATATATGTAAAGAAAGAAAAAGCT
AAAAATATCTAATTTCTTTAGTTGCCACTTTTCCAATTGATGTATTATTGTGCATGTAATATTTTCAAAGATCAAC
ACAGGCTAAAAACAAATTTATAGATTTTATATTTTGTACAGGTATTTTCAAACCTAGCTTCTTCAAACCTT
AACATGTGACTTATTCTTCTATAGTTTCTAGAATTGAGAAACATTAACACATTTAGTTTTTAGGTGCTCTTTTTT
GCTCATATAAAACAGCTTCATTAGTCAGTGTTTTAACTGTGTTCAAGCTTTACCTCTTGATGAGAAATTTCTTAT
GTCAAGGCAGCATTATAAACCTTCCCCACAGATTTTCCATCCTGTCTCTTACTGTTTTATTCTCAAATCTT
GTGCTTTGAACTCTGAAAACCTGGTGGCTTAAAACTAAAAAAGAAAAAAGCATATTTAGCAAGGAAAAAATA
CCAAAATTTTCAGGCATAGCTGCTGGAAAAATTATCTATTTCTCCATTACCCACTGTAGGATTTCTTTTTTAATT
ATACTTTGACTATAAAGTGTCAAAGTATAATTTGTTCTTTTCTTTTACTTTGTTACCCCATTTGTAAGCTATAGC
ATATGAAGCTATATATATAGCTTGTGAAGGTTTGATCTAGAACACCCAGTAACAAATGAACAATGTTGCTTACCT
GCTTCTTTGACATCTTAAAAAGAAATCCAAGGAGGATTGTAAGGATTGTCTTACCACCTTAGCTGAACTGTGAT
GCACAAGATTTTTCTATGTGTTTGGTGGAAATGTACCTGGTTTGTACATTACGCTAAACAGATGATAAGCTCAA
GTCTGATGGTTTTAATAGAATGTAAGTTTCATCGTTTTAAAGCTTTTCTTTTTTAGGTTGGAGAAGGCAAAACACAGG
CTTGCAAGTTGGAAGTATATGAAGTCTTGACAGAGTGTGTCTGGTAAATTGAAAAGTGTTCAAACTATGGCAGT
TTTGCAATCAGGTGAAAATCACCTCATGATATTCAGCTGATAAGGTTTATAAAATTGCCCTTTCTAGCTGCTCT
GTTAGGAATCTGGTTTTTGTACTTTTTCTGTCTGCAAACCAGAATTTGATTTTTTGGTCTTGCAATTTCAAA
AAAAAAGACTTTGAATCTGTTTAGTAGATTCCATATCTTTGAGTTTCAGTGTTTTATATGTACTACTTAAGTT
AAATAGTTAAAGCTTTTAAATAGTTGAGCTTTTTAATGTTGACACTTTATTTTGTACCTATTTATATATGTATG
TATATCTTAGAAAAGCACTTTGTTAAAAAATATGCATTTTATATGATTCTGCCATTTGCTGCTAAATCTGGG

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FIGURE 1309B

CTGGTCAGAATGCTGCAGCGATACTTGATCTATATAAAAAACCTGGCAGTAAAATGTAGAGTGAAAAGTTAAATCCT
CTTGCTGTTTTAACTTTATCATAAAGATGACATAGGCAAGCTGTGCAGCTTTACATTTTAAACCAGGGGACTCTGT
GGCATTAAAAACCGTCTAGAAATGGTTGTACTTTAATGCCAGTAATAATCTGCTTCCTCTATTGTTCATTAAAAATA
TATACGTTTAGTGTATCACACAAACCAATCTTATAAGGGTAATGTAAAAACCCCAACAATTGTACATGTTCTGTT
TTTGAAAATTGTGGCATGTATTTTTGGGTGAAGATCATTAGAGAAGAGTTCTCTAAAGGTTTTCTGTGTTTCATAC
ATGGTATACAGATAGCTCATAATGAAGTCCAGAATCTTACTTTTAAGTGAAGGCATTGTGAATTCACCTCAAGTA
AACCCATTGTTCCAAAGCAATTATAAACTTTGACTCTAGTACTACTATGATTTAAAAAACCACAAAAACC
TTTTTTCCTAGTTTCAGATACACTGGATTCTTTATAGAGTTTGTCTCCATATGAAAGCATGCTGTCCAGTCGCTC
TTGTTAAGATCTTGTCTGAGTTTTGAATTGGGTGCCACACTTTTCCAGTCAATATAATTGCTTGTCTACTGTAC
CATGTATGATTCCTTGTCTTTCCCTATATCCTTCATGACAGATTATGATGTGGCTTTATATTGTGCCTTACTTGTA
CATTTAAACTAAACGTCTTCATTCCCTTCCACTTCTACATCTTTAACTTTGACCTTTTTGGTAAGAGAATCAG
AACTATTACAAAAGCATCATGAAGGATTCAGATGGGTATGGTTTCAAATTCCCTCTCTTTATAGTTATTTTATA
TTTGTATGAAAGACCAGTTTTGGATGGTCTTTGAATATAGGGGGGAAAGATTAGCAGTAATTTCACTACATCCCT
TTTCTCTGACTTTTCATGCATTTCTCATACATCTTCTTCTGATGCTTGACTTTATTTGCTTCCTAGCAATAGTCT
GCATTTAAAGAAAGGTGTGTTCAATTCATCAGCTTGAATTGACTATTTTCAATTTTTCCAGGATTTTTTAGGAGAA
GAGTACCCATTTTGTTTTATAAAAAACAGATGACAAGTCTCTTTAAAGAAACAGAAGTACAGTACTTTTGAAATA
CAATGCTGTTAGTTTGGATTTCTTTTATATATATATATAATATTCATACAATGATCTGATGTTTGCCTTCATTA
ATAAGCTGTTAGTTTATTCACCAAAATGTCAAGAATGGATGTGCTTTTCTTATTCCACACATTTAAAAAAATT
TAGCTGCTAAGATTTAATGTTATAAGAAATGAATTCAAGTTGCCTTCAGCAAGAATTAACAAAACTTATGTTCC
CTTCTTTTATATAGTTTCCATAAAATTCTGTTCAAGTATTTTCTAGTTAATTATGTAACAGAATGTTAGCATCTCT
CCATATCTTGAAACTTGAATTTTGAGAATGCATTGAATTATGCTTTCAGTGTTAAAGTAAAGGTTTCAATTATC
CTTCTAGTGAAGTCTGTTGTGGAATACCATTTCCTAGGAACTGAGGCCATTTCCACAACCTTTCACAGAACTGC
AGTCTTGTCTTCCCTTGGATCATGACAAATAAGTCTCACACAGTGCCGTAATACTTGIGGATTCTTTTGTAATC
TTTGTAATCTTAATAAGGGCATTATGAGAAGACGACTCCATGTTTTTTTTAATACTTCAAACACATTGGGATGTAA
CAATGAATGTCAACTGTAGGAATGGTGGTTTCGTTTTAAGGAATAAGCATGTTGGGGAAAGATGATGAAAATGTA
CTACTGAAAGTTATACACTTCCATAGGCAAATGGGATTATGTGTTGAAGCATAGTCCTCATGCTTAATAAACTGA
CTGAAATCGTAGAAATTACACCTAGGAACTGAGCTAGGCCAAATTGCCATTTTTGTTTAGAGAGTTTGGAGGTA
GTAGTGAGGGGACAGAGCCTTAAACTACTTCCAAACAGTATTTTGAATTGAAGACTTGGTAACTAGTGAAGAA
CATCAAAGTTGGGTATTTCAATGTGCCAAGTTTGGGTGAACTAGGTTTCGGTTTGCCTCTTTCATAACAATGTAAA
CACAATGGTGTAGTTAATTAAATTCTGGGTGGATAGGAGCAGGACTGATTACTATGTCTTGCCCTTCGCCCTTG
TTTTTTTCAGAACCAATAACAGAAATGTGTATGTGTACTGTATCTGCCTTTCACCACATTTTATGACACT
GTATTCCACTGCCTGCTTTTTTACCTTCTTCCCTAGGATTTGTCCTACAGCTTAGTATTGTGGTTGACAGCGAT
ACTAGGGCTGACAGCACAGAAGTCACAAGAGAAGAGTGGAAGGGCAAGAATCAAAGCATTGTTCATACAATGT
GGCAACCTCTTTTGCATAGTTGCGTAGGATCCTGTTTGTAAATGCTATCATAAATATTCTGTAGTTTTTTTTTTT
CTCTCCCAACTGGAGCTATGACACTTTTATTGGATTCAGTCTTGTCTCTTGTCTAGAAAGAACTTTATCTTGT
GACGCATGAGCTGTTTAAAAATTATCCTATTAAATGTTGGTTAATAGTTGTGCAGTTTTTCATTTTCAGATGGAAA
GGCAATGCAATTTTGCCTTTGTTTTCTGTACCTTCCAACCCCTGAGCACTTCTAGTCAGATACAGATTCATCA
GTGTATGCAACATCCTTTGTAATTTAAATAAAAAAAGATGAAAAGAAAACGTTCTGAATTGTTTGCTCATGTT
TTCGCCCTTCTTCTGTACTTATATCTTGCTTACCTAGGTAACCATCCGCTCCTCAAGATAACCTATTCCAAAG
AAATTCCAAATCACAGAG

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FIGURE 1310

NLGEQPTKCSPEEDEDEEDVDDEDHDEGFGSEHELSENEEEEEVEEDYEDDKDDDISDTFSEPGYENDSVEDLK
EVTSSSRKRGKRRYFWEYSEQLTPSQQERMLRPSEWNRDTLP SNMYQKNGLHHGKYAVKKSRRTDVEDLTPNPK
KLLQIGNELRKLNKVISDLTPVSELPLTARPRSRKEKNKLASRACRLKKKAQYEANKVKLWGLNTEYDNLLFVIN
SIKQEIVNRVQNPRDERGPNMGQKLEILIKDTLGLPVAGQTSEFVNQVLEKTAEGNPTGGLVGLRIPTSKV

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FIGURE 1311

GGCACGAGGCTGGAACCAAACAGTTTGGCATGTGTGTCAGTGATACACAAAATAGTTTTGCAGATTATGGTTGTA
TGTTACAAATTAGAAACGTGCATTTCTTACCGGACGGAAGGTCTGTGGTTGATACAGTTGGAGGAAAGCGGTTTA
GGGTTTTAAAAAGAGGAATGAAAGATGGATATTGCACTGCCGACATTGAATATCTGGAAGATGTTAAGGTTGAGA
ATGAAGATGAGATTAAGAATCTCAGAGAGCTTCATGATTGGTTTACTCTCAAGCCTGCAGCTGGTTTCAGAATT
TAAGAGACAGATTTTGAAGCCAAATTCTTCAGCATTTCCGATCAATGCCCGAGAGGGAGGAAAACCTTCAGGCAG
CCCCTAATGGACCTGCATGGTGTGGTGGCTTCTTGCACTTCTCCCTGTAGACCCACGATACCAGCTGTGCGTTT
TGTCATGAAGTCTTTGAAAGAACGGTTGACCAAGATACAGCATATACTGACCTATTTTTCTAGAGACCAATCTA
AGTAACTAACTCTTTGGATCTCCCTTTAAAGTGACCCTAATCTGGCTGCATTGATGGCCAGATTGCTGCTGCCT
TTGCACATCTAGTGCTGGTTTTAGAAATTTAATGAACTTTTTCTTTTCTTCGACCTCCTGAATCATGTGGTTC
TGCAAATGAATACCTTCAACTAGGATTTAGACCCTAAGAAGTTCACAGAAAAACACGCATTGAATGTGTGTCG
AACCTCTACATTGTGAAGTTGCACTATGTACCATACTCTAAAATGAAATAAGAAGTCTTTATGCTGTGAGAGAG
TGTGTGTGTGTGTGTGCGTGCCTGTGTGCTTGTGGGGGTTGGGTAGTGTGTGTGTATTTTCTCTGGCTTTAAAT
CTTAAACAAACAAACAAAAAGCCATAGAGAGCAGAACTTGCCGAGGGTCATTTATTGCCCAAGTTTACAAGAG
TAGCGATACAAGTTTTTCAAATTGAATTTGCCTCAGATATATCTGTCCTAATGCTTATATTGCACAAGTATGT
AAAATATCGTGTGGAGGATCATTCTTTGTTGAAATACTGCTCTTGCTGAAGTGTCTTGACCATTGACTATGACA
CAGTTTCTTATTTATGTAAATACTTGATCAGTGCCGACAGGCATTGGATGCAGAACCTAGAGCCAGTTTTTC
AGGAACAATTGTAAACCTGACATGGTACTGTGCATCTATTCTAAAACACTCAAACTGTGAAAATATGGTTTAC
ATTTAATTGTACATAAAGGTAAAGGGAGAACTCAATTCAGTACCAGTTAGTTTGTACATTTTAGGGGGCTTTTCA
CATTAACTGCCCATTGTGTAAATTTATAGTTTGACATGATGTGTTTGTGTTTTAAAAAAAATGCATAGTATAAAC
CATTAAAGGATCTGGGAAAAGAGAAGATTTAATATAGAACTAAGCTTTTAAAGTTTGTGTTTTGTTTTAATTCT
GGTCTCGGTGCAAATGTTAGTTATGCCTTATTCATATCACAGTTAGATCACCATGCTGCAACATGGTTTATATTC
ATGCTGCCCTAGAACTTTTGTAATTATTTGTTGCAAATTTGTGACTGTCCTTATTAAGTTTCTTTTATGTAAGT
AATTTGTAAAGTTTCTTAAATTTTGTCTTTGCTTATTTAATTTTGAATAAAAGCTAAATTCCTAAAAAAA
AAAAAAA

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FIGURE 1312A

CAGGGCTGGCTTTTTTTTTTTAATAAGATAGCTGGTGCCCAAGATTGTTTTCCACCTTAAGGATAAAACCTGTT
AAGAAAGCCTGAACAATTACAAAAAGGAAGAAAAGGAGACTTGGCCAACCTGGTGTGAGGAGTCTTAACAAGGTC
ATAGTTTGCCAGCCCCTGCCCTAAACAAATAATTCTTGAATGCCTACTGTGGTGTGTAAGATATGAGTAAATACC
AGGGATACACAGAGAACAAAAGAGAAAAACTGCTATTCTTGTGAAACTTGGAAGTTGGAGGAGACTTGGAAGATG
CAGAACTGGATGACTACTCATTCTCATGCTATAGCCAGTTGGAAGTGAATGGATCGCAGCACTCACTGACCTGTG
CTTTTGAGGACCCAGATGTCAACACCACCAATCTGGAATTTGAAATATGTGGGGCCCTCGTGAGGTTAAAGTGCC
TGAATTTGAGGAACTACAAGAGATATATTTTCATCGAGACAAAGAAATTCTTACTGATTGGAAAGAGCAATATAT
GTGTGAAGGTTGGAGAAAAGAGTCTAACCTGCAAAAAATAGACCTAACCACTATAGTTAAACCTGAGGCTCCTT
TTGACCTGAGTGTCTATCTATCGGGAAGGAGCCAATGACTTTGTGGTGACATTTAATACATCACACTTGCAAAAGA
AGTATGTAAAAGTTTTTAATGCACGATGTAGCTTACCGCCAGGAAAAGGATGAAAACAAATGGACGCATGTGAATT
TATCCAGCACAAAGCTGACACTCCTGCAGAGAAAGCTCCAACCGGCAGCAATGTATGAGATTAAAGTTTCGATCCA
TCCCTGATCACTATTTTTAAAGGCTTCTGGAGTGAATGGAGTCCAAGTTATTACTTCAGAACTCCAGAGATCAATA
ATAGCTCAGGGGAGATGGATCCTATCTTACTAACCATCAGCATTTTGAGTTTTTCTCTGTCTGTCTGTGGTCA
TCTTGGCCTGTGTGTTATGAAAAAAGGATTAAGCCTATCGTATGGCCAGTCTCCCCGATCATAAGAAGACTC
TGGAACATCTTTGTAAGAAACCAAGAAAAAATTTAAATGTGAGTTTCAATCCTGAAAGTTTCTGGACTGCCAGA
TTCATAGGGTGGATGACATTCAAGCTAGAGATGAAGTGAAGGTTTTCTGCAAGATACGTTTCTCAGCAACTAG
AAGAATCTGAGAAGCAGAGGCTTGGAGGGGATGTGCAGAGCCCCAAGTCCCATCTGAGGATGTAGTCATCACTC
CAGAAAGCTTTGGAAGAGATTCTCCCTCACATGCCTGGCTGGGAATGTGAGTGCATGTGACGCCCCCTATTCTCT
CCTCTTCCAGGTCCCTAGACTGCAGGGAGAGTGGCAAGAATGGGCCTCATGTGTACCAGGACCTCCTGCTTAGCC
TTGGGACTACAAACAGCAGCTGCCCCCTCCATTTTCTCTCCAATCTGGAATCCTGACATTGAACCCAGTTGCTC
AGGGTCAGCCCATTCTTACTTCCCTGGGATCAAATCAAGAAGAAGCATATGTACCATGTCCAGCTTCTACCAAA
ACCAGTGAAGTGTAAAGAAACCCAGACTGAACTTACCGTGAGCGACAAAGATGATTTAAAGGGAAGTCTAGAGTT
CCTAGTCTCCCTCACAGCACAGAGAAGACAAAATTAGCAAAACCCCACTACACAGTCTGCAAGATTCTGAAACAT
TGCTTTGACCACCTCTTCTGAGTTTCAAGTGGCACTCAACATGAGTCAAGAGCATCCTGCTTCTACCATGTGGATTT
GGTCACAAGGTTTAAAGGTGACCCAATGATTGAGCTATTTAAAAAAGAGGAAAGAAATGAAAGAGTAAAGGAA
ATGATTGAGGAGTGAGGAAGGCAGGAAGAGAGCATGAGAGGAAAGACAGACAGGAAAATAAAAAATGATAGTTGC
CATTATTAGGATTTAATATATATCCAGTGCTTTGCAAGTGCTCTGCGCACCTTGTCTCACTCCATCCTGACAATA
ATCCTGGGAGGTGTGTGCAATTACTACGACTACTCTCTTTTTATAGATCATTAAATTCAGAACTAAGGAGTTAA
GTAACCTGTCCAAGTTGTTTACACAGTGAAGGGAGGGGCCAAGATATGATGGCTGGGAGTCTAATTGCAAGTTCCC
TGAGCCATGTGCCCTTCTCTTCACTGAGGACTGCCCAATCTTGAGTGCCAAACGTCACTAGTAACAGGGTGTGC
CTAGATAATTTATGATCCAACTGAGTCAGTTTGGAAGTGAAAGGGAACTTACATATAATCCCTCCGGGACAA
TGAGCAAAAACCTAGGACTGTCCCCAGACAAATGTGAACATACATATCATCACTTAAATTTAAATGGCTATGAGAA
AGAAAGAGGGGGAGAAACAGTCTTGCGGGTGTGAAGTCCCATGACCAGCCATGTCAAAGAAGGTAAAGAAAGTCA
AGAAAAAGCCATGAAGCCCATTGATTTTCTGAAAAATAGGCTCAAGAGGGAATAAATTAGAAACTCACA
ATTTCTCTGTTTGTACCAAGACAGTGATTCTCTTGCTGCTACCACCCAACTGCATCCGTCCATGATCTCAGAG
GAACTGTGCTGACCCTGGACATGGGTACGTTTGACGAGTGAGAGGAGGCATGACCCCTCCCATGTGTATAGAC
ACTACCCCAACCTAAATTCATCCCTAAATTTGTCCTCAAGTTCTCCAGCAATAGAGGCTGCCACAACTTCAGGGAG
AAAGAGTTACAAGTACATGCAATGAGTGAAGTGAAGTGTGGCTACATTCTTGAAGATATACGGAAGAGACGTATTA
TTAATGCTTGACATATATCATCTTGCCTTTCTTGGTCTAGACTGACTTCTAATGACTAACTCAAAGTCAAGGCAA
CTGAGTAATGTCAGCTCAGCAAAGTGCAGCAAACCCATCTCCACAGGCCTCCAAACCCCTGGCTGTTTACAGAAC
CACAAAGGGCAGATGCTGCACAGAAAACCTAGAGAAGGGGTCATAGGTTTCTGTTTGTGAGATTTGTTGCTA
CTGTTTTCTGTTTTGAATTTCTTCTTGTGTTTGTGTTTGTGTTTGTGTTTGTGTTTGTGTTTGTGTTTGTGTTT
TAGTTTTCTGTTTGTGTTTGTGTTTGTGTTTGTGTTTGTGTTTGTGTTTGTGTTTGTGTTTGTGTTTGTGTTT
GGCTTAAAGGACTGGTAAATCAGACCATCTTATTCTTCAAGTGAATGTTTACTTTCCAAAGTGTCTCTCTCTG
CACCAGCAGTAATAAATACAATGCCATAATCCCTTAGGTTTGCCTAGTGCTTTTGCATTTTCAAAGCACTTCCA
TAAGCATTCTTCCACCTCCTTGATAGGCATTTATGGAAGCCTGCTACATGTCAATCATACTGTTAGGCACAGG
GGACCTAAAGACACATAAAAGGATGGCATTCTGCCTCATAAATGCAAAACCTAATGAAAGTGAAGTGTGTTGGTAA
ACAAATTATTATTATATTATAAAATGCTATAAAAGAGCCATATTGAAAGTGCCCTGTTGGAGACAGGGCAAATGC

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FIGURE 1312B

CACAAAAATGATGTAAATTTACATGGAGGAAAAGTAGAATCTGCCTGGTTTGTAGGCAGCAGAAGACATTTTTCATCAGTGGGCAGGTGTTCTTTACCTTTTGTAGAAATGGGAGTCAAGTCTCAAATAGGAGGCTCCACAAAATCTCATGCCAGGTCTCTGATACCTTATTCACAGAAGTTCTTTGAAGTATTTATTGTTATTTTCTTTGACTTATGGGAAAAC TGGGACACAGGAAGACAGGTAAATTACCCAACCTCACACGTTAAGTCAGAACTGGGAGCCATAATTTTGTATCCC TGGTATAAATAGACAATCTCTTGAAGAAATGAAGAGATGACCATAGAAAAACATCGAGATATCTCCAGCTCTAAA ATCCTTTGTTTCAATGTTGTTTGGCATATGTTATCTTTGGAATTTAGTGTCTGAGCCTCTGTCTGTTACTGTAGT ATTTAAAATGCATGTATTATAATCATATAATCATAACTGCTGTTAATTCTTGATTATATACCTAGGGACAATGTG TAATGTAAGATTACTAATTGGTTCTGCCCAATCTCCTTTCAGATTTTATTAGGAAAAAAAAATAAACCTCCTGAT CGGAGACAATGTATTAATCAGAAGTGTAAGTGGCAGTTCTATATAGCATGAAATGAAAAGACAGCTAATTTGGT CCAACAAACATGACTGGGTCTAGGGCACCCAGGCTGATTGAGCTGATTTCTACCAGCCTTTGCCTCTTCCTTCA ATGTGGTTTCCATGGGAATTTGCTTCAGAAAAGCCAAGTATGGGCTGTTTCAAGAGGTGCACACCTGCATTTTCTTA GCTCTTCTAGAGGGGGCTAAGAGACTTGGTACGGGCCAGGAAGAATATGTGGCAGAGCTCCTGGAAATGATGCAGA TTAGGTGGCATTITTTGTCAGCTCTGTGGTTTATTGTTGGGACTATTCTTTAAAATATCCATTGTTCACTACAGTG AAGATCTCTGATTTAACCGTGTACTATCCACATGCATTACAAACATTTTCGCAGAGCTGCTTAGTATATAAGCGTA CAATGTATGTAATAACCATCTCATATTTAATTAATGTTATAGAAGAAC

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FIGURE 1313

MHDVAYRQEKDENKWTHVNLSSSTKLTLQORKLQPAAMYEIKVRSIPDHYFKGFWSEWSPSYFRTPEINNSSGEM
DPILLTISILSFFSVALLVILACVLWKKRIKPIVWPSLPDHKKTLEHLCKKPRKNLNVSFNPESFLDCQIHRVDD
IQARDEVEGFLQDTFPQQLEESEKQRLGGDVQSPNCPSDEVVITPESFGRDSSLTCLAGNVSACDAPILSSSRSL
DCRESGKNGPHVYQDLLLSLGTNTNLPPPFSLQSGILTLNPVAQGQPILTSLGSNQEEAYVTMSSFYQNO

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FIGURE 1314

CGGGCGAGAAGGGCAGACGGGACATGCAGCCTCTTCCGCCTGAGCCCCGGAAGTGATGTGGCTGCGGCATCGCGG
CCTCGCTATGTCTGCCATTTTCAATTTTCAGAGTCTATTGACTGTAATCTTGCTGCTTATATGTACCTGTGCTTA
TATTCGATCCTTGGCACCCAGCCTCCTGGACAGAAATAAACTGGATTGTTGGGTATATTTTGGAAAGTGTGCCAG
AATTGGTGAACGGAAGAGTCCTTATGTTGCAGTATGCTGTATAGTAATGGCCTTCAGCATCCTCTTCATACAGTA
GCTGGGGAAAATGCCAGAAATGTAGTTGCCATCAGATTTGATTGTGAACAAGGACTGACTGCAGAAAATAATGGAA
AGGATGTTTTAACTCTTTTATCTCCGAACATTGAATGAGATAAATTTCCAGATGCTGTTCTCTATTTTAATGTTAT
TGGACCAATGTTCTGTATAAAACAATTAAGATGTAACCATTTAATAGTCTGTAACAATCAACCTCAGTACTGTCAC
TACAATATTACATTCTGCAAATGTTATTTCTGTTGTATCAGATACAAAATTTTAGTGAGGTATCTCTAAGGCACAT
AGTAGAAAACAAAATTGGTTAATTACTCAAGTTCCTTTCACTGTGATTTGGAAATGATTTAATCTTTATAGAATG
AGAACCTTTTTTGGACTAGCTTTTTTATTAAAATGGCTCAATTTGTGTTGATAAGGATTGCATTAATATTTAATA
GTGCTTGCTTTTCTCTGGGCACACCATTTTGATCATTAAACCAGAGTACCTCTACTCTTAGCAAACCTCTAGTTTA
TGACAAGTATTTAAAATATTTAAAACAAGCTTATGCAGTTCCTTAAGGACGAAGGTAAATGAGATGTAACTTAAAA
ATAGTATTGGGAAAATGTTGATAGTTAACATTAGTGGATTTAGACTAGCCAAATGACATAGTAGGCTCTGAAACA
TCTTGTCAAGTATATGTATTTTGTGCATGAATTTTGTGTTGAAAGCTGTCTTTCTCTGAAAAACACAACGTTCTT
AGAATGAAAAGAACAATTATAAAATAAAAAAAAAAATTTAAAAAAACTGGGCGGGGG

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FIGURE 1315

MSAIFNFQSLTIVILLICTCAYIRSLAPSLDRNKTGLLGIFWKCARI GERKSPYVAVCCIVMAFSILFIQ

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FIGURE 1316

GGAATTCGGCACGAGCCCGATTCCGCGCCCGCCATGGCCGACAAAATGGACATGTCTCTGGACGACATCATTTAAA
CTGAACCGGAGCCAGCGAGGCGGCCGGGGCGGGGGCCGCGGCCGGGCGGCTCCAGGGCCGGCCGCCGCGGTGGG
GCGCAGGCCCGCGCGAGTGAATCGAGGCGGCGGGCCCATCCGGAACCGGCCGGCCATCGCCCGCGGCGCGGCC
GGCGGAGGCGGCAGGAACCGACCGGCGCCCTACAGCAGGCCAAAACAACCTCCCGACAAGTGGCAGCACGATCTT
TTCGACAGTGGCTTCGGCGGTGGTGCCGGCGTGAGACAGGTGGGAACTGCTGGTGTCCAATCTGGATTTTGGG
GTCTCAGACGCCGATATTAGGAACAGCAAACGTGCACCTTGAGCGGAAGGCAGATGCCCTGAAGGCCATGAAGCAGTAC
TCTGGTCGCAGCTTAGGAACAGCAAACGTGCACCTTGAGCGGAAGGCAGATGCCCTGAAGGCCATGAAGCAGTAC
AACGGCTTCCCTCTGGATGGCCGCCCCATGAACATTCAGCTTGTACGTCACAGATTGACGCACAGCGGAGGCCT
GCACAGAGCGTAAACAGAGGTGGCATGACTAGAAACCGTGCGCTGGAGGTTTTGGTGGTGGTGGAGGCACCCGG
AGAGGCACCCGCGGAGGCGCCCGTGGAAGAGGCAGAGGTGCCGCGAGGAATTCAAAGCAGCAGCTTTCGGCAGAG
GAGCTGGATGCCCAGCTGGACGCCTATAATGCGAGAATGGACACCAGTTAAACAGACCAGCAAATCCGCGTGCGG
AACAGGACCCAGGCGTCTCCTCTTGCTCCCTGGTTGGGGGGCGGTGGCTGGGGCTGTGCGCCCAATGATGGATTT
GTTTCTTTTATGTTTTAAATAGGATTTAAAAACTCATGTAAAGGTTTTTTTTTTTTTTTTTTTTTTTAAAT
TCTGAAACAGACCTGTTTTGTACCGAGTTATTTTGGGATAAAATTTTACTGGTTGCTGTTGTGGAGAAGGTGGCG
TTCCACCTTTTCCATAATAAAATAGAAATGTGTGTAA

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FIGURE 1317

MADKMDMSLDDI I KLNRSQRGGRGGGRGRAGSRAGRRGGAQAAARVNRGGGP I RNRPAIARGAAGGGGRNRPAFY
SRPKQLPDKWQHDLFDSGFGGAGVETGGKLLVSNLDFGVSDADIQELFAEFGTLKKA AVHYDRSGRSLGTANVH
FERKADALKAMKQYNGFPLDGRPMNIQLVTSQIDAQRRAQSVNRGGMTRNRGAGGFGGGGGTIRRGTRGGARGRG
RGAGRNSKQQLSAEELDAQLDAYNARMDTS

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FIGURE 1318

GGAATTCGGCACGAGCCCGATTCCGCGCCCCGCCATGCCGACAAAATGGACATGTCTCTGGACGACATCATTAA
CTGAACCGGAGCCAGCGAGGCGGCCGGGGCGGGGGCCGCGGCCGGGCCGGCTCCAGGGCCGGCCGCCGCGGTGGG
GCGCAGGCCCGCGCGCGAGTGAATCGAGGCGGGCGGGCCATCCGGAACCGGCCGGCCATCGCCCGCGGCGCGGCC
GGCGGAGGCGGCAGGAACCGACCGGCGCCCTACAGCAGGCCAAAACAACCTCCCCGACAAGTGGCAGCACGATCTT
TTCGACAGTGGCTTCGGCGGTGGTGCCGGCGTGGAGACAGGTGGGAACTGCTGGTGTCCAATCTGGATTTTGGG
GTCTCAGACGCCGATATTAGGAACCTCTTTGCTGAATTTGGAACGCTGAAGAAGGCGGCTGTGCACTATGATCGC
TCTGGTCGCAGCTTAGGAACAGCAAACGTGCACCTTTGAGCGGAAGGCAGATGCCCTGAAGGCCATGAAGCAGTAC
AACGGCTTCCCTCTGGATGGCCGCCCCATGAACATTAGCTTGTACGTCACAGATTGACGCACAGCGGAGGCCT
GCACAGAGCGTAAACAGAGGTGGCATGACTAGAAAACCGTGCGCTGGAGGTTTTGGTGGTGGTGGAGGCACCCGG
AGAGGCACCCGCGGAGGCGCCCGTGGAAGAGGCAGAGGTGCCGGCAGGAATTCAAAGCAGCAGCTTTCGGCAGAG
GAGCTGGATGCCAGCTGGACGCCTATAATGCGAGAATGGACACCAGTTAAACAGACCAGCAAATCCGCGTGCGG
AACAGGACCCAGGCGTCTCCTCTTGCTCCCTGGTTGGGGGGCGGTGGCTGGGGCTGTGCGCCCAATGATGGATT
GTTTCTTTTATGTTTTAAATAGGATTTAAAACTCATGTAAAGGTTTTTTTTTTTTCTTTTTTTTTTTTAAAT
TCTGAAACAGACCTGTTTTGTACCGAGTTATTTTGGGATAAATTTTACTGGTTGCTGTTGTGGAGAAGGTGGCG
TTTCCACCTTTTCATAATAAAATAGAAATGTGTGTAA

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FIGURE 1319

MADKMDMSLDDIIKLNRSQRGGRGGGRGRAGSRAGRRGGAQAAARVNRGGGPIRNRPAIARGAAGGGGRNRPAPY
SRPKQLPDKWQHDLFDSGFGGAGVETGGKLLVSNLDFGVSDADIQELFAEFGTLKKAHVHYDRSGRSLGTANVH
FERKADALKAMKQYNGFPLDGRPMNIQLVTSQIDAQRRPAQSVNRGGMTRNRGAGGFGGGGGTRRGTRGGARGRG
RGAGRNSKQQLSAEELDAQLDAYNARMDS

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FIGURE 1320B

CCTCAGCATCCCCTCGACGGCCTGGAGGGACACAGCCCCGGCCAGAGGCGCAGGGCAGAGGACATCCCTTCCGG
AGGTTCTGCGGCGGAGGGCTGCCGACCTCTCCCCACGCGCCAGGTGAGGCGCGTAAAGGAAGGGGAGCTTGTCTC
ACTCACAGAGGGCCCGGCTCGCGGGAGGCGCCTGCGGGGTGGGCGCGAACTGAGATCCAAATTTCTGCCCTTTCC
ACTACGTTCCATACCCCCGCCCCTAACACAGTCTCTCAATCCAGCTCCCTTCTAACTCCCCGAAACATCCAGAGG
GGTGGGCGGGAGGAGAAGGGAAGGCCCTCAGGCCACAGACGGTGGGAGTGGAAAGGTCTGTGGAAGTCACTCTT
GGGGCCCAACCCAACTTTCAAAAAGAGGCAGCTGCAACCCTCCTAGCCGGTCTCCGTACTCAAGGACTCTCCCGA
GCCCAGAGGCGAAGGCCGAGCCCTGCGTCCAGCAGCTGAGGGGGGGCGGCCCTGACCCCCTGGCCCCGCGGCC
CCGCACAGACCCAGGGCAGCCCCGGCTCCCGCGGCCCGGCCCTCCCCAGATCCCGGAAGGAGGCCGCCGCCAGC
CGCGCCAGCGCCAGTTGTTACGTTGGTCCCGTCCTCCCGTCCTCCACGATCCAGTGGGGGTTCCCTGGCCCCA
CTTGCCCATGGCGGCGTGGACTGGGCGGAAAACAAGGAAAGGCCGCGGCGCCTAAGGCTCCGAAGCCAGCGTTTC
CGGCCGCCGAGCCCCGGGCGGCGCGTTTCGCAGCTCCCAGAACTGCCAGAAGC

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FIGURE 1321

MKTETREVLTPSTSDNETRDSSIIDPGTEQDLSPENSSVKEYRMEVPSSFSEDMSNIRSQHAEEQSNNGRYDD
CKEFKDLHCKDSTLAEEEESEFPSTSISAVLSDLADLRSCDGQALPSQDPEVALSLSCGHSRGLFSHMQQHDILD
TLCRTIESTIHVVTRISGKGNQAAS

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FIGURE 1322A

TGACAAAATCTTTTATTTATTTAAATGTTAGTAATACGTTTATTGATGAGACTAGGAGCTTCTCTGCAGCATCTT
CATAAATACATTGGTTTTAGTTCCACACTATTCCACATCTTATCTGGGAAGATTAGAAATACAGATGTAATATG
GAAGCTTCAACAGCATGGGGGTGGTGATAGTGTCTTATTTGCCCTTGGTAAAATATTAAAGCGTATTTCTTAACC
CAAAGAGTGATTGGTTATATGAATATATTTGAAAAAGTTAAAGCAAATTTGCAAACCTTTACAAAATCATGTATC
AATTTTATGCTATCCAGTTTTTACGTACCCATGTGTCAACATTTTCATATATCCAGTTCTTTGGGTGCTGGTTTAC
TTTTTTTCATTTATTCAAATTCAGAAAAATACGGACGGATCTAATGTTAAATTAACCAGAAACCTTGGAACATTC
ATATCTTGAGAGGGAATTTGCTACTCTTTTACTTTTGGGATTTTATTATAAAATAGGCTCATTTTATACATATGT
CCTGTGGTCTGTCTTCCAGAGTGTGCTGTAATCATAAGTCTCTAGCAAAGAGTGGAGGGTGGAGGGTGTGTAGAA
CTCCACTCAGCCTCATGGATACATCTACAAGTCTCTCAACCCATCCTGTTACAGTTCTCCATGAGAGTCACCTCA
CACTTGGAAAAGAAGGAGGTTAAAGCAGAGTATTGTTGGCAGCCAGCTATGCCATCCTCTTGTAAATAACTTTT
CAACACACCCATTTTCTTGCCTTAAGGTGCAGGTTTCTACTTCTACAAAATTTCAAATGATTGCAGGTCAAAAAC
CTTTGGAGTTACTCACAAATAATAATAAAATTTCAAATACTAGGGTCTACTTGTCCATCAAGATGACATTACCA
GTGGAACCCACCTGTTAATTTTAAAGTAGCTTCAGAACCCAAACAAAATTTATGTAAGCCTGGTTAAATGTCCTTT
TTTCTTCTTGCCTCTAATAAAATCAGGATCTTCGGCCTTGATACTAAATATGTGTATATTTAGTTATGATGGTAC
TTGTAGATGCTCACATTTCCAGTTCCAAACTCGCCCGTACTTTTTATGTGCTTCAAATATTGGACACATTTCTG
TTAATATATGATTTCTGTATCCACAAACCGCTGTTTGCTTATGCTGAGTCAATTTAGAAGTTAATTTCCAATCTA
GTCTCAACTGCAATGCATTTAAATAGGTAAAAACAAGTAAATGAGTTTGGGACATTTTGAGATTAATGTTACTGC
CCACTTGACTGTCAATTTCAAATGGCTCCTAATGCAACCAAAATTTATAACCAATGTAGCATGTGTAGGAAAGGTA
TTTTTAATTAATTTAAATCATTGTGTATATTACAGCAGTATGAGGAATGCCTGGCTAAAGAGGATTTTTTAAAG
ATGAAGAATGGTTTTGCTTGTATTATATAGGCTTACTGAGTTTGTGAGCAGCATAAAAACAATCATTCCTTAATT
CTTCATTGTGGAACCTGAAATATTTCTGTAATGCATTTTTTAAAGGAGACTCCTAGACACAGCTGTAATAGTGGG
AATAGAAATGTAGAGCTTTTCTCATAACACAAAACCGAGAAATAATTTTTCAGCACCTTGACTTACTCTATGTAAT
AAGGAAAAAAATTTGTTTCCACAAAGTTGAAGTATGTAGTAATATTGGTAACATATGGCATGGCCACTTTATATC
ACAGAATGTGTGTCAAGTTGCAAAGCATACTTGGGCCATAGCAGACACTAAGAATTAAGAACTCTTAAATCAGTGA
AACAAAACCTAATGGGCAGCATTCTCTGTTTGGAAATGGGATCAGTATACAATTAATACAATTTAATTTTACAC
ATTCCCTAAGACACCATTTTTTAAGTTACAGTCACATGAGTGTTTGTATAAATTTAAGTCAATGCTTTTAGCCTAG
GCAAAGCTAAATACAAGGTTTTTGGGGTTTTCTTTTTTTCAGCTTTATTATTGAAGTATTACAACTTAACATCAG
ATACCAATGTGTAAAAAGTACTATTGGGTCTTAAGGGCTCTATCAGGGAGTTGAAATTTTCATACGCTTTACCAG
GTTACTTGTAAAAAATGAACAGCTGTAAGACATTTCAAACCATTTGCAGACACATTGTTAAAAATGCAGCCATTTG
ATAATGAAAGCAGAAACCTTAAGTTTACCTAATATTGCACTAAATGTAAATGATAACATAAAATTAAGTGTGC
ATTTTAAACAGATTCTATTTCCCACTTACTGCTTAGCATAGAAAAGAGCTATGGTTAGAGGAGTGACCAGCAAG
ATTTATTTTCAGATGGAAGGGGTGAGAAAGTGGAAAGCACCTTACTGTTAGAGCATGTTGCATCTAATTTAGTGCT
ACTGAACAATTCAGTAGTTATTTCTGAACCTTTGCTGCAAAGTGCTCTTTAGTTAAAGCACATTAAGAAGGGTCAC
TGCTTAATTGCTTTGTAAATGAAGCAATGGTATTTTTTATCCGATATAGTGTAATTTAAAGTTTTTCTTACAAA
GTGAGTTTATATTGTTGCCTAAACTATGTTATGTAAGCAAAGTTTTTGGAAAGGCGGGAGGGAGTCTAGATTCCG
CGAGAGTGTGCGTTTTGTGTGTGTGAATGTATGAAAAGTTTCCCATTTGGGTTATTCTTAAGATGTGTTTATTGTA
AAGTTTTCTACGTTTTTGGCCACAGTAAATGTACAACCTTCGCAATTGTAGGATTTAATTGATTGAATTCAAAATTT
ATACTGTCTCTTCCCTTCTGCAGAGACATTATGCCACTGTAAAGTGCATGTACAGAAAATACCTCTGAGGTTGAC
TTGTTAAATAACTGATGAATGTTATTTTCACACTGAATCTCAAAGCAGTCATTTGTTTTGCGGGTTAGGGGAAAGT
TTTGTTTTTGTGGTGTGTTTTTGTGTTTTTAATTAGGCACACTAAGAGTGGCTAAATTTGGGGGAATTGGTGG
ATAGGAAAGACCTTGAAAGTGATGTGTAGATGAAAACACAAGGTATGGATGTTGGTTACAGAGTTCAGTTTTAA
CAAGGGAAATTTGGGGATTTTTTTTTTTTTTACTTGCATGTTCTATGGGTAGCTATCAAAGGTGTAACAAATTAT
TCCAGCTTTTCCCAATACTAATTATATTGGTTTTTAAAGTCTGCATAATCACTAGGTGGCATTTTCCCTTCATT
TGTGAACCAAGAGGGGTAAATGATGCTACCCATACAGTGACTTCTGAGTTCTTTAACTTTGACAGAATCTCCATT
GTTTCATTGAATTTCTCATTGTATTATATGTCTTTCCAAGTGTGCAAACCTATAATATGTAGTTAATGAAAAATGG
AAGGCTGCAGATTATTTTGCATGAATAATTAATTGCCCATTAGGGCTAAGGAGACTGACATGATTTTTTATCGGTT
CTGGGTAAATGAAAATTTTAAATGGAAAACCTATTCACCATTTACTAGCTTTGTGCAATATTATAAAAGGTAGAAG
CAAAACACTAGCACATTGTGCTTTGCTTGGCTTGTAAGGATGGCTTTAGTACCATTACATTAATGGACAGTGTG

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FIGURE 1322B

CACAGTGTATTGTAAATGCCAACTCTTGCAAATTTACAATACTTAAATATGTTCAATTAACATCCTAAAGTATTA
AAAGTACAGAGGAAAACTAAGCAAGCATTTATAGCAATACCATGAAATCTCCAGTAATCGTTTTGACTGTTGCC
TTTTGCTCTTTAGTGCAGCTTTTCTGCATTGTAATTGTATTGCTTTGTATTTTCATGTTTTTACACTCATGACTT
CAGAGTTAAGTACTTGTACACCAAGTATTGCAATCACCTTTCTCTTGTTGTACATGCAATGTAACAACCTACAGT
TTTGGTGCTTTTAACAATATTCCCTCTTTTCTTTAATAAAGGATATTTATTTGAATTAACCTGATTTTGTGTT
TAAATATCAGTGGTACATATTTCACTTCATTTCAAATAGGAGGACCATAGCAAATTGTATATCTGTTATGACA
AAAGTTNTAACATGGAGAACAGGATCCAGAGACCATCCATGCCTGTATTTCTGCCTCTTCCTGAGCGCTGTTTGT
TGTGACATATTTTGATGGCAACTTCTTTGTGCTATTAATGAACCTTCTCATTGTTTATAAATATTCACAAAGTT
TGGAAGTGCTGACTTCCAAATTGGAAAATTTTAAATGGGGGTGGGGAGAGGCAGAAAAATATTTATAAAGTTAC
ACACTCA

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FIGURE 1323

TKSFIYLNVSNTFIDETRSFSAASS

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FIGURE 1324A

GCCATGTCCTGCAATTTATGTACTATGGAACATATAGAGCTGAGTATGAATACCGTTCATGAGATTCTTCAGGCTG
CCATGTATGTTCAACTTATAGAAGTGGTGAAGTTCTGCTGCTCTTTTCTCTTAGCGAAGATCTGCCTAGAAAATT
GTGCAGAAATTATGAGACTCTTAGATGATTTTCGGCGTAAACATCGAGGGAGTCAGGGAGAAGTTAGACACCTTTC
TGCTAGACAACCTTTGTGCCACTCATGTCTAGGCCTGACTTTCTGTCTATCTGAGCTTTGAGAAGCTCATGTCTT
ACTTGGATAATGATCATCTGAGCAGGTTCCCAGAGATAGAGCTGTACGAGGCTGTGCAGTCTTGGCTGCGGCATG
ATAGAAGACGCTGGAGACATACCGATACCATTCAGAAATATCCGGTTTTGCTTGATGACCCCAACCAGCGTTT
TTGAGAAGGTTAAGACATCAGAATTTTATAGATACTCCCGACAGCTCCGTTACGAAGTTGACCAAGCATTGAATT
ACTTTCAGAAATGTTTACCAGCAGCCTTTGTTGGATATGAAGTCAAGCCGCATCCGTTCTGCAAAACCGCAAACTA
CAGTATTTTCGAGGAATGATTGGACATAGCATGGTTAACAGTAAAATACTTCTCTTAAAGAAACCAAGAGTCTGGT
GGGAGCTAGAAGGCCCAAGTACCTCTGCGACCTGACTGCCTTGCTATCGTCAATAATTTTGTGTTCTGTTAG
GCGGGGAAGAGCTGGGCCCGGATGGTGAATTCCATGCTTCTTCCAAAGTATTCAGGTATGACCCGAGACAGAACT
CCTGGCTGCAGATGGCAGATATGTCTGTACCACGCTCTGAATTTGCTGTAGGTGTTATTGGGAAGTTTATTTACG
CCGTAGCAGGCAGAACCAGAGATGAGACTTTCTATTCAACTGAGAGATATGACATCACCAACGATAAATGGGAAT
TTGTGGATCCTTATCCAGTTAACAAATATGGACATGAGGGGACAGTGCTCAATAACAAATTGTTTATCACCGGTG
GAATCACCTCATCTTCCACCTCCAAGCAAGTGTGCGTGTGTTGACCCAGCAAAGAAGGGACCATAGAACAACGGA
CCAGGAGAACTCAAGTGTTACCAACTGTTGGGAGAATAAGAGCAAGATGAATTACGCGAGATGCTTTCACAAGA
TGATTTCTTACAATGGCAAGCTTTATGTCTTCGGTGGTGTCTGTGTGATCTTGAGGGCCTCTTTCGAATCTCAGG
GATGCCCTTCTACAGAAGTATAACAACCCAGAGACTGATCAGTGGACCATCTTGGCATCCATGCCGATTGGTAGAA
GTGGCCATGGTGTGACTGTGCTGGACAAACAAATAATGGTTCTTGGAGGCCTTTGTTATAATGGTCATTACAGCG
ATTCCATCCTCACTTTTGATCCGGATGAAAACAAGTGGGAAGGAGATGAGTACCCTCGGATGCCCTGCAAGCTGG
ATGGTTTACAAGTATGCAACCTGCATTTTCCGGACTATGTACTGGATGAGGTCAGGCGTTGCAACTAATGACATC
CTCCTCCCTAAAAAAGAGGCAAAACAAAGTATTTGTTTGACAGAGTAATTAATTAACATATAAAGAAAAACC
TCACCAGTTTTACTATCAAAGCCATTGGTCTAACATTGTAAGAATTTTTTATTCTGTGCTAGCATCCTTTTTTTC
TTTTCAGTGGCCTCAAACCTCATGCAATAAGTTAATTCTAAGTGCTAGCTCTTGAAACTACTTCCAGAAGCAGTTG
AATAGAATGCTCCACTTATCTGGGATATTGATTTTCTGCTTTAAACATTTCTTTCAGATGTTAGCGTAGGAGTCA
TGTGTCTTCTAAGAGAAGACCCGATAAGTGTCACCTGGATGTGATTTCAGTCTCTGTCTCTATCTGAAACCTTTTT
GAAGATTTATTTTCAAGTATTTTCAAGTCTGTTATACTTTTTAGTTTTATTATTTAAAGTTTAAACTCTTGACCT
TTTTGCATGGCTTTTTGCTGAAAATGCAAAAATATAAATTTTCTACAAAATTAACCTTTTTATATTCAAAACACTA
TTTCTAAGCTGCCTTCTCTTATCCGCATTGTGTTAGTGAAAGCATATTCTACTCGCATACAACCTATAAATACA
CAAGGCACATCCCTTTTATGCGTGGTTAGGATTCTATATTTTAAAGCTAGTGCACCTTACTTGACACACAGTTTCG
CCATACTTGTGTAATTTTAGATGTAACGCTCTTTTACATATTAACATTTTTTAGAAAGTTGAAATAACTGGAGTCC
TCATTTGCTATCAAAGTAGCCTATCTTCAGTCCATACTGATTTCAGTAATATTTGAACTCCTTATATTTCTGAAAC
ATGTATGGTTATGAAACTAACACCTTATATTTTATTTTCAAAAGTAAATGTTAGTGTTCTTTGTGCGATGTATGT
CTTTTCTTTTTGAAAATGTTTTTCTTTGTCAGTCTGTTTAAACGTTACCCTGTTTTTATGTGAGAATCGGAGTGGTAT
ATGACAAGTCTGGCCCTGCAGCATGCAAGCACTTTTAAAGAGCATTTAGGTAATACCAGACTCCTAAATCAAGG
CCCCTTAAAGTAAGTGCAACTCCCATTTTTTACATTCAGTAAGGCTGCTGCATTTGTTATTGAATGGAAGGTAG
AAACTCTTAGAAAATTTGACCTCAGTTTTGACTTAGAGGTAAGAAATAGAATTATAATGTTACTGGTTTTATCTA
CTTGTTTTATTTGTACAAAATACCCAGCGACACTAGGGATGTAAGCCCTCAGTTTTTGTTTTTATTACTGAAAGC
TATTAGCATGAAGGATAGTAACCACAAAGTTCAGAATGGATCAAGAATAGCTGTTTAAAGCATTATATAATAAGT
GTTTTAGGATTAGCTGCACCTTTCAACTCTTTAAATGCAGAGGAAAAACATAGTTGACAAAGTTAAGCAAGAAT
AACCTGGGAGTGGATCATTGAAATTGATGCCATTTGCGCATGAGTAGTCTATATCTGATACAGACTAGATCTATA
CTGGCAAACTTGCCAGATCTTAGAATATTGGTGAATATTGCAATGCCTTCTATATGGCTGCTGATGTATAAAT
TTTCTAGTTTCACTTTGTTTGGTGTTTTTTGTTTTTTGTGTTGTTTGTGTTTTTGTGCTGCTGCCACCATTGA
ACATAAATGGAAGTGTGAAGTCATGGAATGTGAAGACTTTGGTTTTTGGGGTTTTTGGGCAGTTATTAGAC
ATACTATGAGATTAAACCTGATCTTCAAACCTCAGAATTGGAGGCATTGGGTTTTAAGAAACCAGGTACATAAGT
AGCTTTTGAAAAAACCATTGGCATTGATTTCAAAAATCAATAATAATCTTATTTTATATATGAGACTTATATTTT
CATTAACTAGTCTGTCAATTTACTTACAGTTTCAAACATGAAATTTGGTATCTGTTTCCCATGGTAATATGGG
TAAAGTCTTTTTCTACATTTAAAAAATACATTATTTTATTTTGAAGTTAGGAATAAGTTAGCCATTTAATTT

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FIGURE 1324B

TTTTCTACATTAGTTTAGTGGCTTTGTATGTGTGCTATTTTGCTTTAAAGAAAAATAACGTCTTCATTATTTTCCT
CATTGATGTCTTTTGCTAGAAAAGACCAAGAAAGAGCCATCAGGCCAGGTATCCACATCAAAGCCTTTACACTAT
AGTGGTGGTTCTCTTTAATTGCTTAGATATGACTTCATGACCCTAGTCAGGGTGACATCTGGGCAAACATTTGAG
TATTCTTGGTCTTCCATTTTAAAGACAGAGGCCAAGATCAAAGTTCATGTTTTGTAAAATTCGTAAAATCTTAAC
TTGAACTAACTCTGGGTTTCAGCTTTACGTAAGTCACGTCGGACCTGATGTTAGCTGTAATCAGTTTTGAGCTTTA
AGGATAGTTGCTGTTGCTTGGGTTCGAATGTATGAGAAAACCCCTGTTTATATGTAGTTCTAATTTAGGTTAT
TTTAAATCCATGATTAACTTACATTCCCTTTTAAATTAATGGTTTTATTGCTGCAAGAGATTTATTTTTGTTATA
CTAACTATGGAAGTTTTTCATAGCATTTTTTTCAAGTTTTATTTTTGTGTGCTTCATTTGGAGTTTTTGTTT
ATATACATTGCGCTCAAAAAGTAGTTTTTTGAAAATTTCAGTAAGATTTGAATCTATACAGTTTAACTGTTATG
ACCTTTATGCGTGTTGTTTTCACTTTATATCTCAAATGCCAGAGTTCACAAAAATAGCTGATCTTCATTAATTAC
ATCTTAATTAGAACCATTTGTTCTCTTCCGTGCTTTGACCTTCTAAGTTTTGATTTTAAAGAAATTCCTTGCAC
TACAGCCTTTTCTTAAATGCAAGATTCTCACTTTGAAGGTTTTGTGTTGGAAGAAATGCTACTGGTTTTTAAAA
AGCAAAGCTTAACTAATAGAATTATTAGCTTTTCTTGAGACAGCTTTCTGTGTCCTCATTACTCTGCTCTGTGTG
AGTGTACTAGAATTTGTGAAATACTGACTGAGCCCTTCACTTATCTTTTCTAAAGCAGCACCTTTGGACACCTC
ATTCTGGGAAGCCTGCTCGAGTCATAGTAAAGGACACACGCTTTATGTGGGGAGAAGTGGTAAAAATGGAGTTTT
GTCTTAATTACATGAACTAAGCTTTAAATATTTTTATAACAGATTATTTGAGCTGCATAATCTAAACATGTCAA
ACGTTTCAGTGGGACTATTTTTATATATGTATATGTGGGTGTAGGTCATAACATTTAGTTTATAATATAAATTGT
TATTTAGTTTTATAAGCTATCTCTCAGAGGAGACTAGCTCTTTTGAGAATTCATAATTTAAAGTTTTAGACTGAA
GTAAATGCAACATAGATAATAGTGTAATCAGATATAATTGAGGGCTATATGGCAGTAAAACTGCTAGTGCCAG
TTTTCTTGTGTTGCCTGTTATACATTTTTGATTTTTGTTTTGTATTCTGAACATTTTGAGAGATCATATGTTTGT
TCAATTACATTTAGAGTTGGTTTGGGAATAAATATCTTCTAAAAAGAGATTTATCTTAAAAATGGAAGTCCTAAA
AATTAGTTTATCCAGAGTTTATAAAGTCAAATATTCAGTAGGCATAGACTGGAATAGATAAATTCATGGAAATCA
TATCCTTTAGTACACCGTATAAATTCAATATTACACAAGTAACATTGAGGAGAATGCCATCAGCTTTGTTCTCC
CTTAAATTCCTTGGTTTTCTTTTTACATTTTGGGAACAACCTGCATTTAAATGTTATTAGTCAGTATATAGTAAG
GATTAGGTGTTTGGCTTTCTGAAGGAATGGTCCAGTGAGGTGATTGGGAGAGGTTATTTTCTACCTAACTTGTTATA
TGCCCTATACCTCTTGGGCATACTTTGTCTATAGAAAAATTTTTGACCTTTAGGTACATTTTGGGCCAGTAGTC
AAATAATCCTAGGGCCGATATAAAAAATCTTAGAATAATTTAAGGTTTGCCTTTTATACCTGTTTTGAAAGCCTTT
ACATTTTTGTCAGGTAATTTTTCCCAAGCCGTGGATATAATCTATTCAAACATGTTTATGCTATCCATTCTGTTT
TTAAATTGAAAAAATGTTAAAAGTGTATGAAGAAAAGTTTAAATAAAATATTTTAAATCTTT

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FIGURE 1325A

GCTCATTGGGGGCATGAATGTTCTCCTTACTAACCTCTCATGGAGTCATGTGATAACAGCCATGTCATGTGTAT
GGATGCCACCATTCTTGAATTTCTGCTAGAAATAAGTAGGTTGCTATGCACTTAGAGTCATCTTTGCAAGGGACT
CATTCCAAACCAATTCCAATCGACCTGAAAGTCCCTTGCACTAAAGAAATGTGATTTTTTTTAAACCCAAGGAGA
AAGTTGGTTGTAACAATTTTACCAGAATTAGCAATCTGATAGAATAGGCTTTTTTAAACAGGAATTTTAAACTG
GCGGTGCCAGTTGCAGTGAAGGTGAAGTGGCTATTGCTTTATNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNCCTGAAGATAGAGCGTTGAACAAACCCAATGGTCTTGGCCCTCAAAAAGCTTTATGTGACATAGAGCA
TCCAGCTCGACAATTAGCAAACCCCTGATATTATTTCATGGACTTGACATGAGGTTTGGACTATTTCATGAGCAACA
GCAGAAGGTCCATGACCCCTACAAATTTACATTTTTCTATGGCCCATATTTGAAAACCTCACATTCGGAGCAGGC
CACTTTATATTTCGTGAGTGATCCCAAGCTCACTGACCAACAGAAAAGATGCTAAAAAATGTGTCCTATCATGTG
CCTGCTCCAACCTGATGGGTAATGTCTGCCTTTAAGCCCCAGAATGGATTCTCCAGGCACAGTGTGGAAGAGTGCT
GTGGTTGATTAGCAATGTCTGCCTTGGGTGAGGAAAGGGGAACACTCCTCAAGTGCCTCCTACTGTCATCTCCAT
TCAGCCTAGCACCACATCCCCATGTAGAAGTGTGTCTTCTACTGCTTGCCACGTACAAGTGTGAAATGCCAAGG
TGAGACTCGTACACTTGGGGATTGCAATGGTTTTTACCCCTCATGAAGGTCAGAGGTGGACTATTTGTACACAT
ACACACATGCACACCCTCTCACGTCCTCCAGAGGCTGAAAGACCATCAGCATCTTGCTAACTGCCATGCATGAGC
AGCAAGGACAGCCTTCCATAATCCATGCCCCATTTCTCTGGAAGCCTGGAACTTTTCAATTTCTGTTCTTGC
TAATTAACATCTAAACATGCTTCTCATTTCCAGCCATTGCTGATGCTTCTCAGTTGAAGTTTGAGCCACATCCCT
CTTACAGCTAGTGAATGAGTTGGTAGCAGATACTGTATNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNAGGGGAGGGTG
GGATGGGGTGTGGGTAAGTTTTGCCTTTTGTGTTTTGTTTTGATGCCGTATATAGTGAAGGGGTGAGGATATTCTA
AACAAACAAAATTGAATAATTTATTACAGAACTATTAAGATTGATTGTAAAGCTCACAGCAAGCTCAGTGG
GCAGCAGCTGCAACATCTCACCGGGGAAATTATTTTATTTAACGTGAGTGAGATGTGGGCCGGAGAAGGTAGCTG
AAGCTATTTATAAACGTTGTGTACCTTCTTCCGAGCTCTCTCCCTTTGTGAAGGGCGCAGCAACTATACCCTT
GATGGATGGAGATTTATGCAATGTGTTTTACTGGGTAGAGTGACAGACCTTGGCTGTCCCTGGAATTGAGAATCT
GGACCTTATTTCCAGGCAGAGAACACTGTCTCAGAAATGGGACTTCTGATAATGAAACAGGTTGTCCAACATTT
TCTAATACGCATTCTACAGAACACAGGTTCCAGGAGGCATCAGGTTGGTGTGATGCAGACTAAGGGTTTTGTGGT
CAAATATCCTTAAGAAACAAAGTTAAGTCAGTTTCTTTCTGCAAGGACTTTTCAGCCTTCAATGTGTGCTGTGC
ATGGTGAATCCCCAAAATAATCCTTGAGTCTGTAGCATTTCTGAACTTACATGACCAGGATACTCTATTTTGC
AGATACCCCCACAGAGCTAGGGTTCCACCGAGTATACCTTGCTTAGGTTGACTTAGCATATCTGAGGCTCTCAAG
GATAAAAACCTGCCACCCCAACACCCCTTCCATTAAAAAAAAAAATAACAAATAGCACCACAGTCTCCATCTGGTTT
ATAGCAACAGAGGTACTTTATTTAATGAAGCAATGGTTCTAATCCTGGATACTGCCACGGACTACAATTCTATCC
CTCCCAGAGGGAGTGGAGGAAGTCTTGGGTGGTGTGGACAGAAGGAAGAGAGGAGAGGGTGAGTGGGGTATAGGG
CCCAGGGTGGCTCCCTACTCCTCAGGCTCAAAAGGATGCTCAGTGGGAACAGATGATCTCTTGATGAGTGCTTCT
TCAGTTTCATAGTTTGAATCGTTCACTGTGTGCTTTTTGGGGGGTTTTCAATGGAAATTCACGTTGCTTTGCAT
TTCTGTGTCCGTCTTTGGTCAGTTGTGCAAGCCTGCTCACTGTGATGTGAAGATGGCCTTTTCATCTGGCTTCTCT
CTCTTAAGTGAGAAAGATTGTCTTTCAGGGGACATGACATCAATAGGTTTCTGGAATGAGGGACTCTTTCTCCCC
GTGTTTTGCTTTGTGTTACATTTTCTTTCTAATGGCATTGAACTTTAAAAAAATGGATTCAACTGTTTTTG
CAGAATGTAGAAAGTATTCTGTGTCTTGGTTAAAGAAATCCACTTGTGAAGTGTGCCTGGAAAATGAAAGTTTG
TGTTTTTTAAAGAGGAATATTTGAACTGCTTTCTATGCAATGCTTAGCTGGAGAAAAGTACAGGCAGGCGTCCCCA
TCTCCCAGCCACTTCTCAAAGGTGCTGCTGTGTTTTAAAGACCAGGTACAGCCAGGGCAGTATTTGCAAGGACAT
TCTGTCTTACTTTATCCCTTTGGTTGGAAAGCTCTAGATGATTCCCGCAGCTCCTCCAGACCCCGCCTCCCTGCC
CTCCCCAGCTGGTCTGGGAAGAGGTGGTCTGCTGACCTGTGGTATCTCAGAGGGGACGTTCTCCTCCTCCTCCTGT
GCACCAGGTGGGCTGCACCCTCCTGCCTATTTCAGGATGTGGATGCCACAGGAGAGCAGCAGGCAGTGGAACTTC
AGTTGCACGTGTTCTCCTGGTGGCAAAGGCATGAAGCACAGGGGTGATTAAATCCAGGCTACTAGAAAGCTCCAG
AGCAAAGTGTGCGGTCCCACAAATGCTTGGCTGGTGGGGTCTGGATCAGTGTGATAGAGTTGGCAGAAGAA
GCAGAGGCACTCTGCTTGTCTTCTTAGCCAGTCCCTCCCTAACACACAACACAACAACACACAATCTCAGCT
GCGCCATTCTGTGCAATCCAGTGACCAAATCCCTTCCCTTGCCACCTCTATGTCAGCAGGACTGACCACATCAC
TCCCCGAGTTCCCAACCACAGCATTTCCTCCAACCTTTTCCATCACAACCAGTTAGAACCCTACAGGCAACAA
GGCCTTCTAGAATCCGCTTAACCCCTTGGCTGATAACAGGCAAATTCAGTCTGCTACACTTTGTTAGGTCCAGAA
GGAGCTGCCCATACTACTTTCTTAAGAGCATGCTCAGTATGGCATATGGACATGTAATGTCACATCTTTGTGGAG

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FIGURE 1325B

TGIGATTTTCTTTTTTTACATATTTGTATGCAGTAGAGAGCCTGTTGTAGAAAACGCTCCCTGTATCTTGCTGTA
CTGTTAAAGAAAGCTGAATTCCACATTGCCAACAAAAGCGTGAAAATGTTTCATGAACCTTCCTCCAGGAAAAGCC
ATTCAAGCCTGATTATTTTCTAAGTAACTTCAATTAAATTGAAGAAAAAAGAG

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FIGURE 1326

MLSWRKVQAGVPSPSHFSKVLLCFKDQVQPGQYLQGHSCLLYPFGWKALDDSRSSSRPRLPALPSWSGKRWSADL
WYLRGDVPPPPCAPGGLHPPAYSGCGCHRAAGSGNFSCTGSPGGKGMKHRGLIQATRKLQSKVCGSHKCLAGG
VWISAEIELAEAEALCLLS

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FIGURE 1327

CTGGCTCAGTCATTCCCCACTTAGCCTCCCAAGTGTGGGATTATAAGCGTGAGCACCATGCCTGGCCCCAATTT
AAAATGTGGAATTCAGTTGGTGTCCAAGACTTATCTTGAGACTCTTAAAAGCATCAGTCTGTAACTAGAACAAAT
ACAGTCTTAGATTTACCCAAGTGCTTAGATATCATTTTATAATGATTAGAATTGAGTATTGTGGGTCCCCTAATT
CTGTGGGTGCCTTAAGTGAGAATTTCTAAATGATTTTCACATTCTAAATGACTTTGGGTTTTGAACCTCTCCATCT
AGTTTACTTCTAAAATGGGAACCTTGAGGCAATTCAGGTATCCAGGCAAATCTTTGTATATATTTTTTTGTGTACA
TGCACACATCTCGAAATCCATTTCCGTGTTTAAATGTTAGTTGTTTATGTGTTAGTATTCTGTGTCTACTGTTTT
GTTGTTGTTAATATGGGTAAAGTGAGCCCTGAAATACATGCTAAACAAGACATGAAATGCAGAAAGGTACATAGT
GTTTCAAGTGTCATGGTAGTTTGATCTGTGTTTTACTTTATTGTGTTTTCTTGAGTGTAAGAAAGAATAAATCAA
AGTTCTTCATACCCATTTTGACAAAGTGGAACAGTGGAGCTGTTTTTGCCTTTGTTTTTATTTATTTTTTGCCA
CTGGTGATGATAGATTTCAAAAAACAAAAGGTGGCAGCAGCACAATGTTTCATGGTGAATTATCTCATAGTATCTA
GATTGATCAAGATCTGACAGAAGGAATGCACAAAGGATTCTATATTCTTAATGATTTATTAATTACCAGGATCCT
TTTCTAAATTGAATGTACTTTTGAATTACTAGGTTTCTTCTTTTTTTTTGTTCTGCAATAGTGAAAGAAAACCTCA
GTAGTTTAGTTTTCAGTTTCTCATGGAAATTGGTAAATGTTAGTTTGTGACTTCATCTATTTTTTATTTGTTTTAT
TAGCGTAGAGTAGGAAGTCTCATATTCTACTGTTCTATCTAGGATGGTGAAATTCCAAAGGTGCCTAACTTGAGT
AAGGGATTTGTGACAAGATAGTACACATTACTATAAGGGCTATTATTTCTGAACTGGATGTCCCTAAAAGCAAA
TAACTGCCCCTATCTCTACTCTAGTGCTCTCTTTGTCCTTATCAACATATACCTCCAATAAGTAATTACATAA
TTCACCGTTAAACATGGACCCACTCTAGGTAAAATTACCCTCATGGAAACATTTTCACTGTGAGAATGATGAATT
TAAAAATTATGTTTGAATCACCTAAAATGTATGTGCAGCTTCTAGATGGCCCTTAGATCTGCTGGGCTCTAGCT
GTGTACTTTAAAAAACAAAACAGCTTTATTGATATATAATTTACATATTATGTAATTTACCCACTTTTAAGTA
TCTAATTCAGTGNNN
NN
GGATAATTACAGCAGGTTATGTTTGGTTTCATTTTAAAGAGTGGAGGTGTTTCATGATTCTAAGCTCAGGAATCTT
GTGATCATGTATTAAATATGTTATCTCATACTATAATGATAAAAAAGCTTAATGATGTGGGTTGGGATGGATATT
AACATAAATAATTGAGTCCGCTGCTTCTATAGCAATGCTGTAGGATAGAACAATAATGTAAGTGATATATGTAAT
TAAAAAATTCTAGAAGCCACATTAAAAAATAAAATAAACAGCTGAAGTTAATTTAATATTTTATTTAACTCCAC
TACATCCAAAATGTTATCATTTTAAACATGTAATTGATGTAAAGATTTATTCTGATAGTTTGTACTATTTCTTGTA
CTAATTTTTTGAATCTGGTATGCATTTTACAAATTTGGGCAAGCCACATTTAAGTGCTCATTAGCCACATGAG
GCCAGTGGATACTGTATTGAATAGCACAGTCTATAGCATATTTATTAATTTGTCTTGTAGTAAGATGAAATAGA
CAATAATACGGAATAATATCTTAAATGGAAATCTTTGTTAGTCTCTAGAGCCTTCATTGCTTGATAAATAGGACA
TCTAAACTTTTAGATATAAATCAGTTGTCAATGAGATAAAATTATTGCCAGCAAATATTTTCTTCAAAGATAAGT
AACTTTTGATATGGCAGTTGGTGAAATGAAAGAATATAATCTGCCTTCTTGTTAAATGGTTGACTATTCTGTAGC
TTGTAGGTAGTACGTATTAGAACTTGTGTATGTGGGAAATATTTGGCATAATACTGTTTTTCAGTATATAGTAGC
TATTTTTTAAGGAAATTAGTTTCATACAAGAAAAAGATTATTATAAAAGTGATACTTTTGCATGAAATATTAGTT
TGTGTTGATAACTCTTAGTTAACCCTTAAAGTTTAAACAGTACTCAAAAAAATAATGAGAATCTAGTATTCT
GTAGTTAACTAATCTATAAGATAAATTGCTAAAGTACTAGGGAGCTTGTAATCTTAAAAATCTTTTTATTTTCAG
TGTTCAATTCAGGTTGGATATATTTGAAATTGTAGATTTCTATCTGTACAACATCTCCTAGTTAATAGAATTTTTT
TCCTTCCCCTCCCTTCT
TAATATCTCAAGCTAAAAAATATGTAATTGAGGTTGTATCTGGAGAAGATGGGAAAACATTGTATAATTTAAGC
CCTTAATTGCTGTGTTAGCTTTTAGGGCTGAGTAATTGCCTTTTACATACAAATAAAAGCTTTAACTCTTTTCTCAA
GAGTGTACCACCGTCCTTAGAATCAGGTGTTTTAAATCCAGTTTCTTTTAAATTAATGGGACTGTAGTGATCCCT
ACCCTGTAGAGAAATCAACAGAACTAGAGAAGCTAAGGGCTTGATCAGGTTTCCCCTAGAACCTGTGTTGCCTGC
CTGCTGTATCTTCCATGTCTTTCTTATTCAACTTCTAGAAGTAGAGAAGGTTGGGACTTGAGTGTAGAAGAAACA
TCAGAATAATTTCAAAAAACAGGAAGTTGGAACATAATTTTTAAATTATTGTATTGTTTTTACGGATTTTACAT
GTATAGTTAAATATTAAATTCATCTCTTGCAAGTTCAATAAAAGCTATAGTATAGATTTTATTTTTAAGAAGTTT
ATATAATTTCTTTTGTGAACCAATATGTAAACTAGAATATTTATTAACTAATAATATGTATTAGTATCAATAAA
ATATGTATTTATTTTTAAATTGGTATGAAACAAAATAAAAATTTGTAGACACTCTTAAATTTGGTCATTGATATT
ATCTTTGTAATTTAACAATTAAGTACTATTTAGTGTATATGCCTGAATTTAAAGGATGGAATTTAACCTCCCGGA
ATCTTACCAAAGGGGAATTTTAAACCGGGA

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FIGURE 1328

WLSHSPLSLPSVGIIISVSTMPGPNLKCGIQLVSKTYLETLSISL

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FIGURE 1329

CGCTGGCGTTCCGCGCACGCCGGCTCACTGCGCCTGCCCGGCGTGTGGACGCACACGCTCCCGGAAGTGGGAGGT
GGCCGCTGGAGTTTGTGTGGCCGCCGCCGCGGGAACGCGAGCCCGGTAATTTTTCAACGGAGAAAGGCGAGGCTT
TCGGGCTCTGCAGAGTGAGAGTTAGCAAGTGTCCGGCTCCAGCAACTCTCCTCTGGCGTGACAGCCGGCATGGAG
GATCCACAGAGTAAAGAGCCTGCCGGCGAGGCCGTGGCTCCCGCGCTGCTGGAGTCGCCGCGGCCGGAGGGCGGG
GAGGAGCCGCCGCGTCCCAGTCCCGAGGAACTCAACAGTGTAATTTGATGGCCAGGAGACAAAAGGATCCAA
TTCATTACCTCCAGTGCGAGTGACTTCAGTGACCCGGTTTACAAAGAGATTGCCATTACGAATGGCTGTATTAAT
AGAATGAGTAAGGAAGAACTCAGAGCTAAGCTTTCAGAAATCAAGCTTGAACTAGAGGAGTAAAGGATGTTCTA
AAGAAGAGACTGAAAACTATTATAAGAAGCAGAAGCTGATAGCTGAAAGAGAGCAATTTTGCTGACAGTTATTA
TGACTACATTTGTATTATTGACTTTGAAGCCACTTGTGAAGAAGGAAACCCACCGGAGTTTGATACATGAAATAAT
TGAATTTCCGGTTGTATAACTGAATACGCATACTTTAGAAATAGAAGACACGTTTCAGCAGTATGTAAGACCAGA
GATTAACACACAGCTGTCTGATTTCTGCATCAGTCTAACTGGAATTACTCAGGATCAGGTAGACAGAGCTGATAC
CTTCCCTCAGGTACTAAAAAAGTAATTGACTGGATGAAATTGAAGGAATTAGGAACAAAGTATAAATACTCACT
TTTAACAGATGGTTCTTGGGATATGAGTAAGTTCTTGAACATTCAAGTGTCAACTCAGCAGGCTCAAATACCTCC
TTTTGCGAAAAAGTGGATCAATATTCGGAAGTCATATGGAAATTTTACAAGGTTCTTAGAAGCCAAACCAA
GACAATAATGCTTGAAAAATTAGGAATGGATTATGATGGGCGGCCTCACTGTGGTCTTGATGACTCTAAGAATAT
CGCCCGAATAGCAGTTCGAATGCTTCAGGATGGGTGTGAACCTCGAATCAACGAGAAAATGCATGCAGGACAGCT
AATGAGTGTGTCTCTTCTTACCAATAGAGGGCACTCCACCACCACAAATGCCACATTTTAGAAAGTAACAACA
GTTTTGTGTGTGGATCATTTCAATTGAAGTTGCTATGAAGAGGGAGAAGTTTCTGCCTTGGAATTGAAACAAAA
ACACAGGCGTCACAAGCATGTTACCTATTAAGAGAGAGAGGGTATCTCTGAAGACTAATTAAATGGTAATTTT
AAAAAGATGTGACCAGTTGACTTTTAGTATATCATCCCAAGTATTATCCCCAAAATGATAATGCAAAACAGAATA
ATTTGGAGACCAGGAGAAAACTGGTATGATTACTGGGGAGGGGAAGAAGCACAGGTGGTCAAGATAATAATGCA
TGTTTGGCCTCAGCTGTAGTTGCCAAAGAACTACCTGCCTCACAGATGAGCACGCACGGGTGCATTGTCAAAGT
CTGAGAAGGATGTATTGTACTTTGAAGGAAGACTTTCCATTTCTAAGCTACCATGGAGAAGTATATGCTCCTCGA
GACCAGAGACTGTGACTTCTGCATCTTTGATTCCAGCGACATATGATAAAATGTTTTGCACATAGTTGAATCCAG
CGTTGATACATGAAGGACAGCATTACATCTTTTTTTCTATTATACTTAGAAATTTCTCTTTGTTCTGCACCACC
AACCTGTATATCAAGCCTCCTTGCCCCACAAAGCTTCCAAAGCCCCGTAAATTTGTTAATCTAGAGCAGGGGTCAG
CAAATAACACCCATGGGCCAAATCTGGCCTGCTGCCTATTTTTGTATGGCCTACAACTATGGTTTTTATATTC
CCTTTTGTAAATGGCTCAAAATAATTTTTGTATAATATGAAAATTACGAAATTTTAGTTTCTCTAAATAAAGTT
TTGGAAAGAAAAAA

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FIGURE 1330

MKLKELGTTYKYSLLTDGSWDMKFLNIQCQLSRLKYPPFAKKWINIRKSYGNFYKVPRSQTKLTIMLEKLGMDY
DGRPHCGLDDSKNIARIAVRMLQDGCELRINEKMHAGQLMSVSSSLPIEGTPPPQMPHFRK

[illegible]

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FIGURE 1332A

GGCGGAGCCGCCTCGGACGATAAGGAAATTGAGATTTGGAGAAGTTAAATAACCAAGACTTCACAGACAAAGTCT
CACTCCTTTTGCCAGGCCGGTGTGCATTGGGGTAATCTCGGCTGACTGCAACCTCCGTCCCCTCCGAGTTCAAG
TGATTCTCCTGCCTCAACCTCCCGAGTAGCTGGGATTACAGGCAAAGCCATGACTACAGTAGTGGTACATGTGGA
CTCCAAAGCTGAGCTCACTACCCTGCTGGAGCAGTGGGAAAAGGAACATGGCAGTGGGCAGGACATGGTACCTAT
CCTTACCAGGATGTCTCAATTGATTGAAAAAGAACTGAAGAGTATCGTAAAGGGGATCCAGACCCATTTGATGA
TCGACATCCTGGTCGAGCTGATCCAGAGTGTATGCTGGGCCACTTGCTGAGAATACTCTTCAAGAATGATGATTT
CATGAATGCACTGGTGAATGCATATGTGATGACAAGCCGAGAGCCCCCTTTAAACACTGCAGCTTGACAGACTCCT
ATTAGACATCATGCCAGGGCTGGAACTGCTGTCTCTTTCAAGAAAAGGAGGGAATTGTCGAGAATCTTTTCAA
ATGGGCCCCGAGAGGCCGATCAACCATTGAGGACATATTCTACTGGACTGTTAGGAGGTGCTATGGAAAATCAAGA
CATTGCTGCCAACTATAGAGATGAAAATTCACAGCTGGTGGCAATAGTGCTTCGAAGACTGAGGGAGCTACAGCT
ACAGGAAGTGGCTTTGCGGCAGGAAAACAAGCGTCCCAGTCCACGGAAGCTCTCTTCTGAACCCCTTTTGCCCTCT
GGATGAGGAGGCTGTGGATATGGACTATGGTGACATGGCTGTAGATGATGCTGAAATTCAGAAGTCAGCACTTCA
GATTATCATCAATTGTGTGTGTGGCCCAGATAACCGAATATCCAGTATTGGTAAATTTATCTCTGGTACTCCTCG
GAGAAAGCTGCCTCAGAACCCTAAAAGCAGTGAGCACACCCTGGCCAAGATGTGGAATGTGGTTCAGTCCAACAA
CGGCATCAAGGTGCTCCTGTCTTACTGTCCATTAAGATGCCCATCACAGATGCAGACCAAATCCGGGCCCCCTGGC
CTGCAAAGCCCTAGTGGGCCTGTCTCGCAGTAGCACTGTCCGGCAGATCATCAGTAAACTGCCCTTTTTCAGCAG
CTGCCAGATCCAGCAGCTGATGAAGGAGCCTGTGCTGCAGGACAAGCGCAGTGACCATGTCAAGTTCTGCAAGTA
TGCTGCTGAACCTATTGAACGGGTGTGAGGAAAACCACTTCTCATTGGCACTGATGTTTCCCTAGCACGACTGCA
GAAAGCAGATGTTGTTGCCAGTCAAGGATCTCCTTCCCTGAGAAAGAGCTGCTTTTGTGATACGAAACCATCT
TATTTCTAAAGGGCTTGAGAAACAGCAACCGTGCTGACAAAAGAGGCTGACCTGCCCATGACTGCTGCCTCCCA
TTCTTCTGCCTTTACCCAGTCACTGCTGCTGCTTCTCCTGTCTCTCTACCCCGAACCCCTCGTATCGCTAATGG
CATTGCAACTCGTCTGGGCAGCCATGCTGCTGTGGGTGCCTCTGCGCCTTCTGCCCCTACTGCTCATCCTCAGCC
ACGGCCCCCCCCAGGGTCCGCTAGCTCTGCCCCGCCCATCTTATGCAGGCAACTCCCCTTTGATTGGTAGAATCAG
TTTTATCAGAGAGAGGCCATCACCCCTGCAATGGCAGGAAAATCAGAGTGTTGCGGCAGAAGTCGGACCATGGTGC
CTACAGCCAAAGCCCAGCCATAAAAAAACAGCTGGACAGACATCTTCCTTCCCCACCTACGCTGGACAGTATAAT
CACAGAGTATCTTAGAGAACAACATGCTCGCTGCAAGAATCCAGTTGCCACCTGCCACCTTTCTCCCTCTTTAC
TCCTCACCAATGTCTGAGCCAAAACAGAGGCGGCAAGCGCCAATAAACTTTACGTCAAGGCTAAACCGCAGGGC
ATCATTTCCAAAGTATGGAGGGGTGGATGGCGGATGCTTTGATAGGCACCTTATCTTTAGCAGATTCCGTCTAT
TTCAGTGTTCCGGGAAGCCAATGAAGATGAGAGTGCTTACCTGCTGTGCATTCTCAGCACGGGAGCGGTTCTCT
GATGCTTGGCACCTGCACAGGGCAGCTGAAGCTCTATAATGTGTTAGTGGACAGGAGGAGGCCAGCTATAACTG
TCACAACTCAGCCATCACACATCTTGAACCTTCAGGGATGGGTCCCTTGCTGCTGACATCTGCTACTTGGAGCCA
GCCTTTGTCTGCACCTTTGGGGAATGAAGTCAGTATTGATATGAAGCATTCTTCACAGAAGATCACTATGTTGA
GTTCAAGTAAAGCACTCCAGGATCGGGTCATCGGCACAAAAGGAGACATTGCCACATTTATGATATTCAGACTGG
CAACAAGCTGTTGACTCTGTTTAAACCCAGATCTTGCCAACAACTACAAGAGGAAGTGTGCCACCTTTAATCCTAC
AGATGATCTTGTCTTAAATGATGGCGTCTCTGGGATGTCCGCTCTGCACAGGCCATCCACAAGTTTGACAAGTT
CAATATGAACATCAGTGGTGTCTTCCATCCAAATGGACTGGAGGTGATCATTAACTAGATTTGGGACCTTCG
AACTTTTCATCTTTTGCTACTGTTCCCGCTCTGGATCAGTGTCGCGTGGTGTCAATCACACGGGAACAGTGAT
GTATGGAGCTATGTTGCAGGCAGATGATGAAGATGACTTAATGGAAGAGAGGATGAAAAGCCCCCTTTGGGTCTATC
CTTCCGAACATTTAATGCAACTGACTACAAACCTATAGCAACCATTGATGTGAAACGGAACATCTTTGACCTGTG
TACAGACACCAAAGACTGCTATCTTGCTGTCTATTGAGAATCAAGGCAGCATGGATGCCCTGAACATGGACACAGT
ATGCAGGCTGTATGAAGTGGGCAGGCAGCGTCTGGCAGAGGATGAGGATGAAGAGGAGGACCAGGAAGAGGAAGA
ACAGGAGGAAGAAGATGATGATGAAGATGATGATGACACCGATGATTTAGATGAGCTTGACACTGACCAGTTGCT
GGAGGCGGAGTTGGAGGAGGACGACAATAATGAGAACGCAGGGGAAGATGGGGACAATGACTTCTCTCCCTCTGA
TGAGGAGCTAGCAAACCTTCTAGAGGAGGGAGAGGACGGGGAGGATGAAGACTCTGATGCAGATGAGGAGGTGGA
ACTGATCCTGGGGGACACTGACAGCTCTGACAACTCTGATTGGAAGATGACATCATCTTATCTCTGAATGAGTG
AGGAGCCATCACTGCTTGAAGAGATTCTTGGCAGGCGAGAACTGAGTCAAATGAATTCAGAACATATTCCCTT
CTCTTTCTCCCAGGGCTGTCTGTCTTTTAAAGGAGCTGCATGCCCTGCATTGAGAAGATTATGGCTTAGAGAGCCT
CATTGGCACCCGAGGGTCTTCCAGAATCAATAACCACCACAAAAATGACAACAGGGACTAGGCCCTACTCTGCA

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FIGURE 1332B

CCCCCACATCCACCCCCACCATTTCTAGGATGGACATATCTTTCAAGGGGAAAAAAAAAACCATGTCTCTGGG
GTATTTTACAATATATTTTCTTTGTATAGTGTTCTTTACTTAAAGAACAAGAAATAGTTTTTTATAAACTTTAA
AAAGGAAAAAAAAAACAGGCATTTATAACTGAGGGTATGAACTTATAATCCACCAGGTCTCTTGTCCCTGCACTTCA
TTTTCTTTGGAAGAAAATGATGTCTAAAGAACAATATAGAGGCATTTTTACATACGTATTTAAATGAAAAGGAAA
ATCGTGGTTTCTTAAATTGATAAGGATTAAGAATATTTTATTATAAATATAATATATGATTTTTTAACCTGTTTT
GTTGCCTCATATGCTGTCAGGTAAATTTGTTTTCTTCGTGCCAGAGGTGGGGAGGAAGGCACTCTGTCTGCTGG
GTAAATGCCTAAATTCACCTCACCTTCATGGTTTGGGGGCAGCATGGTCATTGTGGATATTGGTTTTGTGGAGTTG
AGGGAACCTTAGGATATAAGTTCACTCCCTCTATTTTTCTTTGTGATTCAGTTTTTCAAAAATCTTTTTTCTTCC
CTTCTCCCCATTGTGGAAATTACAAATCAAAGGCCTTTTTCTTTAATGTAAAGTGATTTATTTAAAAAAAATA
CAAATAAACTACAAGTCTGTCTTTGTTAAA
AAAAA

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FIGURE 1333

MTTVVVHVDSKAELTTLLEQWEKEHSGQDMVPILTRMSQLIEKETEEYRKGDPDFDDRHPGRADPECMLGHLL
RILFKNDDFMNALVNAYVMTSREPPLNNTAACRLLLDIMPGLTAVVFQKEGIVENLFKWAREADQPLR TYSTGL
LGGAMENQDIAANYRDENSQLVAIVLRRRLRELQLQEVALRQENKRPSPRKLSSEPLLPDDEEAVDMDYGDMAVDD
AEIQKSALQIIINCVC GPDNRISSIGKFISGT PRRKLPQNPKSSEHTLAKMWNVVQSNNGIKVLLSLLSIKMPIT
DADQIRALACKALVGLSRSSSTVRQIISKLP LFSSCQIQQLMKEPVLQDKRSDHVKFCKYAAELIERVSGKPLLIG
TDVSLARLQKADVVAQSRISFPEKELLLLIRNHLISKGLGETATVLTKEADLPMTAASHSSAFTPTVTAASPVS L
PRTPRIANGIATRLGSHAAVGASAPSAPTAHPQPRPPQG PLALPGPSYAGNSPLIGRISFIRERPSPCNGRKIRV
LRQKSDHGAYSQSPAIAKKQLDRHLPSPPTLDSIITEYLREQHARCKNPVATCPPFSIFTPHQCEPKQRRQAPIN
FTSRLNRRASF PKYGGVDGGCFDRHLIFSRFRPISVFREANEDESGFTCCAFSARERFLMLGTCTGQLKLYNVFS
GQEEASYNCHNSAITHLEPSRDGSLLLTSATWSQPLSALWGMKSVFDMKHSFTEDHYVEFSKHSQDRVIGTKGDI
AHYIDIQTGNKLLTLFNPDLANNYKRNCATFNPTDDLVLNDGVLWDVRSQAIAHKFDKFNMNISGVFHPNGLEVI
INTEIWDLRTFHLHTVPALDQCRVVFNHTGTVMYGAMLQADDEDDLMEERMKSPPFGSSFRTFNATDYKPIATID
VKRNIFDLCTDTKDCYLAVIENQGSMDALNMDTVCRLYEVGRQRLAEDEDEEEDQEEEEQEEDDDDDDDTDDL
DELDTDQLLEAELEEDDNNENAGEDGDND FSPSDEELANLLEEGEDGEDEDSDADEEVELILGDTDSSDNDLED
DIILSLNE

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FIGURE 1334

CACACACACACACAGCCAGGAGCAAGGGAGCTTTCGGGGCCACACTCCCAGACGCCTCCCTGAGCCCTGGAACCC
GGACTCGTTGCTCCTGGCCTTCCATACAACATACGAGCACATCCTGCGGTCCCACCCAGATCCCCTCCTCCTCG
CCATCCCATTCTGCCCCCTCCCCACCCTGGGTACAGAAAGGGACTGAAGTGTGGGCAGAGAGGGGGCTTAAGGC
CCCTGGGCACAGGCTGGGATCAGGGCAGTCGAGCGAAGGGCAGCTGTGTCTGCTGCCCTCCCTTCTGGAGGCTGGAGG
GGAGAGGCCAAGCCCTTGGAATGTAGCAAATGTCTGGATGTGCGATAAGTGCGTGTATGTGCGGGACAGGCC
CGAGAAGCTAGTGACTCCTGCACACCCCCATTGCACAAATGAAATCACAGCCCAGGAGGGAGGGTAGCTTGGCAC
TGGCTGAGAAATAGAGCTCTCTCCCCGCCCCCTCCCCCTAACCACAAGGGATTGTCTGACAACTTGTGGGGATAG
AAGGGCTCACAGGGCAGGGGTCTCAGCTGCCCCCATCCTTAGGGCAGGGGAGTTAGTGTGGAGCCGAGAGCAGGT
CCCAGCTCCCCCTGCCAGCCGCACTGTCCAGGCCCAGGGACCTCTGCCGGGTCTCCAGCCCTTGCCACACAG
CCTAGACGTAGTAGCTTGGGCTTCCAGCAGGTGGCGAGCTGGTTTCGTGCTGGAAATTTCTCCTGGGTTTCTTGGG
GTCAAACATGCCAACCTCCAAGACCCCATCCTCACGTCTCCCACTTTTCTGGCGCTGGAGTGTGCAGGGCGTAGG
ACCTGCATGTGTGGGTGTGAGAATGGGGGGCGGTGGACACCAAGGGGCGAGTGTGTGACTAGGTGTGTGTGCACAT
GTGTAGGGTGCAGACGCATGGGTGCCATCCTTTGCGTTTCACTGACTGTGCGTCCAGACCCCTCACCAGCGGGCCC
CCCACCACACCCCTGGTCTTCCAGGCAGCTGTCCAGGGCGCCCAGGCCTGCCTTGCCACCACAGCCCTCAGGAAA
TCCGGCAAGGAGGCCCCCTGCAGGTTGGTTTCAAGCCCCAGGTAGCAAAACAGAGACAACAGCAGCCCCGCGCTGAC
CCCCCTGCCCCCTCTCTGTGGAGGCCCGGGACCCCCGCAATAAGCACCACATGGGTGAGGCTGTCCCTGTGAGGGTC
CCCTGCCAGGGTCCCTCCTGGGGTCTTGGGCCATTTGAGGGGCTCTTTGATGGGCCAGGCCGGCCAGAGTGAAC
CCGAGCACTTTCTGGCTGGTGGCCCAACCTCTCCACTCCCCACTCATTTCCACCTTGAAAAAGGGCTATAGGTCC
CCTGCCCTGCCCCGGTCCAGTTTACAACAGTGTGGGGTGGCCCCAGGGCCTGGCCCCACTCTCCCTGCTGTGCC
CACTCCTCTCAGACTCCACCTCCCCAGTGGGTATGGGCCCTCCACATGCCAGGTAAGTAGCAAACCCCCACTCC
CTCCAAGGACCAGGTCTCAGAGAAGGCCCTGGTCACTGCCCCCGGCCACCTGGAGCCCATCGGGGCTGCCTCTC
CCAGCCGCGACTTCTCCTTTTGCCTTAGGCCTCGCGACATCCTGATCTCTCCTGCAATAACTAGGAATCGAGATT
CCACAGTAGACGTCCCTTGCCGTGNN
NNNNNNNNNNNNNNNCTCTCTTTCTCTCTCTCCTCTCTCTGTAAAGATCCTGTTGCGGGAGTTTCCCCAGCCGTTG
TAGTATCTAGTATGTTAGAGTTGGGAGGGGACCATAGTTATGTAGCCCAGCCCCCTCATTCCCAGAGGCACCCAG
AGGGCCAGCCTCCAGCCTGACCCAGAGCAGAACCGGAACACCAGGTGGGGGCCCTGGTGCTGCCACCTCCTCTG
CTGGTCGGGCTGGGACCCCTTTGCCCCCTTAGGAGAGGTGTTGGTCACAGATGTTTACCTCAGTTTATGTCACTGTC
GAAGAAACAAAAATAATAGCAAAAAATAACACTGTAGACATGAAGACTTAGAAGACAAAAAATAAATTCAC
ACAAAAATCTCCCTTGTGCGATTCTTCTGTGAAGGTACAGTGTGTATGTGTGTTGTGTGTATGTGTGTGCGTG
TCTCTGTCCCAGACCCTGTGTCCCCACACTGCCCCCTGTCTTCGGTGCTTCCCAGAGACCCCTCTGAGCTGGC
CTGTGGGGCACGGGAAGCCCCCTGGATGGGAGGCGGGGCCACAGGTCGGCTAGAGGGTCTCCACCAGGGCCACTG
AACAGAACCCACGGCTGCCAGAATGTTCCCTGAGCCACACTGTGGCCAGTGGGACAGTCTGGTGGCTGACAT
CAGCGTCCATGCTTGGCTCAGGGCCTGGGGCGGGGTCTGGGTAGAGTCTAGCCCCAGAGCCCCAGCCCCCTCAT
GTCTTGCCGCCCTTCCCTCATGTGTTTGTAAATACTCTGGCATCCTTTGGCCCTGAGAAGGTTTTTAAATGTGTT
ATTTACTTCTCTAAACATGACGATTGCTATAAAAAATAAACAAAAGTTTAGAAAAATGTAAAAA

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FIGURE 1335

THHTPGARELSGHTPRRLPEPWNPDLLLLAFHTTYEHILRSHPRSPPPRHPILPPPHPGYRKGLKCWAERGLKA
PGHRLGSGQ

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FIGURE 1336

CGGACGCGTGGGCAAGTAATTAGAAGTAATCCTTCATTTAACATCCCCACTGGGTGCCTCGAGGTATTTCTGAA
GCCGAATGGTCCCAGGGTGTTTCAGGGAACCTTACGAATTAAGAAATACTTGACTGTGGAGCAAATAATGACCTGT
GTGGCAGACACGTGCAGGCGCTTCTTTGATAGGGGCTATTCTCCAAAGGATGTTGCTGTGCTTGTGTCAGCACC
AAAGAAGTGGAGCACTATAAGTATGAGCTCTTGAAAGCAATGAGGAAGAAAAGGGTGGTGCAGCTCAGTGATGCA
TGTGATATGTTGGGTGATCACATTGTGTTGGACAGTGTTCCGGCGATTCTCAGGCCTGGAAAGGAGCATAGTGTTT
GGGATCCATCCAAGGACAGCTGACCCAGCTATCTTACCCAATGTTCTGATCTGTCTGGCTTCCAGGGCAAACAA
CACCTGTATATTTTTCCGTGGGGTGGCCATTAGGAAGAACTCCAAATCAAATGCTATGTAAATGTCTATGGGTG
ACAGTCTGCTGATGGTAGAAACCTTTCTTTTAGTTTACAAGTCAGAGATTTGGACGGAGCTGACACAAAGAGTT
TGGAGCTCCCCCATTTCTGGCTCTCCTTTTCAGGGGTTCCCTCCCCAACCCCTTTTCAGCAGCGGTGGCTGCCCCC
ATTCTGACCCCTGACTCTTCCAGCCAGAAAGATGGTGGTTTTCTAAAGGAACCTTTAGCTGTCTGCACAATGCCG
ATCTGTGTCTTGCATTTTGGGTAAAAGCCATAAAAAATAAGAACTCAGCCTGTGGCCTTTCTTTCTTCCAAGGCT
GGGCTTCTTTTTTTAAGTGACTTCATGCAGTTTGTGCTTTTAAAAATTTGTCCAGAATCGTTTTCTGCAGAAGC
ATGGTCTGTTAGGAGCTTACTGGCCGTAGCAGAAGCAATTGTTTCCTGAATTCCTTGACATTTATCTTTGCTGTAT
TCATTTAGGGCTTGGGAGAGTCCGAAGATAATTAGTCACTGTGAGATTAATAATTTTGTGAGACAAAGAATAC
CGTTATGATTATTTAATCCTTTAAAATTGTGGTCTCCAGAGCTTGTTCAGAAATGGCCCAGACCAAGCCTTAAT
TGTGATAGTGAATATTAATGGTCACTTTAAGGAGAAATTATAGGCCAAGATGAAATGAACATAAACCTGTTTGCC
CTGGCTTTCAGTGGAAGATGATATTAGAGACCAAATCTGGTTCTGAAGGTGTGTATCAGCCCTAAGGTGAACCA
GACTTGGGAAAGATTGTCTTTAAAATCAATGAGTTTATGTTTTAACTTCTCAGCTTAGTTCTATGCATTGCTCT
ATAACACACCTAGTTAAGTTTTATGTTATCTTGAAGTGTGATTTTTTTTCTATTTACTTTTCATGGTTTGGTGGG
CCATTGTTATGGAAGTGAATGTTTGTGTCCACCCTTCACCCCCAAATTCCCGTGTGAAAGCCCCAACCTGCACTG
TGGAGCTGGGGCTGCTAAGGAAGTAATTAAGGTTACATGAAGTCATGGTGGGGCTCTGATCTGCTAAGGTGGTG
TCCTTATAGGGAGAGACCCAGAGAGCTTGTTCCTCCCTCCCTGTGCATGCAAACAAGAGGGCATGGGAGCACA
CAGAGAGATGGCAGCCACCTACAAGCCAAGAGGAGAAGCCTCACAATCAAACCTCTCGCTGCTGGCGAGAGTCTTG
GACTCTGTCTTGGACTTCCAGCCTCCAGACTGTGAGAAACAAATTTCTGTTGTTTCAGCTTCTCAGTCTCTGGTG
TTTTGTTATTGCAGCCTGAGAACACAGCTGTACGATTATTTGTCAAACAGAAAAACTGATACTTAACAATGCTA
ATGCAATTATTTATTTGCTTTTCAGTCTCTACAAAACGTTCTAAAACACTAATCTAAATATTAACAGTAAAATAT
TTGCATAACTAATGGAACTAAGAAATCATATGACCAATATTTCACTTATTGGTAATCTTACTCTACTGATTTCC
CCCCAGACTGTGATTTTTGAACTTCCTTGCCCTTCTCCTGTCTTTCTGTGTTTATTCATGGAATTCAGTTAICT
GGGCTTGAAATTGCAGGCTCTCCTAACTTAAGCAAATCTGACAGATCAGCAAAATGAGATAAATGTTTCTTTTT
TCTTTCTGACTGCATTAAATCAGATACAACCTCAGCATTAAAAAGCTATCTTTGTAAATGTTGTTACTAATAAATT
AGTCTTATAAAAAAAAAAAAAAAAAA

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FIGURE 1337

RTRGQVIRSNPSFNIPTGCLVFPEAEWSQGVQGTLRICKYLTVEQIMTCVADTCRRFFDRGYSPKDVAVLVSTA
KEVEHYKYELLKAMRKKRVVQLSDACDMLGDHIVLDSVRRFSGLERSIVFGIHPRTADPAILPNVLICLASRAKQ
HLYIFPWGGH

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FIGURE 1338

GGCAGGAATTTTCGGTAGAACTGGAGTGACCTGTGGAAGCTTTTGAATCTAACCTGCTGTCTTCGTGCTCTGTG
TGAAGGGGAAGCTGGGGGGTTAGCATGAAGTCTGGCCTTGTGTGCATTGGAGCTTCCAAGGCACTTTGAAATCAT
TCCAGTATATTTGGGAAGAATTGAGTGAATGAGAATGCTCTTCCTTATTCTGGTAGATTTGACTTGTTTATAATT
CTGCACTTTTGAAGAAAAACAGTGTTAATCTGTAGTTGAAAGAAAGCTTAGTAGATGAGAGAGTTCTAGGCTACT
GTGGCTTTTTCCAGTAGATTTAGATGAGATTATGTGTTTTGAAATGTTTTGTGGGATCCCTTAGAAAGCATCACT
TCAGGGCAGAGACACTCAATATTGCCAGCCAGCTTGGGTTCTAAAGTGATTTAATCAAATTCATGCTCCTGATCT
TTTTTTTCCCCCTTCCTTTGGCTATGAAAACCCAAAGCCCGGAGTGATTGTTTTCTCCTTGCTTTAAGCAGTGAA
GTTATCCTAATGCAAAAGAGCTTAGTAGAAAATGAGTGGTTTACCTTTTTTCTAAAAGTATATTTTCAAGTTTA
TTCTGGAATGTGATGTCTTGGTCCTCTTAAAAGCAGATCAGCCATGACTGAAACTCAAGGCTTAGCTGGTATCTA
TGTTGTGCTACATTAGGTGACTAGAAGCCACTTCTTAGTGTAAATCAGCTCCTGTTTCCCTGTGAGCCTTAGTTAT
ATTTAATTCAGTGGCTTTGAGTCAAGGCCGTTCTAATTGAGGGGACCCAGTGTGCTTCAGTGTAAAGAGTGGG
GCAATGAAGAGTGAACCCCAATGAAGAGTGATCCCAACTTTGGAACTATCTGGTCATTTCATGACCTTAAAAAGC
TGCCATGGTGGTCAAATGGCATGTGTTTGACAAAAATGACCGATGTGTTTAACCAAAGCTTTGAAATGTGATGA
AGCCACCAACATAAGCACTTGCCTAACAGAAATCAGTATTTCTTCTACTTAGAAGGCTTGGGGCCCAGGGTAATG
AGGCACCAGATGAAGATAAGATCTGCATCAAGGAATTAAATTTCCAGTTTGTCTTGGGGTCTTTCTGCTTATG
TTTTTTCCCCCCCCTCTGGTAATAGTCCTCTTCTGAGAATGAAAGGAGGCACAGAAGTTGCGAGAAAGACCCAGT
CCCCAGTCTTTGCCACCATTTGCACCATGGTTGTCTCGGAGTCCCTTCACCTGACCTTTTTAGTCAGCTCAGATCT
TTTTGTAGTTTGAAGATAGACCTATTCAAGAGCTATCAGGGTTAAAGCTGCACTGACCAAAGCTGTACTTTTAA
AACACAACCCCTGGGCTAGTGATGTCTCTACTTGCTCTATGAGCCTTTTGCCAGCCTCAGAATAGGCGAGGTAAC
CTTGAATTTTCAAGGGCCCTGGAACTCTAGCTGAAACCTGCCTTTCCCTAATGCTCACACAAGCACCAGGTACCCTG
AGCTTATACTGAGTCCAGTGGTTCCATTTATGTGTGTGTGTATGTGTGTGTGTGTGAGTAACATGAAACTTGGCA
GTAGCAGAGAGCACTGAAGTTCACATGCAAGTTCTAATCTAAAGTTAAGCAGTCTCTTATTTGTTTCGGGACTCT
GATTGACTCTTTTTCTGATGCTTTTCGGCATGTCTGCAGCCTGTTCTCCTAGCCTGCTGCTTGGAGTCAGGTTGA
GCATCAGTGAGATGAAGACAGTACCTTTTCTCTCACATTGGCAGAATAGCACGCACTAGATGCCTGACCTTGAG
CTCTAGTCTCCCCCTTTAAATCTTACCTTGGCAGTAACACATTATTCCTCATTCAATAATTTCAATGCTGAAACTG
AACTCTATTACTAATGCCTTCCAATCAGAGTTCTGATGGGGATGCCTGTGGGATGGCCCACACCTGGGGGACCT
GGCAGATGGGGTGAGTTGGGTAAGGAAGATGATGCTTAGTTCCTGATAGATGCTACAGATGTAGTTTGGCATTTC
AGTTTTGTCCAGTTTGATTTTCACTGGGGTTTGAAGTACAGCAAGCTGTGTATGAAGTTGTGTTTTGTGGTGAC
ACATTAATAATCAAATTGCTAAAACCTGAATCTGCTTATTCTTCAGCTTCACCTCTGCACTAACCCCTTACCCT
TATGGTACGTCAGGATTTTAACTAGTACTGCTTTGTTGACTTTGGGAAATGGTGCCACTCAAAGCAACTTCCTA
ACTTGAGGAATAACTCCTTTGTAGTTTACTTTCTGGTACTGGTTGGTGCCCTTGATTGGGATACAGCTATATTCT
TAGCTCAAATGTCCTCTTTTTGAGAGCAAAGTAGTTATCCAATGGTGAGACGAGACCCTGACGCTCATAGAGGCC
ATTCCTTCCTGGGTGTCGGACCAGGGCTCTGTGTACAGGAAAACCTTCTGGGTGGACTTTGTAAGAATCCAGTTT
CCAAGGTTAGATTCACATCCTTAATCTTGAGAGACTAGAATTTACAGCTCGCTTTGGAACATATTCCAATTCA
ACCAGTTAAAAATCAGAGGACCAAGTCGTGGGGGAGGGGGCGGTGTTGAGGAGAGGTATTTTTAAAGATCTGGCA
ACTTTTCAGGATTATTTGTGGAGAAGCTCTAAGGTTAAGATCAGGAAATAAAAGACTGTGTGTGTGGGTGTGTGCG
TGTGTGTGTTCAAGTGCCATAATCTTGTTTACCTATCACTTTAAAAAAATAATTGAAGTGTAAAGCTAAATAAAAT
GCTTGGAGTTTTGCTGGGCTAGTGAGAGTTGGTGCAAATCTTGTTGTGTGTTGCATAGGAAGGTGAGATGACC
ATCTACTAAAGAGGAAGTAGCTAAATACAGATCTGTGGGTGTTTTTAAAAAACTCAACCTATCTGGTGTTTTAT
TTTAATGGATAAAAAATGTAATTTTTCTAAGGTAGCAACTTATTTCCAAATTAATATAGATGAAAAATAGATACCA
ATTAGACTAAATTGAAAGCTTTTGTCTATATTTGCATAGCCTTTGAAATATTTCTTAGTGCCTAGGAGGTCTG
GGGATTCCTCTTTTCGTGGTGGTCACTAACCTTACTTGATGCAGATAAAATCACTTGTCATGCAAAATGTGTTAG
AACTTGATAAAGCTTTGAGTTTGAGAAATAAAGGTATATTTAAATTTAAATAAAACTTGTCAATTTATGCTCATT
G

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FIGURE 1339

GRNFGRTGVTCGTALESNLLSSCSV

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FIGURE 1340

CCCACGCGTCCGCCGGGCGCGTTCCGTTGGCGGCGGATTTCGAACGTTTCGGACTGAGGTTTTTCTGCCTGAAGAAG
CGTCATACGGACCGGATTGTTTTCGCTGGCCAGTGTCCCGGAGCTTGTGTGCGATACAGAGAGCACCTCGGAA
GCTGAGGCAGCTGGTACTTGACAGAGAGGATGGCGCTGTCGACCATAGTCTCCAGAGGAAGCAGATAAAGCGGA
AGGCTCCCCGTGGCTTTCTAAAGCGAGTCTTCAAGCGAAAGAAGCCTCAACTTCGTCTGGAGAAAAGTGGTGACT
TATTGGTCCATCTGAACTGTTTACTGTTTGTTCATCGATTAGCAGAAGAGTCCAGGACAAACGCTTGTGCGAGTA
AATGTAGAGTCATTAACAAGGAGCATGTACTGGCCGCAGCAAAGGTAATTCTAAAGAAGAGCAGAGGTTAGAAGT
CAAAGAACATATTCTTGAAAGTTATGATGCATTCTTTGGGTGGTAACAGATCATAAAGACATTTTTTACACATC
AGTTAATATGGGATTATTAAATATTGGCTATAAGTGAAAAAAA

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FIGURE 1341

MALSTIVSQRKQIKRKAPRGFLKRVFKRKKPQLRLEKSGDLLVHLNCLLFVHRLAEESRTNACASKCRVINKEHV
LAAAKVILKKS RG

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FIGURE 1342A

GTGGGCCGCGCGGTGGCGGAGACTGTGGCTTTAAGAGCGTGCCGGGAGCCCGAGCCCCAGCCGGGCCGCGCTTC
GCCGCTGCGCACCCAGCGGAGCCAAGCCCCACGCTGGCCGGACAGGGCCGCTGTGCGCGGGCTGCTGAGAACT
AGCCCTAGACCTCTGCGTGAGGGTTCTTCTGCCGAAGACATCACCAGTGTGTGGAGCCTGCCACACCCACCCGCT
GCCAAACCACGGCCTTTACCTGTGTCTTCCGGTGTTTTCCCGTGCGACCCATCCTGTGGGAGTGCCTCGTGGGCTG
CCCCAGAGTTACCCACACTCAGCAGCACCAATGGTGAAGATGACAAGATCGAAGACTTTCCAGGCATATCTGC
CCTCCTGCCACCGGACCTACAGCTGCATTCACTGCAGAGCTCACTTGGCCAATCATGATGAACTAATTTCCAAGT
CATTCCAAGGAAGTCAAGGACGAGCATACCTCTTTAACTCAGTAGTTAATGTGGGCTGTGGGCTGCAGAAGAGC
GAGTGTTGCTAACAGGACTGCATGCAGTCGCAGACATTTACTGTGAAAACCTGCAAAACCACTCTGGGCTGGAAAT
ACGAACATGCTTTTGAAAGCAGCCAGAAATATAAAGAAGGCAAATACATCATTGAACTAGCACACATGATCAAGG
ACAATGGCTGGGACTGATTGGACAGCATCTACCCAACCCAGTGTCCACGTGAACGCCATTCAACCGAACATTCTT
CCCAAGCGTGAGAGAGTGACTGACACTTGGTTCCATCCATTTAGGGGCTTGCCATCCGGGGCATCCTCCCACCC
TGACGCCATCTTTCTGGTGACCGGCCCTCTAAATCGCTGTCTCTCTGTCTCTTTGCTTTGTATCTGTTTGTGAGTT
GATCCTGGCTTCTCTCTCTGTCTTAGTTTGGCTGAAAACAAAACAACAAAAGGAACAGATCCTTGACCGCATGG
CGGCAGCCACCTTGGTAAGGGCCCCAGGGCCCCATGCGAGAGCTGCCTGATGGCCTCTTGTGACGAGAGCAGTGG
CACGGGGGCGTGAGGAAGAGGGGAAAGGGGAAACTCTAAGGGTCTGGCGCGGGGAAGGGGTGGAAGGTGGAGGT
AGGAACAAAATTGCGCCGCTCCTGGAGACCTGATAACTTAGGCTTGAAATAATTGACTTGTCTAAAAGGACAAAG
AGAAAAAAAATACCTCATGACTGCATTCTCTCTGACTAGAAGCTTCTGTTCTGACACCAAATGTGCCAGGTT
AGCAAATGAGCACAAGATGTGGCCCTGATTCTAGTTGGTGGGGCAAGGGCCTGGTTCTCCTGGGCTGAGTGGGGG
AGTGTCTTGGCAGCAGCGAGTGACCTGGGCAGTGGCCAGGTGGGTGCGATGACTCTGATGCCTCACTCAGTCTCT
GGGCAATCATCATCTTTGCCCTCTAGCCACCGTAGATAAGGTGTGAAGGGACTGCTGTTTGCAATGGGCTTACCAT
CCAAATATCCCAAAGGCTTTGACCAGCAACCAAGTAAATCAGTAATTGAGGAGAGCAGGGCACAAAGGGGCTGC
AGTTTGGGAGCTCCTGAAGAAATGGCTCAGATATTGAGTCAGAGAAATAAAAAGTAGGATCAGTTAGCAATTCTA
ACTGCCCTTCTCTGACCCCTCATAAGAGGAGTGTGGTGAGGGAGGGGACTGGGTAGGGGTCATCCCAGGAGGA
GGGGTTTACATTGGAACCAAGTTCAGGTTCCGTGCATCTTTCTCTTCGGTTTTACAGTGGCTTCCGTGGGATCGT
CAATTTCTTGTCTTAGAGTTTCGGGTGTTTTTCTCCAGTCTTGTTACTGTAGACTGTAGAAAGCACGGGCCCCA
GGCTCTGAGCTTAGTAATAACCTGGCTGGTAGATTCTCATGCCCTAATTGTCCCACTTAGGCCTGAATGTCTT
GCATGGAGAGAAATCTCTGTGAGTGTGGTCCAGCAGCAGGGAGGAGTTCTGCCCAAATTCGATATCACCCCTT
CCCCCATCCAAACATCCTTCGATTAGGGAAGTGAGAGCACATCCCTGTAAGGCCATAAGAGAAAGAGGAGTTT
GTTACATTTAATCAACACTGTGAAGTCTGTTCTACAGCAATTACGCCATTACACAGTATATGACTGAACTCATT
TAACTGGGTAAATTTCAATTTCTTAGACTGAATATATTATTGTTAAGATACGTGTGCGTGTTAGGTAATTCTCAGC
ATCTCCTCCAAGTAGGCCGACCTTCTCGGAAAATTACCCCTAAAAGTCTCACAAAAGAATGAGTTTATGGGGAGA
TTCTGTAAAGTGATGAACTGAGATGAAAGCAGCCAACAGCCAGGAGCTTTTCAGAATAGCGTCTGCAGCAGAAC
CAGTTTCCATTACAGAGCGCGTCTTGGTGGAAATGCTTTTTTGTGTGTCTCCACGCGCTGATGGTGGAAATGGGAG
CCCCAAGACGTGTGGGCTTAGAAATCAACTTTTGTTCCTCAAGGCTTCTTGTCCAGATCTTTCCAGTGCTTTTCA
AGCCCTGGGAGATCAAGTTGTTCTCCCCACTTTACTGCAAGGTAGACTGAAAGTTTCAAGAAATACTGAATTTCT
GCTCCCAGAAGAATAGTTTCTCTGGCTCACAGGCCCAAGTTCTCAATGAAATCGTTTTTTAACTTTACATTCTCT
AAGCTGGCTTCCCGTGACAGAAAGCCATGGATTTCCCTCTCTCCCTTCCCCCTCCTCAAGGAAATAGTCTTCTCT
TTATGGATTTTCAATTGGACTCTTCTCTCAGCGATTGTCTGGCTGTTTATTGATAGTCTTCCCATAAGAAAATG
GGGTTAAACATGGGGTAGGTATTTTGTCTTTCAAACATACAAATGGAATGTGGTGACATAAACTAGACATGGGGTG
CCCTCAAGTTTCCAAGGGGACCAATGTGCCACTGTTCTTCTTGGGGATGAGGCCTTTGACTGTTGGATGGATCA
GAGCAGGCTCCAGTCAGACCTGTTCTGAATGTTTTTTTTTTCGGTGACTATCCAGTGAGCCTTCAGTGGGTGC
AAGGCGCCATACTTGCTGTGAGAGAGCTGAGTAGAGTGTGGTTTTTCCATAACTACAGGGGGAAAAAAGTCAT
TAGGCTTTCCCTTTGTGTGAGTGAACCAAAAGTGCTTTTACAACGTTGCTCTGTTCATGGGTGTCTATCTA
ACATTGAGCAGCATTGGAGAGGCCACAGCTGAGCTATGGAGATGCTAAATTAACATGACCTCAGTCAGTTTCA
TCTTTAATTTCTCACCAAATTATTGACTTAGAGCATAACCAAAGACCTCATTCAATCACCCAGGTGGGTGGG
GGAATTGGAGTTTGTGGTGAAGTTTGGGGGCGGGGTGTGGGGAGTAGAGACAGGGTAAGGGGACGTGAGAAAGG
AAAAGGCATGAAGTTCTATACCTCAGCCAGCAGCTGCCTTCGTTTGGAACTGAAGTCCAGCCAGCAGACTCTCTA
GCTCCATCTCCCTGTGCCACCTAGGTCATATGACCTTGGCCACCTTGGAGTAGACCCAGACCCCTCGGGACCC

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FIGURE 1342B

GGGACATTAGTCTCAGGCTGCTGATGGATTGATTTGACATGAACCAAACACAGCCAAACTCGATACCCACAAGCT
GTCAGCTGAACCTGACTGAGTGTTCTTCCTGAGTTCACGAGGATAGGCTAGAGTGCATTTTTACTGGTGGATCAG
TGTGTGCGAAAGAGATGACCCTTTATAAAGAGATTTTCAAGTGGATATATATAAAAGAAACAGTTGCTTGAAAA
TATACTTTTGTAAATAATATTTAATTTTTTAAATAATATATTTGGTGCTGTTTTCTCAGATCCCCTGAGAGCACT
TTTTATTTTCCTTTTAAATTCTATGGTTTCCTTTGCATTTCTTGAAGTATATTTTAAGGGAAACAGTGATCACCA
ATACATGTTTTCAGTTTTTTTTTTTTTAAGGTCCTCTATCACTTTAATCTGGATCAAGGCTTTGAAGCAATGCCTCT
CTGCATTTTTTCCCAGTGGAACAGACTCTGCAGTACATTAATCAGGTTGAGAATTGAAATATTTCTTGCACTCA
GTATTGGCTAGAAAAGAAAATAAAATAAACCAAGTTAATTTAGTAGTAACAACCTTACAGTGATTCTTCCTGTTGG
AAGAATTTGCAACAAATCAGAATCACGTTTTTAGTTGTGCGTGTGCGCGCACACGTGTGTAAGCACTTTTCGA
TTGTGCTCCTGTTTTCTCGAGTGGGGACACTTTAACTACAGTTTACACCTCGGGCGCATAAAGTTTTCTTCTC
TTTCTCTCTGGTTGTTTCTGTTTCTGAGTGGACCAACAGCAGAACCCACGAGGATTTGTTTTGAGTATGGAGCTG
TTGCGGGTTTGCTCCTTTTTCTTGCTTTGCGTGCTCAGTTTTTACAGACTGTAAAGGAGATGTGTTGTTTGTGAA
GATGGAGCAGAGTCAAATCTGTGCTTCTAACTGAGATGAGAGTGTATTAATCACGTATCGCAGGGCTCCAGCTGT
TTTAGAAGCCACATCATGTTAAACATTAAGTGGTTGGATTAAAGAACATTAATATTATAATACACATATCTTA
GTGGTAAACAGCTTTTTTTTTTTTAAAGGTCAGATTGCCTCAGGTTTAGAAAGAGGCTGAGAAATCAAATCTTGAAC
ACAATCAACTTACATATTTTAAAGGAATCTGCCTCAAATGAGAAAATATGCTAGTTATCTAGATAGAGGAAAGAG
ATATTTACTTTTTTAAAAATTAATAAGTTATGAAATCTGGCAGAAAAGGTAAAGCCTAGAAGAACTATGAAAG
CTATTCTCATGTTACCAAATCTATCTGCGCATATGTTTTTGTATAACATTTCCGGTGACAGTGGGAGTCGGTTCC
CTTTCCCAACCTGCAGAGACTATCTTCCAATACAGAATCTGTCTATTTATGCTTGTGTTTACAACTGTATTTGT
TGGGTTTGGGTTTTTGTCTTTGTTGGTGGCATTTTTCAGGTCACCTTTGCTTCTATAACAAAGGTAATTGTTTTCA
AATAATTTGTCTTCACCTTTTCTGTATTTGTACATAGTGATTGAGTATTAGAGAAAAGTGCATTGTTTCTGTCA
TATTTCCAATCTGTGTTGGTGCTCATTTGAGAAAATAAAAGTTTTCAATATTACAAAAAATCTATGTCGGGTG
CGGAGAAAGAGGTAATGAAATGGCAGG

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FIGURE 1343

VGRGGGGDCGFKSVPGARAPAGPRFAAAHPGAKPHAGRTGPPVAGLLRTSPRPLREGSSAEDITSVWSLPHPPA
AKPRPLPVSSGVSRATHFVGVPRLPQSSPHTQQHQW

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FIGURE 1344A

AAAAGAGACATTGTAATGAGGCACACCACTAAAGTGAGCATGCCCAATTAAAACCAGTGTAATATAGGATAAGAA
AATCTGATTTTTTCAAAAAAGATACTCTACATAAAGAATCCTTCATATAAAAAAGTTCTTTCTTGTAGTACATTTAA
AGTTTTAATTCACATCATGTATAACTGAGAGTTCCTTTGAGCCCTTTTATAGGCAGGGAGGCATGTCTGTCTATCTAG
CGTGTGGCCAGTAAGTGATTATTACATTGGAATCAGTTTTTTCAGTCTTTTAAAAATAAATCTATGCCATAAGAA
TAAAAGATAAAGAGCAAAATTAATGTTAACTATTTTATAGCTTATTATAACTATGTCAACAAGTGTTTATTAAATAC
CTATTATGGGAAAGTCACTGTGGTTGGCATTGAAAATTACATCATCTTTAAAGCAGTATTTGTCCCCAGATGGAC
TCATCACTAGCAAAGACTAGGTTTATTGGAAGGCATAGGGTGAGAGAATGGGAAGATGGAGTGRAGGCGGGTTGT
TAAAGTGCTGTCTAGTGAGTGATTTTGTCTACTTGAATAATGGTCCATGTTTGGGGGCATATTGTGTTTCATAAGA
AGTGAAAGGTATTTGCAAAGTAAGCTACAAATGACCCATAAATCTGTTAAACAACAGTCCTTAATATGCAAAGATG
AAAACCAAGCATTACTGCTACCCAAAGGGAACCTGGTGCTTGGTGATGTGCAGATGGGGCTGTTGGTTAAGAGAGC
TATTACAGGTTTTCTCTCTTAGGTTTCATAGGAGGTAGTTACTGAGATGAGATTGTTTTATCTTTTTGAATACAG
ATCTCTTGTCTTGAGTTAGTTCTGAGGATGGGAGTAATAAAGGAGTTTTTGTTTTTTGTGTTGTTGTTGTTT
TGGCTCCTTAGTAATACTCCTCTGACATTTATTTCTATTATTCTTCAAAGAAAGGAAACCAACTGAAATGTTTGC
TTTAAACAAACATTTTAATAAGTTTCTCTGGGTTTTTTTTTCCCTTTTAAAAAATTAGCATATACCATAGCAATA
AAAGAACTAATGTTAACTATTGTATGCTACAACCTTAAGTGATTTTTCTAAAGAAGCACAATGTCATTGAAAGTAT
TATTGAAAAGGATCATAGTCACATTGAATTTGTGAAGGCCAAAGAAATTGAAGGGAGTGATATTTTCATTTTATG
ATATTCACATTAGTAAATTTTGTGTACAAGAATACCAGGCAGAGTGTTTTACCCATGGAAACAGGTTTCAGATTA
CTTTGTTTTTACTGTTAGAGTCTCAAGTTTAGAAATGCTAACACTTAAATCAGTTTTTTCTCACTATACTTGAA
GATTGTTAATATTTTGATATCTTCTAGCTTGATGAATTTAAACATATCTTCAGATCTGTGACAGTGACAGCCAA
TAGGACTGATAATATTAGCTTCAAACCAATAATATCCAGGGTTAAATAAAAAATCATAGTGAAAGTACGATTGTA
AAATTATGCTATATTAACTTTTAAGTCTGTAATAACTTGACATCAAAATGTTATGTAATTACCATAAATAATGGC
TAGCGAGAACATCTTTGGAATTTCTCAAATTACCTTTCTTACTACACTGTTTGCAGAATGAATGTAGAAATGATC
CTGTTAGCTTTCTGAATGTTCTGTGGGTTGAATGTGTTTTTGTCTAAATAAAGCTTTTGGTATTTGTTTAAATTA
CACTTCTTGAGAAGTGGAATTTTAGGATCATCTTTGCTTTGTTTCAGTTTTTGTGATTTTGAATGAATGTTTA
GTTTACTGAGCCAGTTGGTCATTTCTTCTCATGTCGTTAAGTCCAGTGAGTAAGCCTGAACGTGTGAATAAATTA
CCAAAACTTGCTTAGAATTTTCAATTTGAAGCAATTTGCTAATATTTGAAGTGATACACATTTGTAGTTATGTT
AAAAATTGTATTGTACTAAGAATGTAATCAATGCTACTTTAGTTGTAAACATTTCTGATGTCAAAACCTTTATTC
ATTACTGTTGATTTTAAGAATAAGAAATCACTGCCTAAATATTACCAAAAGCCACTGTCTCTACCCGAACCTCCC
AGTTTGGGAAAGAATCGTTAGATAAAACAAAGGCTCTGCCCTTTCTGATACCAAACTCCACAGATACCTTCTCAC
ATCTTTTAAACATTTTGCAATAACATATTGTTTATAGGAAGTTTACAGGGTATGCAATGATTAAACCTTTTAAG
TGAATTGATAGTTGCAAAAGAAAGGATAATATTTAAGGTCAGTGAGTAGCAAGACAATCTAAAGTTTCTGTAATA
TCTGGCTCTCTGTAAATTATAGAGCAAAGTTTCCCTTACAGAATCCTTTTATGAACAGCAAGCTAGAGTCTATCC
CTAGTGGTTATAGCACCTGCTGCGTTTTTTCAGGAGACAGTTAGGCCAGGGTGATTTGAATGGATAGATGTGCTGT
TTTGCTGCTTGTAGAATTCAGCCCAGTCTTTGGTCTCTCTCTCTCTCTCTCCCTCCTCCACCTCTCCCTCTCTCT
CTTCTGCACCAGAGCCTAAGGCTGCGCCACCAAGATGCGTCATTTTTTCCAGAGGCTTCTTTTTTTTTTTTTTG
AGATGGAGTTTTGCTCTGTTGCCAGGCTGGCATGCAGTGCTGCAATCTTGGCTGACTGCAACTTCCACCTCCCG
TGTTACACGAGTCTTTTGCTCAGCTCTGGATTAGCTGGGATTACAGGCACGTGCCACCATGCCTAGCTAATT
TTTGTGTTTTTATAGTAGAGACGGGTTTACCATTGTTGGCCAGGCTAGTCTCAAACCTGACCTTAAGTGATCTG
CCCGCTTGGCTCCCAAAGTGCTGGGATTACAGGCATGAGTACCGTGTCTGCCCAGACATATCAAATTTGAC
AGGTATTGTATACCTTTGGATCTTTAGGAATTAATTTTTGCTCTGTCACTCAGCTTTGTATATTTTGAATGG
AGATAAGTATAGGGAGGCTTGGGAAGGAAATTGCCAGAATTCCCAAACCATGTAACACTCATTGAGAATTCAG
ATCCATTATATCTAAAGGGCAAGTGAAGGAAACAGTATTGTGAAGTGGGTATAACTCCTTGGTTCTTAAC TAGTA
CATTCTTAATCTGTGAGACCCAAAGGTTGATAAACAATAATTTAAGATTGTACAGTACTCTAAACGTCTGCAAAG
GTCTAGATGTTATCAGTATCACTAGTTTTTTATTTCTGCCAGTAGCTCCCTTTTAGGTTACATTGTTGTCTCTTT
CCAGTGTGGCATCTGTCAATTGGTTTTTCACTATGGCAAGTTCATTAAAAAGCTTGCTCCATTGTTATCTTCAAGT
AATGCCCATAAGGAGATGGGAAGATATCTGAGACAATTAAGGCTTTAGCTTCTAGGCAAGAGAAATAACGTTGCAT
TAAATTTCAAGTTTCTTTCTGCTAGACTTGAATGTGTCTAGCCACTCTAATTTATGGGGCTTTTGGTTTTTTCC
TATTGTACTTTGTATGTAGAAATTGTTTTGAAATATCAAGCATATTTACTTTGAATTTGAACTCTTTCTTAATTTT

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FIGURE 1344B

GTATTATCCTTTGAATAAAATGTAAATCCAAAAAAAAAAAAAAAAAAAA

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FIGURE 1345

MCLATLIYGGFWFFPIVLCM

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FIGURE 1346

GGTTGGTGTGTTTGGCATTCTTTCTTTTAAAGAAAATGTTTTCAGGAAACATGAACAAACATACTG
CCAATTATAGTGGGGCTGGGAAGGCACAGGAGCTGGCGACCTCTCAGCTGCATAGTTGGGACGGCAAACCTGCT
GTGAGCTTCTCAGACTTTTCACCTACTTCACCTATTAAGGAAGCCATGAGGAGTTGTAAACTCTTGTTTCAGGGGAAG
AAAAGAGGGCAGGAGGAAGTAACCCAATGCCTTTAAATACAAAACAGATGAAAAACAAAATACTCATTTTTCTTT
TTCTATTGTGGGTTTGGGGAGCCAAACCAAGTGTGACTGTGAGCACGTTCACTGAGAGGCATGACAACATTATTG
AAGAGGTCTTTCCATTATGTCTGGTTCTCTTATTTTCTTAAGTCAAGCCTTAACATGAACATACTTTAAGATGA
TACGGGTCTGTCAACATAAACCTGTAAAAGGGCATCGACAGCTTTTCAGATAATCCAGGAATGTTGAGACATGGC
TAAGTTTCTAGCTGATACTTAGTCATTCCCTCTTGATATTGTTGGGATGGGTAGCCAAAAGGCAGGCTTGTGGGA
GTTAAGAGCCAATGATACCTGGAAACATGGGAGGTAGCTGGGGGTACAAGTGGATGTTGAGACTGAAGGAAGAGG
TGGAAAGAAGACACAGAAGGCACCCAGATGCCAAAAGGCCTGGCATGAATGAGAGTTGGCATCTGTCTCTGTTGTG
GTGTTCCCATTTCTGCCATACCCATTTGCCAGATTGTTCTGATTCTCATGTTCAATTGACTATCCACATGAGA
CTACAGTTTATAGGCAGTGAGGAATTGTTTCTTCTGGGAAATGTCTTCCAGCAACTTCAGAGGAATGGGAAAG
TGTTAATCTTACGTGAAGCAAAGGAGCCTGGACTAGGGGCAGAGAGAAAGAAGCAGCAGCCCACCTTCTTTGTGT
TTGCACATGTGCCTATGTGCTGTACATTGGTACCTGACTGTGGCTCAGATCTGCGTCGCAGCAGCGAGAGAAGAA
ATCACTCCATATCCGATGAGAGGAAGGGTGGCACAGAGATGGTGTCTACAATTAGAGACATTTCTGACTCCACCT
TAGCCTAAGCAAACCTTTATATACTGAGTAACATTTGAAGGTTGTCTTTAATGGTGGGGGGTGTTTTTCTCTTT
TAACTACAGTGCTTGCACAAGAGAGGGGAGGGACTCAGAAAAGGTTAGGGCAGGTGAGGGAGACAGTAGATGGCC
TGGGATGACTTGAGTCCATCATACTATTGCTTGGCAGGTGTCTCCCCCATGTTTGATTCAAATTCCATGAGTGA
CCTACCTTTCCCCAGGAATGGGACTGAGAGGGTAGTCTCCAGCAACTCAGTCTGCACAGGGCTCCCCGTTCAGGC
TGCTTTTGGTGGTTGTGCTTTTGTAAAGTTTCTTCTGCACTTCGACTTACCTCTGAATCAGAAAGCAAGCCCCA
GCAGGTGAATGAGGGATGTCTGCTTGGCATTGCCAATCTAACCAGGGAGGCTGGCTGGCCACCCACTGTCCGCT
AGAGGGGAGAGCTAGCAGGTGTTGGTATGAACTCAGGAATAGAAACACGAGGCCTTTTTAAATACGAGGGAGAAG
AATCCATGATGCATACCTGTAACCCCTAGAACCCAAGTGCCAGAATTCCTAGATGCTGCTTCTGTTTGAACAAA
ATGTCACCTGCTTTTACACTTGAAAAAACACACTCGAAAAATGTTCAACTCCATGAAAAATATTTTTTGGCTTTA
AGAAATTGTTTGGTGTTTAACTGTTTCTTTGATTGCCATTCCACCAGTAAATTGTTGGTTGATTGCACTGCAC
TCTGGGGTTGGGGTTGGGAGGGGAGGGTCCTTATACAGAGCCGAACCTGGGGTTGCTCAGGAAGTGGGCCAGGGA
ATGTGGAAGTCGTTGACATTGCCTGGGCCAAAAGAGTGGGAGATAGTTTTTCTCCCTCAGCCCACTCCTGGTAG
CACCTGTCGCCAGCCTGGTACAAAGCCAGGCCTTTTTCTTCTGTGAGCATCTCATCACTGTCCAGCAGCAGGTGG
AAAAAGGGGGACAACAACCAGACCTATTTTTTCTCCCCATTTTTTCCAAATTTTGCTGTGCCAAATGTTTAAAA
TTTTATAAATATGAATCTATTGAAATTTCTTAAATCAAGAGCTTCTTCGTGTAAAGTTTGCTTTTTTAGCTATAG
AAAAAGAAAAACAGTAAATATCTCTTAATGGCATCCAGCCTTGCTGAGCTCACCTTTTTTCTGAAGAATGGGTAG
GAGTGAATATTTAATGTAAACATTTACCAAGTCCCTTTACCCTAATTTTGAAGCTGCATTAAACCAACTCAC
TAACACAGGGAATGATTGCACCCTAGTCCTCTGTGGGCCAAGAACTTTCAGAAGCATTAAAAAATAGTTGAAG
TATATCACTTCTCACCAAGTGGGTAGAGTCAGTTGGCTGTTTGTCCCTGTTTTTTATTTATCCATAATTATGT
TTGTGCTTTTTGTTTTGTAAACAGTAATGGAACGTACATTTTTTATTTGTTTAGAAGACAACCTTGATTCAATCT
TTCAAGAACTGTTCCATTCTTGTTTTCTTCTTAGGGGGATAAAAAGTTACCAGTTAATTTGTTTTGAGATATTTA
AGCATTCTTTGAGTTATAGAATTGTGATGCAGGGATTTGTGAATGAGACATTTACATGTGAAAGGTGACTTCACT
AGTTACCTGCTTGAGCAGAGTAAAGTGTGTATATGTACATAAAATGTAAGTAATCTTAACCTCATTGTGCAGTGC
CTTTTAGATGTTCCGCTTTCTATAAAGTCTTCAAATTTTTGCATATATATTATATATATATGATGTAATGTTATA
GAAATATATGTATAATATACATATTTTTTCCAGGGGTATCTGATAGCTCTGTATTTTGTATGGAAGTTGAAAGA
AAAAAGTATTTTACCTCAGAAATTAAATAAAAAAATACTTTTAAGTATAAAAAAATAATAGCGCCGCTCGTGA
T

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FIGURE 1347

LVLFGIFFFSFLKKMFSGNMNKHTANYSGAGKAQELATSQLHSWDGKPCCELLRLFTYFTY

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FIGURE 1348

ACTCGGCCGGGCAGCCGCGGGCCGAGCGCAGCCGCCTCCGCCACCGATGCGCCTGGTGGCCAGACTCCAAGTGGG
ACCGGCGGACACGCAGCCTCGCGTGTGTCAGGGGAAGCTGATGGAGAATCGAGCTCTGGATCCAGGGACTCGGGACT
CCTATGGTGCCACCAGCCACCTCCCCAACAAGGGGGCCCTGGCGAAGGTCAAGAACAACCTCAAAGACTTGATGT
CCAAACTGACGGAGGGCCAGTATGTGCTGTGCCGGTGGACAGATGGCCTGTACTACCTCGGGAAGATCAAGAGGG
TCAGCAGCTCTAAGCAAAGCTGCCTCGTGACTTTTCGAAGATAATTCCAAATACTGGGTCCCTATGGAAGGACATAC
AGCATGCCGGTGTTCAGGAGAGGAGGCCAAGTGCAACATCTGCCTAGGGAAGACATCAGGGCCGCTGAATGAGA
TCCTCATCTGCGGGAAGTGTGGCCTGGGTTACCACCAGCAGTGCCACATCCCATAGCGGGCAGTGCTGACCAGC
CCCTGCTCACACCTTGTTCTGCCGACGCTGCATCTTCGCACTGGCTGTGCGGGTGAGCCTTCCATCCTCCCCAG
TCCCTGCCTCTCCTGCCTCCTCCAGTGGGGCAGACCAGAGACTCCCATCACAGAGTCTGAGCTCCAAGCAGAAGG
GCCACACCTGGGCTTTGGAGACAGATAGCGCCTCTGCCACTGTCTTGCCAGGATTTGTAGACTCCCTGAGCCT
CAGTTTCCTCAACTGTAAAGTGGAGATGGGTTTGGTGTGCGGAATAACGGGACCAATAAATGATGCTTTACTATT
AAAAAAGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1349

MENRALDPGTRDSYGATSHLPNKGALAKVKNNFKDLMSKLTEGQYVLCRWTGGLYYLGKIKRVSSSKQSCLVTFE
DNSKYWVLWKDIQHAGVPGEKPKCNICLGKTSGLNEILICGKCGLGYHQQCHIP IAGSADQPLLTPWFCRRCIF
ALAVRVSLPSSPVPASPASSSGADQRLPSQSLSSKQKGHTWALETDSASATVLGQDL

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FIGURE 1350

GCCGAAGCCGCCGTCCTGCTCTCCCGCGTGGGCTTCTCTAATTCCATTGTTTTTTTTTAGATTCTCTCGGGCCTAG
CCGTCCTTGGAACCCGATATTCGGGCTGGGCGGTTCCGCGGCCTGGGCCTAGGGGCTTAACAGTAGCAACAGATG
CGTCGGCGGGCGGCAGTAGCTGTTAGTTGCAGCAGCAATCTCTTCCCGAACACGAGCACCACAGGCGCCCGAAGGC
CGGAACAGGCGTTTAGAGAAAATGGCAGACGATATTGATATTGAAGCAATGCTTGAGGCTCCTTACAAGAAGGTG
AGAAAAACATGTCGGTGAGGTTTATATATTTCTTAATTTAGCATTATTCACGAACTACTGCTGAAATGTAAAC
TAACCTCCCCGGAGCCCTCTTGATTATCTTATCAGAGATGCATTACGTGTAACCTACAAAAGTAAATATATGCT
ATTGATGTAATAATATTGTGCAGTAGTTTCACTTCAGCGTGATGAATAAATGCCCATCTATCTCTCTTTGTAGAC
TTGCCTAACGATATCTCACCTCTACTCCCATGAATTCACCTTTGATTCCAGTGTGAACGTCAATCATAAGGTAG
TAATTGAGTGACTTATCGCTGTACCGTGGTCCCCTAGGTAAAATGACTCAACTAAGAATTACCACCTCCAGTTTG
GTATAGCAAAAAGGTGAATGTAGTGGTTTGGGAAAAAGCAGGGGTCCAAGAATAACAAAGCATGACCAGTCTGTG
GCAAGTTAAATCTTCTAATAGTCTTATAAGAAGAAATGGGTGAGATTTTAAAATTTATGTATCTATGTAAGACTG
GTGATAGTAAATCTTAAAACAGTCCAGTGGCAATCTGCTGCTCAGTTAATAATTACTAAAATTCTTGGATCCCTG
AATAGAAATTAAAAAATAACAAGAGGCAGTAGAGTCAATACAAGCTTAATACAAGCTTAGAGTAAATACAA
GCTTAGAGTCACTTGATGACTGTTTTACT

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FIGURE 1351

PKPPSCSPAWASLIPLFFLDLGLGPSRPWNPIFGLGGSAAWA

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FIGURE 1352A

TTAGAGGTCCTTTCTGCTTTATAACATTAGGTTCTTCTTGTGAGGCCTTAAGCATTGCTAAACAGGTTCAAGTA
AGTTTAGTAAAGTTTCATTACTGCCATTGATTCAATTATCAAAGTCTTTTGTACATATAAAGAATTCTTCAGAT
GCATGGTTTCTATTAAACAAGATCCAATGCCTTCCTTTTATTTCCCTTCAGTTCAACATCTAATATATAAAGATT
GCTCTGACTACTACGCAATAGGCAAAAGAAGCAGTGAGACCTACAGAGTTACACCTGATCCCAAAAATAGTAGCT
TTGAAGTTTACTGTGACATGGAGACCATGGGGGGAGGCTGGACAGTGCTGCAGGCACGTCTCGATGGGAGCACCA
ACTTCACCAGAACATGGCAAGACTACAAAGCAGGCTTTGGAAACCTCAGAAGGGAATTTTGGCTGGGGAACGATA
AAATTCATCTTCTGACCAAGAGTAAGGAAATGATTCTGAGAATAGATCTTGAAGACTTTAATGGTGTGCAACTAT
ATGCCTTGTATGATCAGTTTTATGTGGCTAATGAGTTTCTCAAATATCGTTTACACGTTGGTAACTATAATGGCA
CAGCTGGAGATGCATTACGTTTCAACAAACATTACAACCACGATCTGAAGTTTTTACCACCTCCAGATAAAGACA
ATGATCGATATCCTTCTGGGAACTGTGGGCTGTACTACAGTTTACGGCTGGTGGTTTGTATGCATGTCTTTCTGCAA
ACTTAAATGGCAAAATATTATCACCAAAAATACAGAGGTGTCCGTAATGGGATTTTCTGGGGTACCTGGCCTGGTG
TAAGTGAGGCACACCTTGGTGGCTACAAGTCCTCCTTCAAAGAGGCTAAGATGATGATCAGACCCAAGCACTTTA
AGCCATAAAATCACTCTGTTCATTCTCCAGGTATTCGTTATCTAATAGGGCAATTAATTCCTTCAGCACTTTAGA
ATATGCCTTGTTCATATTTTTCATAGCTAAAAATGATGTCTGACGGCTAGGTTCTTATGCTACACAGCATTG
AAATAAAGCTGAAAAACAATGCATTTTAAAGGAGTCCTTTGTTGTTATGCTGTTATCCAATGAACACTTGCAAGC
AATTAGCAATATTGAGAATTATACATTAGATTTACAATTCTTTAATTTCTATTGAACTTTTTCTATTGCTTGT
ATTACTTGCTGTATTTAAAAATAATTGTTGGCTGGGTGTGGTAGCTCACGCCTGTAATCCCAGCACTTTGGAAT
GTCAAGGCAGGCAGATCACTTGAGGTCAGGAGTTTGAGACCAGCCTGGCCAAACATGTGAAACGCTGTCTCTATT
AAAAATACAAAAATTAGCCGGGCATGGTGGTACATGCCTGTAATCCTAGCTACTTGGGAGGCTGAGGCAGGAGAA
TCGCTTGAACCTGAGAGGAAGAGGTTGCAGTGAGCCAAGACTGAGCCACTGCACTCCAGCATGGGTGACAGAGAA
AACTCTGTCTCAACAAAAAAATAATAAAATTTATTAGTAGGCTGGATTCTACACAAAGTAATCTGTATTTGGG
CCATGATTTAAGCACATCTGAAGGTATATCACTCTTTTACGGCTATAATTATTTGGGTAATCTTCATTCTGAGAC
AACTTAATCTATATCATTTTACTTTGCAACAGAACAAACCTACAGCATTTTGGTTCCCAGACTAAGGGAATAAT
ATCTATATAATTAACTTGTTCATTTATCATTCATGAAATATAAAATACTTGTCAATTTAAACCGTTTAAAAATGT
GGTAGCATAATGTCACCCCAAAAAGCATTAGAAAGCAATGTAACGTGAAGACCAGGGTTTAAAGGTAATTCAT
TTATAGTTTATACTCCTTAGATGTTTGATGTTGAAAACCTGCTTAAACATGAAAATTATCTTCTCTGCTCTGTG
TGAACAATAGCTTTTAAATTTAAGATTGCTCACTACTGTACTAGACTACTGGTAGGTTTTTTTTGGGGGGGGTGGGT
AGGGATATGTGGGTAATGAAGCAATTTACTTACAGGCTATCATACTCTGAGGCCAATTTTATCTCCAAAGCAATAA
TATCATTAAGTGATTCACTTCATAGAAGGCTAAGTTTCTCTAGGACAGATAGAAAACATGAATTTTGAAATATAT
AGAACAGTAGTTAAATACTATATATTTCAACCCCTGGCTGGTAGATTGCTTATTTTACTATCAGAACTAAAAAGA
TAGATTTTTTACCCAAACAGAAGTATCTGTAATTTTTTATAATTCATCAATTCCTGGAATGCTATATATAATTTAA
AAGACTTTTTTAAATGTGTTTAAATTTTCATCATCGTAAAAAGGGATCATCTCAGAGAGAACAGCAGTATTCTGCGTA
TTTTTAAAAATGCTCTAGAGTAACATTTGAAGTAATTCAGTGTAGTGTATGCCAGTCCTAGAAATAATTTTTTTA
ATTTCTGGTGTCTGTTTCTAATACACTAACCAAGTTTTTCAAATATATTTTACAAAGATGCATCTTTACCCATTAT
TTTAAATGATTAAGGAGGATAGTTGCTTCAGGTAACAAGCTAATTTTTTCAAATATTAGGCCCTTACAGAACTAT
TTAGTCAAAAAGTAAGATATTCTTTTAAATATATAACCCAAAGCTTTCAGTTAAACATGATATATCACAAATAC
TATTAAATGTTAAAGAGAAATGCAATAGCATTAAATGATGACCAAAATGTAAATATTGTAGATTTCAAAAGC
TGTGTCTCTATTAGGTGGGATACCAATGTAAATGATGTAACGTGACGTTGTTTTTTTACTTTTTTACTTTTTAAAAA
AGACTAAAAACGTTTTGATATTATACAATGTATTTGTTTCAGATAAGGTCATTGTCAATTTAGTATATATAATTAA
TATATGTACAAGTTTAAAGTAAATTCCTGTGAGTAAAAATGGACTTATCACAAAACATAGTTCTAAAGAAAGGTAT
ATGCTCATATACACGGTGTCCATTAATTTAATGGGAACTAGGTATAACTTCAGGAGAATTTGGCAAATAATTCAT
TAATCCATGTAAATATTCAAAGCTTGTCTATCCACATTATTTCAAGGGATCACTTTATTTTTTATTATACCTT
CACAGCACTTTTCTAGTAAATCTGTAAACACAGAAATTCATTTTGGGAATCATTTTCATGTTACCAATAATTCAG
ACTTTTATAACATTTAACATGTTGATGGAAATAGATTACATCTGCTAGAACCTTTTGCCTTAACTATTCACCAAT
ATATGCTAATATTCAATAATATGGATTGACTGTTTACAAACATTAGAATCTTGTCTTGGTTCCATTTTGTATGGCT
AATATTTGTTATCTTAATTAAGACTATTTCTGAGGTCATGATTACTTGAAAATATTGACTAAAACTGGGTCCTTA
GAAATTCAGGTGGAGCTGATTTACCTATGACTGAGGGGAAAAAAAATCAAATTTTACTGATAATAGTAATGCT
CCAAATGAATTAATGACACATCTGTTCAATAAAATAAGAGCTTAAATATACAAAACATAAGAAATCTGGGCAACA

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FIGURE 1352B

AAACTTGTGGTCCTTTACTTTTGAATAGCTACCCAAGAAAAGGTTTTAAAGGTAAAAGTTATGAGTAATGTCATCA
CAATAAGCTCTTGTTTTAAATTCCTTTCTTTTATGTATAATTAGGTTTATGTTTCATGTCTTTTTTAAACCTTAT
AAAAGATTTAATTATCACATCTATTCTTCAATGTGGAAATATTAAATATTGTTGGTTGTAAAAATAATTTTATGT
ACTTACTTGTGTCTGAAAAGTTGTAAAATGCTTACCTCAGCTATACAATATCTGTGACTCTGAAGACTTTAATGA
GTACTATTTCATTAAACAAGAAGTCAGAGGCAAATAGAGGAACACCATTATCTTACTTCCCTCTAGAATACTGTTG
AAACATTTGAAATACAAAAGTTTCAGTTTCATTTTGTGGCATTCAACTTCCTCTCCTCTTTTTCCGTTATTAGTG
TTGCTGCTCTGGTTAGCC

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FIGURE 1353

GCTGTGAGTTGGCGTGCTAGTGGGATGGCAGATGAGGAAGAAGACCCACGTTTGAGGAAGAAAATGAAGAAATT
GGAGGAGGTGCAGAAGGTGGACAGGGTAAAAGAAAGAGACTTTTTTCTAAAGAATTGCGATGTATGATGTATGGC
TTTGGGGATGACCAGAATCCTTATACTGAGTCAGTGGATATTCTTGAAGATCTTGTCATAGAGTTTATCACTGAA
ATGACTCACAAAGGCAATGTCAATTGGAAGACAAGGTCGAGTACAAGTTGAAGATATCGTCTTCTTGATTGCGAAAG
GACCCAAGGAAGTTTGCCAGGGTTAAAGACTTGCTTACTATGAATGAAGAATTGAAACGAGCTAGAAAAGCATT
GATGAAGCAAATTATGGATCTTTGACACTTTTTGTAGTTTCCGAAAATTACCATCTGGGGAAACCATATATAATAA
TTGTATATTTTCTAAAGTAAGATTCTGATATCTAGCCGAGATCGCACCCTGCACTCCAGCCTGGGCGACAGAGC
GAGACTCCGTCTCAAAAAAAAAAAAAAGAAAGCAAGTTTACATGAATAATGCTGTGTTGGAAGGCTTTTTGATTTA
AAATCTTTTCGGATTTATAACATCCTGTTAAGTTTTAGGAGAACCCGTTTTCCAGAGCAGATTCAAGCTTCTAA
AAATAAATGCTTTTCAGTAGCAGGAATGGCATTGTTTTAAAAAGCTGATGGCAGGGTAAGCATTGGGTTAGTGTTT
TATTAACATATTTGTAAGTACTTGTTTCATTGTGGAAATGTGTCCTTGACTAAAACCATAACGTGGCTATGGAAACC
ATGTTTGTAGTTCTGAATACACAGGTTTTGTGTGTATTTACTCTATGTATTAAATTATTATTGCCCTTAGTTTTAA
AGTAAGGATTACAATTGGATTTAAGTAGATCACTGAATGTTATTGTTTATGAACTTAACTTTTGTATGCTGCT
TATAAACATGATCTATAAATCAGTGCTTGGGAAAATTTACTTTCTTAATCTACTGATACAGGAATAAAATATGA
ACAATTAAACAGATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1354

MADEEDPTFEEENEIIGGGAEGGQKKRRLFSKELRCMMYGFDDQNPYTESVDILEDLVIEFITEMTHKAMSI
GRQGRVQVEDIVFLIRKDPKRFARVKDLLTMNEELKRARKAFDEANYGS

1501/1629
FIGURE 1355

ACGCCAAGGCGGCCACGTCTCTCCCCCTGGTGAAGAAGCTGCCCTGGGCTTGTCGTCCTAGGGTCTCCAGACA
TGTCTGAGGTGAAGAGCCGGAAGAAGTCGGGGCCCAAGGGAGCCCCTGCTGCGGAGCCCGGAAGCGGAGCGAGG
GCGGGAAGACCCCCGTGGCCCGGAGCAGCGGAGGCGGGGGCTGGGCAGACCCCGAACGTGCCTGAGCCTGCTGT
CGCTGGGGACGTGCCTGGGCCTGGCCTGGTTTGTATTTTCAGCAGTCAGAAAAATTTGCAAAGGTGGAAAAACCAAT
ACCAGTTACTGAACTAGAAACCAATGAATTCCAACAACCTTCAAAGTAAAATCAGTTTAATTTTCAGAAAAGTGGC
AGAAATCTGAAGCTATCATGGAACAATTGAAGTCTTTTCAAATAATTGCTCATCTAAAGCGTCTACAGGAAGAAA
TTAATGAGGTAAAACTTGGTCCAATAGGATAACTGAAAAACAGGATATACTGAACAACAGTCTGACGACGCTTT
CTCAAGACATTACAAAAGTAGACCAAAGTACAACCTCCATGGCAAAGATGTTGGTCTCAAGATTACAAGTGTA
AAACAGATATACGACGGATTTTCAGGTTTAGTAAGTGTATGTAATATCATTGACAGATTCTGTGCAAGAACTAGAAA
ATAAAATAGAGAAAGTAGAAAAAATACAGTAAAAAATATAGGTGATCTTCTTTCAAGCAGTATTGATCGAACAG
CAACGCTCCGAAAGACAGCATCTGAAAATTCACAAAGAATTAAGTCTGTTAAGAAGACGCTAACCAGAACTAAAG
GTGACTTCGACAAACATACAGATAGATTTCTAAGCTTAGAAGGTGACAGAGCCAAAGTTCTGAAGACAGTGA
TTGCAAATGATCTAAAACCAAAGGTGTATAATCTAAAGAAGGACTTTTCCCGTTTGAACCATTAGTAAATGATT
TAACACTACGCATTGGGAGATTGGTTACCGACTTACTACAAAGAGAGAAAGAAATTGCTTTCTTAAGTAAAAAA
TATCTAATTTAACAATAGTCCAAGCTGAGATTAAGGATATTAAGATGAAATAGCACACATTTTCAGATATGAATT
AGTTTGACATTATTGAGATTAGACTAAGGTAATTTTTTTAATGGGACCTCTCATGAGAAGACTGGTAAATCAAAA
ATAATGATATTTTGGAGCAAAGTCATTTTATATTTAATCCTATTTTGTACAGTAAAAATAAACTTTAAAGCAG
GTTGATTTTCCAAAATAAATATGCTAAAACCTAAAAA

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FIGURE 1356

MSEVKSRKKS GPKGAPAAEPGKRSEGGKTPVARSSGGGGWADPRTCLSLLSLGTCLGLAWFVFQQSEKFAKVENQ
YQLLKLETNEFQQQLQSKISLISEKWQKSEAIMEQLKSFQIIAHLKRLQEEINEVKTWSNRITEKQDILNNSLTTL
SQDITKVDQSTTSMADVGLKITSVKTDIRRISGLVTDVISLTDVQELNKKIEKVEKNTVKNIGDLLSSSIDRT
ATLRKTASENSQRINSVKKTLTELKSDFDKHTDRFLSLEGDRAKVLKTVTFANDLKPKVYNLKKDFSRLLEPLVND
LTLRIGRLVTDLLQREKEIAFLSEKISNLTIVQAEIKDIKDEIAHISDMN

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FIGURE 1357A

[illegible]

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FIGURE 1357B

TCTTTGTGGCCTAGTACATAGTTAATTTAGTGAATGCTTCCAGTTGTACTTGAAAAGAATGTATATTTTCTGATT
ATTGAGGGTAAATTTCTCTATATATGTTTTCTGTTTAATAAATATGTAGCTATGTGCTTATGAAA

1505/1629
FIGURE 1358

VRSTRNIHSVISGD

1506/1629
FIGURE 1359

CCGCAGAACTTGGGGAGCCGCCGCCATCCGCCGCCGAGCCAGCTTCCGCCGCCGAGGACCGGCCCTGCC
CCAGCCTCCGAGCCGCCGCCGCGTCCACGCCGCCGCCGCCAGGGCGAGTCGGGGTCGCCGCCCTGCACGCTTCT
CAGTGTTCCCCCGCGCCCCGCATGTAACCCGCCAGGCCGCCGCAACGGTGTCCCTTCAGCTCCAGCCCCGGGT
GCACCCCCCGCCCCGACACCAGCTCTCCAGCCTGCTCGTCCAGGATGGCCGCCGCAAGGCCGAGATGCAGCTG
ATGTCCCCGCTGCAGATCTCTGACCCGTTCCGGATCCTTTCTCACTCGCCACCATGGACAACCTACCCTAAGCTG
GAGGAGATGATGCTGCTGAGCAACGGGGCTCCCCAGTTTCTCGGCCGCCGCCGGGGCCCCAGAGGGCAGCGGCAGC
AACAGCAGCAGCAGCAGCAGCAGCGGGGGCGGTGGAGGCGCGGGGGCGGCAGCAACAGCAGCAGCAGCAGCAGCACC
TTCAACCTCAGGCGGACACGGGCGAGCAGCCCTACGAGCAGCTGACCGCAGAGTCTTTCTTGACATCTCTCTG
AACAACGAGAAGGTGCTGGTGGAGACCAGTTACCCAGCCAAACCACTCGACTGCCCCCATCACCTATACTGGC
CGCTTTTCCCTGGAGCCTGCACCCAACAGTGGCAACACCTTGTGGCCCGAGCCCCCTTTCAGCTTGGTCAGTGGC
CTAGTGAGCATGACCAACCCACCGGCCTCCTCGTCTCAGCACCATCTCCAGCGGCTCCTCCGCCTCCGCCTCC
CAGAGCCCCACCTTGAGCTGCGCAGTGCCATCCAACGACAGCAGTCCCATTTACTCAGCGGCACCCACCTTCCCC
ACGCCGAACACTGACATTTTCCCTGAGCCACAAAGCCAGGCCTTCCCGGGCTCGGCAGGGACAGCGCTCCAGTAC
CCGCCTCCTGCCTACCCTGCCGCCAAGGTGGCTTCCAGGTTCCCATGATCCCCGACTACCTGTTTCCACAGCAG
CAGGGGGATCTGGGCTGGGCACCCAGACCAGAAGCCCTTCCAGGGCTGGAGAGCCGCACCCAGCAGCCTTCG
CTAACCCCTCTGTCTACTATTAAGGCCTTTGCCACTCAGTCGGGCTCCCAGGACCTGAAGGCCCTCAATACCAGC
TACCAGTCCCAGCTCATCAACCCAGCCGCATGCGCAAGTATCCCAACCGGCCAGCAAGACGCCCCCCCCACGAA
CGCCCTTACGCTTGCCAGTGGAGTCTGTGATCGCCGCTTCTCCCGCTCCGACGAGCTCACCCGCCACATCCGC
ATCCACACAGGCCAGAAGCCCTTCCAGTGC CGCATCTGCATGCGCAACTTCAGCCGCAGCGACCACCTCACCACC
CACATCCGCACCCACACAGGCGAAAAGCCCTTTCGCTGCGACATCTGTGGAAGAAAGTTTGCCAGGAGCGATGAA
CGCAAGAGGCATACCAAGATCCACTTGC GGCAGAAGGACAAGAAAGCAGACAAAAGTGTTGTGGCCTCTTCGGCC
ACCTCTCTCTCTCTTCTTACCCTGCCCGGTTGCTACCTCTTACCCTGCCCGGTTACTACCTCTTATCCATCC
CCGGCCACCACCTCATACCCATCCCCTGTGCCACCTCCTTCTCTCTCTCCCGCTCCTCGACCTACCCATCCCCT
GTGCACAGTGGCTTCCCCCTCCCCGTCGGTGGCCACCACGTACTCTCTGTTCCCCCTGCTTTCCCGGCCAGGTC
AGCAGCTTCCCTTCCCTCAGCTGTACCAACTCCTTCAGCGCCTCCACAGGGCTTTCGGACATGACAGCAACCTTT
TCTCCCAGGACAATTGAAATTTGCTAAAGGGAAAGGGGAAAGAAAGGGGAGAAAAAGAAACACAAGAGA
CTTAAAGGACAGGAGGAGGAGATGGCCATAGGAGAGGAGGGTTCTCTTAGGTCAGATGGAGGTTCTCAGAGCCA
AGTCCTCCCTCTCTACTGGAGTGGAAGGTCTATTGGCCAACAATCCTTTCTGCCCACTTCCCCTTCCCCAATTAC
TATTCCTTTGACTTCAGCTGCCTGAAACAGCCATGTCCAAGTTCTTCACCTCTATCCAAAGAACTTGATTTGCA
TGGATTTTGGATAAATCATTTAGTATCATCTCCATCATATGCCTGACCCCTTGCTCCCTTCAATGCTAGAAAAAT
CGAGTTGGCAAAATGGGGTTTGGGCCCTCAGAGCCCTGCCCTGCACCCCTGTACAGTGTCTGTGCCATGGATTT
CGTTTTCTTGGGGTACTCTTGATGTGAAGATAATTTGCATATTCTATTGTATTATTGGAGTTAGGTCCTCACT
TGGGGGAAAAAAAAAAAAAAAAAGCCAAGCAAACCAATGGTGATCCTCTATTTTGTGATGATGCTGTGACAATAAG
TTTGAACCTTTTTTTTTTGAACAGCAGTCCCAGTATTCTCAGAGCATGTGTCAGAGTGTGTTCCGTTAACCTTT
TTGTAAATACTGCTTGACCGTACTCTCACATGTGGCAAAATATGGTTTGGTTTTCTTTTTTTTTTTTGAAGTG
TTTTTCTTCGTCCTTTTGGTTTAAAAAGTTTACGTCCTTGGTGCCCTTTGTGTGATGCCCCCTTGCTGATGGCTT
GACATGTGCAATTGTGAGGGACATGCTCACCTCTAGCCTTAAGGGGGCAGGGAGTGATGATTTGGGGGAGGCTT
TGGGAGCAAAATAAGGAAGAGGGCTGAGCTGAGCTTCGGTCTCCAGAATGTAAGAAAACAAAATCTAAAACAAA
ATCTGAACTCTCAAAAGTCTATTTTTTTAACTGAAAATGTAAATTTATAAATATATTACAGGAGTTGGAATGTTGT
AGTTACCTACTGAGTAGGCGGCGATTTTTGTATGTTATGAACATGCAGTTCATTATTTTGTGGTTCTATTTTACT
TTGTACTTGTGTTTGCTTAAACAAAGTGACTGTTTGGCTTATAAACACATTGAATGCGCTTTATTGCCCATGGGA
TATGTGGTGTATATCCTTCAAAAAATTAAAACGAAAATAAAGTAGCTGCGATTGGG

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FIGURE 1360

MAAAKAEMQLMSPLQISDPFGSFPHSPTMDNYPKLEEMLLSNGAPQFLGAAGAPEGSGSNSSSSSSSGGGGGGGG
GSNSSSSSSSTFNPQADTGEQPYEHLTAESFPDISLNNEKVLVETSYPSTTRLPPITYTGRFSLEPAPNSGNTLW
PEPLFSLVSLVSMTNPPASSSSAPSPAASSASASQSPPLSCAVPSNDSSPIYSAAPTFFTPNTDIFPEPQSQAF
PGSAGTALQYPPPAYPAAKGGFQVPMIPDYLFPQQQGDGLGTPDQKPFQGLSRTQQPSLTPLSTIKAFATQSG
SQDLKALNTSYQSOLIKPSRMRKYPNRPSKTPPHERPYACPVESCDRRFSRDELTRHIRIHTGQKPFQCRICMR
NFSRSDHLTTHIRHTGKPFACDICGRKFARSDEKRRHTKIHLRQDKKADKSVVASSATSSLSSYPSPVATSY
PSPVTTSYPSPATTSYSPSPVPTSFSSPGSSTYSPSVHSGFPSPSVATTYSSVPPAFPAQVSSFPSSAVTNSFSAS
TGLSDMTATFSPRTIEIC

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FIGURE 1361

GGCACAGGGCTGTGACTAGCGGGCCGGCCCCGGGGCCAGGACAGCGGGCGGGCGGGCGGGCGGGCCTGGCCCCGGGA
TGGCTATGTTCCGCAGCCTGGTGGCCTCGGCTCAGCAGCGGCAGCCGCCGGCCGGGCGGGCGGGCGGCAGACAGCG
GCCTGGAGGCGCAGTACACCTGCCCCATCTGCCTGGAGGTCTATACCGGCCCGTGGCCATCGGCAGCTGCGGCC
ACACGTTCTGCGGGGAGTGCTCTCCAGCCCTGCCTGCAGGTGCCATCCCCGCTGTGCCCCTGTGCGCCTGCCCT
TCGACCCCAAGAAGGTGGACAAGGCCACCCACGTGGAGAAGCAGCTCTCATCCTACAAAGCGCCCTGTGAGGCT
GCAACAAAAAGGTGACCCTGGCAAAGATGAGAGTGACATTTTCGTCTGCCTGAAGGTCCAGGAGCAGATGGCCA
ACTGCCCCAAGTTTCGTCCCCGTGGTGCCACATCACAGCCTATCCCAGCAACATCCCCAACAGGTCCACCTTCG
CCTGCCCCGTAAGTGTGGTGCCCGCAACCTGGACCAGCAGGAGCTGGTGAAGCACTGTGTGAAAGCCACCGCAGCG
ACCCCAACCGCGTGGTGTGCCCCATCTGCTCGGCAATGCCCTGGGGGGACCCCAGCTACAAGAGCGCCAACCTCC
TGCAGCACCTGCTTACCGACACAAGTTCTCCTACGACACCTTTGTGGACTACAGTATTGACGAGGAGGCCGCT
TCCAGGCTGCTCTGGCCCTGTCTCTCTCTGAGAAGTGAAGGGAAGCGCAGCCACCCGCTGCGTCTGGGGTCAGG
GATGTCCCCGCTCCTGTGTGCGACCTGGCACCTGCTCGGGAGCGCACCTCACCGGACTGAGCTCACAGGAGGAGC
CTGCACCCGCGCAGAAGGGGAGCCGGGGCCGAGCCTCCGGGCTGAATACGGGCCAGCCGCCGAGGCCGCCAGAG
CAGGGCCGCTGGTCCCACCGCGTCGCTGGGTCTTCGGTGCTTCTGGCCGAGCAGGCGGCCCTACTTGGGCAGG
GCTGGACGCTGGGACCTGGAGCTGCCGCCGTCTCTCAAAGCCATGATAACCCCTCGTGGGAAGAAGGGACCGAC
GCGCGAGTCGCGCTCCGCAGTCGAGCCGGGAGGAACCCAGGCTGCTGCCCTGCCAGCCCGACCTGCCCGGCC
CCGCTTCCACCTTGCGCATTTGGTACTGGCTTTTGTGATACTTAGGAACCTGGCATCTTTTCTATATTATCCAG
TGTGATAATCTTTTACGTTTTATAGAGCAAAGACAGAGCAGTTACTCTTCATATTGCAATATCTGTGTTTACT
AGGAATAATAGTATTTTTATGGAACATTTACAAAATTATTTTTTAAAGAAAACAATCAAAACAAGCATTGGGGG
ATTGGGGCAAGGATGGAAGGAGCAGTGGGGCAGCTGCCAGAGCTCAGGCGAGCCATGGGGTCTGCTGTGGGGTCT
GCCCTGGCCACCCACTGTGTGTCTGGGTCTTTGAGGTTTGTACGTTTCTCTTTGATGACCAGGAAGAAATCCAG
CACCCAGCCACAGGCTGTGGCTGCTCCCAGCAGAGGTGGGGCCGGCAGAGAAGGGGCCCTCCTCCACCCAGAGTC
CTGGCCTTGGCCCGCTGTCACCTTCAAAGCTGACTGTGCCCGCTGCGGGAGGGGACGGCACCCAGTGGTGGCA
GAGCTTGGGGCCTGGGCAGGGGCCGCTTGGCGGGCCGGGCAACACGTCAACATTCTTTTCTGTTCTTGGCATT
AATTATTGCTGTCTTTTTTAAAAAAGTTTAAATAAAATGTCTCAGAGCAAAAAA
AAAAAAAAAAAAAAAAAAAAA

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FIGURE 1362

MAMFRSLVASAQQRQPPAGPAGGDSGLEAQYTCPICLEVYHRPVAIGSCGHTFCGECLOPCLQVPSPLCPLCRLP
FDPKKVDKATHVEKQLSSYKAPCRGCNKKVTLAKMRVHISSCLKVQEQMANCPKFVPVPTSQPIPSNIPNRSTF
ACPYCGARNLDQQEELVKHCVESHRSDPNRVVCPICSAMPWGDPSYKSANFLQHLLHRHKFSYDTFVDYSIDEEAA
FQAALALSLEN

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FIGURE 1363

TTGAGCGCAGGTGAGCTCCTGCGCGTTCCGGGGGCGTTCCCTCCAGTCAACCCTCCCGCCGTTACCCGCGGCGCGCC
CGAGGGAGTCTCCTCCAGACCCTCCCTCCCGTTGCTCCAACTAATACGGAAGTGAACGGATCGCTGCGAGGGTGG
GAGAGAAAATTAGGGGGAGAAAGGACAGAGAGAGCAACTACCATCCATAGCCAGATAGATTATCTTACACTGAAC
TGATCAAGTACTTTGAAAATGACTTCGAAATTTATCTTGGTGTCTTCATACTTGCTGCACTGAGTCTTTCAACC
ACCTTTTCTCTCCAAGTACAGCAAAAGGTTCTACTAGTTTCTTTTGATGGATTCCGTTGGGATTACTTATAT
AAAGTTCCAACGCCCCATTTTCATTATATTATGAAATATGGTGTTCACGTGAAGCAAGTTACTAATGTTTTATT
ACAAAAACCTACCCTAACCAATTATACTTTGGTAACTGGCCTCTTTGCAGAGAATCATGGGATTGTTGCAAATGAT
ATGTTTGATCCTATTTCGGAACAAATCTTTCTCCTTGGATCACATGAATATTTATGATTCCAAGTTTTGGGAAGAA
GCGACACCAATATGGATCACAAACCAGAGGGCAGGACATACTAGTGGTGCAGCCATGTGGCCCGGAACAGATGTA
AAAATACATAAGCGCTTTTCTACTCATTACATGCCCTTACAATGAGTCAGTTTCATTTGAAGATAGAGTTGCCAAA
ATTGTTGAATGGTTTACGTCAAAAGAGCCCATAAATCTTGGTCTTCTCTATTGGGAAGACCCTGATGACATGGGC
CACCATTTGGGACCTGACAGTCCGCTCATGGGGCCTGTCAATTCAGATATTGACAAGAAGTTAGGATATCTCATA
CAAATGCTGAAAAAGGCAAAGTTGTGGAACACTCTGAACCTAATCATCACAAAGTATGGAATGACGCAGTGC
TCTGAGGAAAGGTTAATAGAACTTGACCAGTACCTGGATAAAGACCACTATACCCTGATTGATCAATCTCCAGTA
GCAGCCATCTTGCCAAAAGAAGGTAAATTTGATGAAGTCTATGAAGCACTAAGTACGCTCATCCTAATCTTACT
GTTTACAAAAAGAAGACGTTCCAGAAAAGGTGGCATTACAAATACAACAGTCAATTCACCAATCATAGCAGTG
GCTGATGAAGGGTGGCACATTTTACAGAATAAGTCAGATGACTTTCTGTTAGGCAACCACGGTTACGATAATGCG
TTAGCAGATATGCATCCAATATTTTTAGCCCATGGTCTGCTTCAGAAAAGAATTTCTCAAAAGAAGCCATGAAC
TCCACAGATTTGTACCCACTACTATGCCACCTCCTCAATATCACTGCCATGCCACACAATGGATCATTCTGGAAT
GTCCAGGATCTGCTCAATTCAGCAATGCCAAGGGTGGTCCCTTATACACAGAGTACTATACTCCTCCCTGGTAGT
GTTAAACCAGCAGAATATGACCAAGAGGGTGCATACCCTTATTTCATAGGGGTCTCTCTTGGCAGCATTATAGTG
ATTGTATTTTTTGTAAATTTTCATTAAGCATTAAATTCACAGTCAAATACCTGCCTTACAAGATATGCATGCTGAA
ATAGCTCAACCATTATTACAAGCCTAATGTTACTTTGAAGTGGATTTGCATATTGAAGTGGAGATTCCATAATTA
TGTCAGTGTTTAAAGGTTTCAAATCTGGGAAACCAGTTCCAAACATCTGCAGAAACCATTAAGCAGTTACATAT
TTAGGTATACACACACACACACACACATACACACACACGACCAAAATACTTACACCTGCAAAGGAATAAA
GATGTGAGAGTATGTCTCCATTGTTCACTGTAGCATAGGATAGATAAGATCCTGCTTTATTTGGACTTGGCGCA
GATAATGTATATATTTAGCAACTTTGCACTATGTAAAGTACCTTATATATTGCACCTTAAATTTCTCTCCTGATG
GGTACTTTAATTTGAAATGCACCTTATGGACAGTTATGTCTTATAACTTGATTGAAAATGACAACCTTTTGCACC
CATGTCACAGAATACTTGTACGCATTGTTCAAAGTGAAGGAAATTTCTAATAATCCCGAATAATGAACATAGAA
ATCTATCTCCATAAATTGAGAGAAGAAGAAGGTGATAAGTGTGAAAATTAATGTGATAACCTTTGAACCTTGA
ATTTTGGAGATGTATTCCCAACAGCAGAATGCAACTGTGGGCATTTCTGTCTTATTTCTTTCCAGAGAACGTGG
TTTTCATTTATTTTTCCCTCAAAAGAGAGTCAAATACTGACAGATTCGTTCTAAATATATTGTTTCTGTCTATAAA
ATTATTGTGATTTCTGATGAGTCATATTACTGTGATTTTCATAATAATGAAGACACCATGAATATACTTTTCTT
CTATATAGTTTCAAGCAATGGCCTGAATAGAAAGCAACCAGGCACCATCTCAGCAATGTTTTCTCTTGTGTTGTAATTA
TTTGCTCCTTTGAAAATTAATCACTATTAATTACATTAAAAATCAAATTGGATAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1364

MTSKFILVSFILAALSLSTTFSLQLDQQKVLLVSFDGFRWDYLYKVPTPHFHYIMKYGVHVKQVTNVFITKTYPN
HYTLVTGLFAENHGIVANDMFDPIRKNKSFSLDHMNIYDSKFWEEATPIWITNQRAGHTSGAAMWPGTDVKIHKRF
PTHYMPYNESVSFEDRVAKIVEWFTSKEPINLGLLYWEDPDDMGHHLGPDSPLMGPVISDIDKKLGYLIQMLKKA
KLWNTLNLIITSDHGMTQCSEERLIELDQYLDKDHYTELIDQSPVAAILPKEGKFDEVYEALTHAHFNLTIVYKKED
VPERWHYKYNRIQPIIAVADEGWHILQNKSDDFLLGNHGYDNALADMHPIFLAHGPAFRKNFSKEAMNSTDLYP
LLCHLLNITAMPHNGSFWNVQDLLNSAMPRVVPYTQSTILLPGSVKPAEYDQEGSYPYFIGVSLGSIIVIVFFVI
FIKHLIHSQIPALQDMHAEIAQPLLQA

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FIGURE 1365

GAATCTCTCGCGGGCAGCAGGGCGCGCGCTGCACGCACAGTACTAGGTCAGGTGGTGCTCCCGGGTGAGGAGCTG
CTCCTGCCGGAACAGGAGGACGCGGAAGGCCCTGGGGGTGCAGTGGAGCGACCGTTGAGCCTGAATGCTAGAGCG
TGCTCGCGGGTGCGCGTTTGTATGCGGTCCGGGCCTTCGACGCTGTGGGGACCGCCTGCTGGTCAACCAAGTGCGG
CCGCCTCCGTACAAGGAGCCCCGGCAGTGGAGGCGGCGGCGGTGTTTACTGGGTGGACTCTCAGCAGAAGCGGTA
TGTTCCAGTAAAAGGAGACCATGTGATTGGCATA GTGACAGCTAAATCTGGAGATATATTCAAAGTTGATGTTGG
AGGGAGTGAGCCAGCTTCTTTGTCTTACTTGTCAATTGAAGGTGCAACTAAAAGAAACAGACCAAATGTGCAGGT
TGGAGATCTCATCTATGGCCAGTTTGTGGTTGCTAATAAAGACATGGAACCAGAGATGGTCTGTATTGACAGCTG
TGGACGAGCCAATGGAATGGGTGTCATTGGACAGGATGGTCTGCTTTTTAAAGTGA CTCTGGGCTTAATTAGAAA
GCTATTAGCTCCAGATTGTGAAATCATA CAGGAAGTGGGAAAAC TCTATCCACTGGAGATAGTATTGGAATGAA
TGGAAGAATATGGGTAAAGGCAAAAACCATCCAGCAGACTTTAATTTTGCAAACATTTTAGAAGCTTGTAACA
CATGACGTCAGATCAAAGAAAACAGATCTTCTCCAGATTGGCAGAAAGTTGATATAGGTGGACTTTTTTACAGGT
CAGTTGAGGCAAAAACTATGGGTTTTTTCAGGTGAACCTCCCCATTTAAATACTCAGAAGATAAGGTGTGAAT
GTAIGTATTATTAGAGTCCGAAAGTATTTTATAAGTTACTGGTTTTTCACCCACGCTTTTGTGGGAGAGAAAATC
ATTGCAAAATCATTTTTTTTTTGTTCGGTACAATAAAGTTTACTAAAAACAAA

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FIGURE 1366

MLERARGCAFCVCGPGLRRCGDRLLVTKCGRLRHKEPGSGGGGGVYWVDSQQKRYVPVKGDHVGIVTAKSGDIFK
VDVGGSEPASLSYLSFEGATKRNRPNVQVGDLIYGQFVVANKDMEPEMVCIDSCGRANGMGVIGQDGLLFKVTLG
LIRKLLAPDCEIIQEVGKLYPLEIVFGMNGRIWVKAKTIQQTLILANILEACEHMTSDQRKQIFSRLAES

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FIGURE 1367

GGCACGAGGTGATGAAGAAGCCAGTTATCTCAGATTTGAAATAGTATATGGAAAAATGAAGAAGAGAAAGTGGAA
AATTTTTCATCCTTTGCGACTAGTTCGGGATCCACTGTCACCTGCTGTAAGACAGAAAGAACTGTGAAAAATGA
CCTGCCTGTAAATGAAGCTGCAATTAGAAAAATAGCTGCCCTTGAAAATGAGCTGACTTTTCTTCGCTCTCAGAT
TGCAGCAATTGTGGAAATGAGGAAGTGA AAAATAGTACAAATTCTAGTTCCTTTGGCTTGAGTGACGAGCGCAT
TAGTTTGGGTGAGCTGTCATCATCGCGGGCTGCCATCTGAGTGTGGACCCAGATCAGCTTCCAGGTTTCAGTGCT
TTCTCCTCCTCCTCCTCCACCACCTTCCTCCTCAGTTTTTCATCTCTCCAGCCACCGTGTTTTCTCCCGTACAACC
AGGATCTAATAATATTTGTGACTCAGATAATCCAGCAACTGAAATGAGCAAACAGAACCCGGCTGCTAATAAGAC
CAATTATAGTCATCATTTCAAAAAGCCAGAGAAATAAAGATATTCCAAACATGTTGGACGTTCTAAAGGATATGAA
TAAGGTTAAGCTTTCGTGCAATTGAGCGGTCACCTGGCGGTAGACCCATTTCATAAGAGGAAAAGACAGAATTCACA
TTGGGATCCAGTTTTCTTTAATATCTCATGCACCTAAACAGAAATTTGCATTTCAAGAAGATGATTCTTTTGAGAA
AGAGAATAGATCTTGGGAATCTTCCCCATTTTCTAGTCCAGAACTTCAAGGTTTGGACATCACATTTACAGTC
AGAAGGACAGCGAACTAAAGAAGAAATGGTCAACACAAAAGCTGTTGACCAAGGTATCAGCAACACAAGCCTTCT
AAACTCAAGGATTTAAACTCAACTTAAGGTTGAGCTTTAAACTTCCAAAACCTTCTTCTGGATGATAAATTATTC
TTAGAAACTGATTTGGACTGTTAAAGGCTAAAAGTAGATGTATTTAAAGACTCTTCTTGACACATTTTGCCTACA
CTTGCTATGTAAATATGTATGCCTGTCATTTTTGTTTCCTTTGTTCTTTTACGTTTATACTCTGTTCTTCTGT
ACATAGAGCTTAAAATAAACATTCTTTTGAAGTTGAAAAAAAAAAAAAAAAAAAA

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FIGURE 1368

MQELKNSTNSSSFGLSDERISLGQLSSSRAAHLSDPDQLPGSVLSPPPPPLPPQFSSLQPPCFPPVQPGSNNI
CDSDNPATEMSKQNPAAANKTNYSHHSKSQRNKDIPNMLDVLKDMNKVKLRAIERSPGGRPIHKRKRQNSHWDVPS
LISHALKQKFAFQEDDSFEKENRSWESSPFSSPETSFRFGHHISQSEGQRTKEEMVNTKAVDQGISNTSLLNSRI

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FIGURE 1370

MTMETVESQHDGSITASLTESKSAHVQTQTGQNSIPALAQVAAIAETDESAESEGVIDSHKRREILSRFPSYRKI
LNELSSDVPGVPKIEERSEEEGTTPPSIATMAVPTSIYQTSTGQYSMYAAIRYDTVLALSLI

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FIGURE 1371

GGGGGTGGCGGGGACGCGAGTGGCGGCCGCGGGGCCCCGGACAAGGGTCCGCAGAGCTGCAGCCTTCGAGGGCCA
GCCCTCTCCGAGTCCGGGGCTGGGTCCCACCAGTGACAAGGCGGCAGCCCCGCGCACACCAAAGAGAAAGCGGCT
GTGGCGGCAGCGGCAGCCCCAGCCATGCTGTGTTATGTGACGAGGCCGGACGCGGTGCTGATGGAGGTGGAGGTG
GAGGCGAAAGCCAACGGCGAGGACTGCCTCAACCAGGTGTGCAGGCCGACTGGGAATCATAGAAGTTGACTATTTT
GGACTGCAATTTACGGGTAGCAAAGGTGAAAGTTTATGGCTAAACCTGAGAAACCGGATCTCCCAGCAGATGGAT
GGGCTAGCCCCCTTACAGGCTTAAACTTAGAGTCAAGTTCTTCGTGGAGCCTCATCTCATCTTACAGGAGCAGACT
AGGCATATCTTTTTCTTGACATCAAGGAGGCCCTCTTGGCAGGCCACCTCTTGTGTTCCCCAGAGCAGGCAGTG
GAACTCAGTGCCCTCCTGGCCCAGACCAAGTTTGGAGACTACAACCAGAACTGCCAAGTATAACTATGAGGAG
CTCTGTGCCAAGGAGCTCTCCTCTGCCACCTTGAACAGCATTGTTGCAAAACATAAGGAGTTGGAGGGGACCAGC
CAGGCTTCAGCTGAATACCAAGTTTTCAGATTGTGTGCGCAATGGAAAACATATGGCATAGAATGGCATTCTGTG
CGGGATAGCGAAGGGCAGAGACTGCTCATTGGGGTTGGACCTGAAGGAATCTCAATTTGTAAAGATGACTTTAGC
CCAATTAATAGGATAGCTTATCCTGTGGTGCAGATGGCCACCCAGTCAGGAAAGAATGTATATTTGACGGTCACC
AAGGAATCTGGGAACAGCATCGTGCTCTTGTTTAAAAATGATCAGCACCAGGGCGGCCAGCGGGCTCTACCGAGCG
ATAACAGAGACGCACGCATTCTACAGGTGTGACACAGTGACCAGCGCCGTGATGATGCAGTATAGCCGTGACTTG
AAGGGCCACTTGGCATCTCTGTTTCTGAATGAAAACATTAACCTTGGCAAGAAATATGTCTTTGATATTAAAAGA
ACATCAAAGGAGGTGTATGACCATGCCAGGAGGGCTCTGTACAATGCTGGCGTTGTGGACCTCGTTTCAAGAAGC
AACCAGAGCCCTTCACACTCGCCTCTGAAGTCTCAGAAAGCAGCATGAACTGCAGCAGCTGCGAGGGCCTCAGC
TGCCAGCAGACCCGGGTGCTGCAGGAGAAGCTACGCAAGCTGAAGGAAGCCATGCTGTGCATGGTGTGCTGCGAG
GAGGAGATCAACTCCACCTTCTGTCCCTGTGGCCACACTGTGTGCTGTGAGAGCTGCGCCGCCCAGCTACAGTCA
TGTCCCCTCTGCAGGTGCGGTGTGGAGCATGTCCAGCACGTCTATCTGCCAACGCACACCAGTCTTCTCAATCTG
ACTGTAATCTTAATCTGTTGTGCTTTTGTGGACTTGGCATGTTTCCATGAACTGCACTATTATAAACTATTAAAA
TGATAGATGTTGGAGAAAGTAATTATTCCAACACCCATCTGCCCATGCGATGTTAAAAAA

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FIGURE 1372

MLCYVTRPDVLMEEVEAKANGEDCLNQVCRRLGII EVDYFGLQFTGSKGESLWLNLRNRISQQMDGLAPYRLK
LRVKFFVEPHLILQEQRHIFFLHIKEALLAGHLLCSPEQAVELSALLAQTKFGDYNQNTAKYNYEELCAKELSS
ATLNSIVAKHKELEGTSQASAEYQVLQIVSAMENYGIEWHSVRDSEGQRLLIGVGPEGISICKDDFSPINRIAYP
VVQMATQSGKNVYLTVTKESGNSIVLLFKMISTRAASGLYRAITETHAFYRCDTVTSVMMQYSRDLKGHLASLF
LNENINLGKKYVFDIKRTSKEVYDHARRALYNAGVVDLVSRSNQSPSHSPLKSSSESSMNCSSCEGLSCQQTRVLQ
EKLRLKEAMLCMVCCEEEINSTFCPCGHTVCCESCAAQLQSCPVCRSRVEHVQHVVYLPHTSLLNLTVI

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FIGURE 1373

ACATGACGGGCACGCCAGGCGCCGTTGCCACCCGGGATGGCGAGGCCCCGAGCGCTCCCCGCCCTGCAGTCCGA
GCTACGACCTCACGGGCAAGGTGATGCTTCTGGGAGACACAGGCGTCGGCAAAACATGTTTCTGTATCCAATTCA
AAGACGGGGCCTTCCTGTCCGGAACCTTCATAGCCACCGTCGGCATAGACTTCAGGAACAAGGTGGTGAAGTGTGG
ATGGCGTGAGAGTGAAGCTGCAGATCTGGGACACCGCTGGGCAGGAACGGTTCCGAAGCGTCACCCATGCTTATT
ACAGAGATGCTCAGGCCTTGCTTCTGCTGTATGACATCACCAACAAATCTTCTTTTCGACAACATCAGGGCCTGGC
TCACTGAGATTTCATGAGTATGCCCAGAGGGACGTGGTGATCATGCTGCTAGGCAACAAGGCGGATATGAGCAGCG
AAAGAGTGATCCGTTCCGAAGACGGAGAGACCTTGCCAGGGAGTACGGTGTTCCCTTCCTGGAGACCAGCGCCA
AGACTGGCATGAATGTGGAGTTAGCCTTCTGGCCATCGCCAAGGAAGTGAATACCGGGCCGGGCATCAGGCGG
ATGAGCCCAGCTTCCAGATCCGAGACTATGTAGAGTCCCAGAAGAAGCGCTCCAGCTGCTGCTCCTTCATGTGAA
TCCCAGGGGGCAGAGAGGAGGCTCTGGAGGCACACAGGATGCAGCCTTCCCCCTCCCAGGCCTGGCTTATTCCAA
GAGGCTGGTCTTGAATTCCTGAGCTCAAGCAACCTGCCGGCCTCGGCCTCCCAAAGTACTGGGATTACACGCAGA
AGGCACCATGCCCAGGCTAGATGTGTCTTATCCCAATCCTTTGGCAGGCATGCAGCTCCACAGGCGATTCTTCA
AGCAGCTGAAGTGTTTAGCCCTCCTGGGTAAAGAGCCAGATAAGGAGAAATCCCTTTCCTAGGTTTGAATGTGT
TGTGAAAAAAGAGAAATCCCTGGCTCCTGGAGCTGGTGGGAGACAAGATTAAGCAAACCTCCCCTGACATGTA
TCCCTTTGACCCCAAGCTCTGCCTCCTCCCTGACCACCATGCCCTTTCCTTTAACTTCTCAAACAGATACCAGG
GCCTAAACTGCTTTACCTCCCTCCTACTGAGTCAGGTTAGGTGGTGGGAGGTCACCCATTTCGAGTTAAACCA
ATGCAATATGAGTAAAACAAAGTCATGTGGGTATGTCTGGGGTAGAGAGAGGGGTAGCAAGTTCATGTGTCTCC
TTGGTCACATATCTCCCAAAGCTCCGATCCCTGCCATGGGAAGTGGACAGGAAACATGAGGTCATGACCTGCAGG
CATCTTTACTGCAGCTCTGCCGGCCTGGAGGGGGAGAGGGGGAGGAAGAAGTATGCGCTGCACATTTCTGAGGCT
ACTGCATTTGCTTTCAAGGCAGAAATCTTGCTCTGAGCAGTCAGCGGCTCCAGTTTGGGGCCCGATAAGGAAGTTC
TCCGTGGCCTCCCTCAGGCAGAGCAGGGAGGAGGCTGACATTGCCAGTCTCTTCTGGGGCCCAAGGCAGGTTGCA
GGAGATCCAATCCCATAGACAGCTCTGGGCCTCTTGCAATTTAGTTTTTCAGAATTAAACTGCAGTATTTTGAA
AGCAA

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FIGURE 1374

MTGTPGAVATRDGEAPERSPPCSPSYDLTGKVMLLGGDTGVGKTCFLIQFKDGAFLSGTFIATVGIDFRNKVVTVD
GVRVKLQIWDTAGQERFRSVTHAYYRDAQALLLLYDITNKSSFDNIRAWLTEIHEYAQRDVVIMLLGNKADMSSE
RVIRSEDGETLAREYGVPFLETSAKTGMNVELAFLAIKELKYRAGHQADEPSFQIRDYVESQKKRSSCCSFM

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FIGURE 1375

GCGGCGGGTACTCTGTGCCCCGCGTCCCGGAGGCAGCCGACTGCGCCACCCACCCCTCGCACGGCCGGGCGGGAC
CCGCGCCACCAGCCCGGACCTCCGTCGTCCCGCGGCGACCAAACCCCGCTGGCCCCACCGCTGTGACTACTCT
GGACTCGCCCGCAGAGTTTGCCCGCCGGGGAGGGTGGCCGATTGGCGGAGCGCACTCCTGCTGTTTTCCCCACCA
TCTCGTGGATGTCTGTCCTCGGGTGGTGAGAGAACTTTGCAGTGGGCTGGAGCGCCCTTTGCGGAGAAGCACACG
AAGGTGAAGGAAGGAAAGAAAGAACCCGAGGAAGAAGGAGCTCGGAAGAAGGGTCCGGAGCGGCCGGTCCGGCC
GTGCAGGGCGAGTGCGCCCGAGGCGCGGCCCTGATGCTCCCCGGGCTCGAGGAGCATTGGGCACTTGCGGGAC
TGCTCTCGGTGGAGTAGCCCCGTCGGGCCCGGAGGGTTTGTGCAACCGCGGAGAACACCGAGTGCTGGTTCGCACG
GGGCGTGCCGAGCCGCCTCCCGGCGCGCCCTCCGCACCTTTCCCGCCTCGTTCATCCGTGCTCCCCGGCCAGGAG
CCTCCGCTGCGTCTTCAACCTCGCTCCCCCTTTGCGTCCCGGGAGCCTGCGAGCACCCGGCCGAAGGCGCAGCCGA
ATCTTGCGGGAGTGCAGCCGAAAGCGTCGGGTTTGTGTGGGGTTAGCGGGGGCCGCCGCGCCACCTGCACCTCGC
CCGCCCGCCGCTCGGGGAAAGCCCGAAGAGGAGGCGGACCAGGAGAAGAGCAAAGAAAAGCAGTCCGTCTGGATT
TGTTTGCCAGGACTGGCGCCGCGCACGCGGATCGCCGAGGGGAGTGCGGTCCGGAGTACCGCGCCCCCGCCTCC
CCGCCCGGGCAGCTGAGGCCCGGGGTTGGAGCGCTGCCCCCGCGTACAGTCCCCGAGCGCCCGACGTCTCCGCGC
AGGTTCTTGAAGCAGCTGGGCCTGGGGCGCCACTAATGTGGCCCTGAGGGCCGGAGCCCGCACCAGCGGGAGCG
GGAGCCGGAGCAGCTGCGGGCGCCGAGTGGCCGGTGCGCCCGGCGGAGCGCGCGTGCCTGGCCAGCGCGCTCCCC
GCTTCTGCTTGGCTTTCCGGCTTAATTTTCTCGGCGGGATTAAAGTTGGAAATTGACCGGAGAATTGAGTTGCC
GGGGAACAGAGCCCCGGCCGCCAGAGCGATGTTCCCGCAGAGCGGGCACCCGACGCCGACCCAGGCTGCAGG
CCAGCCCTTCAAGTTCACTATCCCGAGTCCCTGGACCGGATTAAAGAGGAATTCCAGTTCCTGCAGGCGCAGTA
TCACAGCCTTAAATTGGAATGTGAGAACTGGCAAGTGAAAAGACAGAAATGCAGAGGCACTATGTGATGTATTA
TGAAATGTCATATGGATTAAACATTGAAATGCACAAACAGACTGAAATCGCCAAGAGATTGAATACGATTTGTGC
ACAAGTCATCCCATTTCTGTCTCAGGAACATCAACAACAGGTGGCCCAGGCTGTTGAACGTGCCAAACAGGTGAC
CATGGCAGAGTTGAATGCCATCATCGGGGTACGTGGCCTACCAGGTCTACCTCCTACACAGCAGCAGTTGCAAGC
TCAGCATCTTTCTCATGGCCACGGACCCCCAGTTCCCCTTACGCCTCACCCCTTCGGGACTTCAGCCTCCTGGAAT
CCCGCCCCCTCGGGGGCAGTGCCGGCCTTCTTGCGCTGTCTAGTGTCTGAGTGGGCAGTCTCACTTGGCAATAAA
AGATGACAAGAAGCACACGATGCAGAGCACACAGAGGTGAGAGGCCGGGCAAGCCAGATTAGGACTTTGTCCT
CATACTCTTACAGTGCTGCAAAGTTGTGTGCATCGCTAAAGAGAGCCCCAACCTATACAGAGAGCAAACAATGAG
ATAAGAGGAACTGTGCAAAAGCTTTCCACTGAAACACAGGTACCCTGGAAGTTTGCAAGGGTTTGCTGTGGGCAT
CTGTAGATTTCTCGATCTCGTTAGATTGCAGGCATCTTGACATCTTGCAACTGCCTAGTTAATGCCAGTGGCCT
GTACCATATTATGGAAAAGTGTAACTGCTTAATTGGGTAATTTTCAAAGAAAAGTAATGTTGTTAAATGGGGCGA
AATAAGAAGTTAAATTTGAAAGTGAATGTGTTCAAATGAAAGGTTTGATAATTGCGTCTGTTACTTACTTAGTTTC
ATAGGCTTTAATTTCTAGTATGCATTAAATATTGGGCAAAATTGCACCTTGACTAATTTTTTTGAAGAAAAGTAATTT
ATTCTGTCAAGAAATAAAAAAATAGGCTTTGTGTATGGTTAAACTGTAAATCTTATGTTTACAAAATACTGTAAT
TTTCAGGAAATCACTGTATTAGGAATGTGCAATGACTTATATAAATAAAAGCCATTTTTTAAACTGAAAAA

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FIGURE 1376

MF PQSRHPTPHQAAGQPFKFTIPESLDRIKEEFQFLQAQYHSLKLECEKLASEKTEMQRHYVMYYEMSYGLNIEM
HKQTEIAKRLNTICAQVIPFLSQEHQQQVAQAVERAKQVTMAELNAIIGVRGLPGLPPTQQQLQAQHLSHGHGPP
VPLTPHPSGLQPPGIPPLGGSAGLLALSSALSGQSHLAIKDDKKHDAEHHRGERPGKPD

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FIGURE 1377

GCAATTGGTGGCTTTGAAGGCGCGGCGAGCGGGAACAGCTCTTGAGGAGTGAGACTGCAGGAGATGTGGGCCGTG
CCAAAGAGATGGATGAGACTGTTGCTGAGTTTCATCAAGAGGACCATCTTGAAAATCCCATGAATGAACTGACAA
CAATCCTGAAGGCCTGGGATTTTTTGTCTGAAAATCAACTGCAGACTGTAAATTTCCGACAGAGAAAGGAATCTG
TAGTTCAGCACTTGATCCATCTGTGTGAGGAAAAGCGTGCAAGTATCAGTGATGCTGCCCTGTTAGACATCATTT
ATATGCAATTTTCATCAGCACCAGAAAAGTTTGGGATGTTTTTCAGATGAGTAAAGGACCAGGTGAAGATGTTGACC
TTTTTGATATGAAACAATTTAAAAATTCGTTCAAGAAAAATTCCTCAGAGAGCATTAAAAAATGTGACAGTCAGCT
TCAGAGAACTGAGGAGAATGCAGTCTGGATTTCGAATTGCCTGGGGAACACAGTACACAAAGCCAAACCAGTACA
AACCTACCTACGTGGTGTACTACTCCAGACTCCGTACGCCTTCACGTCCTCCTCCATGCTGAGGCGCAATACAC
CGCTTCTGGGTGAGGCGCTGACAATTGCTAGCAAACACCATCAGATTGTGAAAATGGACCTGAGAAGTCGGTATC
TGGACTCTCTTAAGGCTATTGTTTTTAAACAGTATAATCAGACCTTTGAACTCACAACCTCTACGACACCTCTAC
AGGAAAGAAGCCTTGGACTAGATATAAATATGGATTCAAGGATCATTCATGAAAACATAGTAGAAAAAGAGAGAG
TCCAACGAATAACTCAAGAAACATTTGGAGATTATCCTCAACCACAACCTAGAATTTGCACAATATAAGCTTGAAA
CGAAATTCAAAAGTGGTTTTAAATGGGAGCATCTTGGCTGAGAGGAAAGAACCCCTCCGATGCCTAATAAAGTTCT
CTAGCCACATCTTCTGGAAGCATTGAAATCCTTAGCACCAGCGGGTATTGCAGATGCTCCACTTTCTCCACTGC
TCATTGCATACCCAACAAGAGAATGAATTATTTTAAATTAGAGATAAATAAGACGTGCGTGGTTTTCTTAAGCA
CAGCTCCTCCTTCTTGATATTGCACATGCACCTTCAGTTCATGGGCTAGCTGTATAGCTTNCGTCTGTAACTTGT
AATTTCAAGAATCCTTGGTATTGAATTTTAGAAATGCTCACATAATTGTTGGGACTGATTATTCCTCCACGGAT
ATGCCCTCCTCTCTGATATCCTGCTAACTGTAGCCGTTGTGGCATTGAGATGACAGGACATATATATATATGG
CCCCACACTTGACCTTGAGTGCCTGAATGCTCTGAAATCAAGCATATGGCACAGCGCTCAAGACTTTTGGGTTTG
TGTCCTTTTTCTATGGCTGTCTCTTCTCAATTCTGGAGAGGTCTGGTTCAGTGGCTGGTTTTCCAGGGATTGAT
TCTTAAGCTCTGGATCACAGAGAGAAGCAACAAGGAACATACTCAACTCAAACTTTTTAGGAGAATCATGAAA
TTGGTCTATTCAAAGGATGGAGTTGAGTCCATTCTGTTATTGTTGCAAGAGGTTGCATATTTGGTGAGTCAGTTA
TATAAAATAGTGTCTTATTGTAAATATGATACTTCTCATAATCTATTTTATCATGTGTATAACATTCAAACCTGA
CAAATATATTGACTTATGAATAAAGGTGTCAAAAAACTGGCACATCAGTTAATTTTGATCAAAGTACTTCAGTGA
TCATCACTAAATACCCCTATCTTTTTAAAAANNN
NN
NNAATGACATCACTTTGGTTCAGAGCTCTAAAATGGAGGGAGGAAGCCATTCTAAAAAGGACTCCCTACATGACC
TGCAACTTGAAAAAAAATTAAAAGCTCCAAAAAAAACAATACAGGAGCTTACCTTGAACTTTGAATTGGGCC
AAATTGCGATGACCACTGCATCCTGGAAAATTTTATTTTACCAGCACTACAACCTCCTCAACAGCACCACCAATA
AACTATGGATTTTTGTACTAAGCCAGTTGCCTCTTTCAAACAACCTGTCAACTTGTCTAATCACCTCAGCTTT
TTTTAAAAACCCCTCCTCTACCTCTCTCTTCAGAACACAAGTGGCTTCTAGCTGAATCTGTCTCCCAAATTGCA
ATTCTTAAGACCTCAATAAAAACACCTTGTCTTGCTGAAAA

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FIGURE 1378

AIGGFERGEQEQLLRSETAGDVGRAKEMDETVAEFIKRTILKIPMNELTTILKAWDFLSENQLQTVNFRQRKESV
VQHLLHLCEEKRASISDAALLDIIYMQFHQHQKVWDVFMQSKGPGEDVDLFDKQFKNSFKKILQRALKNVTVSF
RETEENAVWIRIAWGTQYTKPNQYKPTYVVVYSQTPYAFTSSSMLRRNTPLLQALTIASKHHQIVKMDLRSRYL
DSLKAIVFKQYNQTFETHNSTTPLQERSLGLDINMDSRIIHENIVEKERVQRITQETFGDYPQPQLEFAQYKLET
KFKSGLNGSILAERKEPLRCLIKFSSPHLLEALKSLAPAGIADAPLSPLLCIPNKRMYFKIRDK

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FIGURE 1379

CCACTATTCCACAGGGAAGGTCAGCGCTTCCTTCACCTCCACCGCGATGGTCCCGGAGACCACACATGAAGCAGC
TGCCATCGACGAGGATGTGCTGCGCTACCAAGTTTGTGAAGAAGAAGGGCTACGTGCGGCTGCACACCAACAAGG
CGACCTCAACCTGGAGCTGCACTGCGACCTGACACCAAAAACCTGCGAAAACCTTCATCAGGCTTTGCAAGAAGCA
TTATTACGATGGACCATCTTCCACAGATCCATCCGGAACCTTGTGATCCAAGGGGGCGACCCACAGGCACAGGC
ACGGGTGGGGAGTCATACTGGGGGAAGCCCTTCAAAGACGAGTTCGGGCCAACCTCTCGCACACGGGGCCGCGGC
ATCCTCAGCATGGCCAACTCCGGGCCAACAGCAACAGGTCTCAATTCTTCATCACGTTTCGCTCCTGTGCCTAC
CTGGACAAGAAGCATACCATCTTTGGACGGGTGTGGGGGCTTTGACGTAAGTACAGCCATGGAGAATGTGGAG
AGTGACCCCAAACTGACCGCCCTAAGGAGGAGATCCGCATTGATGCCACTACAGTGTTTCGTGGACCCCTATGAG
GAGGCCGATGCCAGATTGCGCAGGAGCGGAAGACACAGCTCAAGGTAGCCCCGAGACCAAAGTGAAGAGCAGC
CAGCCCCAGGCAGGGAGCCAGGGCCCCCAGACCTTCCGCCAGGGCGTGGGCAAGTACATCAACCCAGCAGCCACG
AAGCGAGCAGCAGAGGAAGAGCCCTCAACCAAGTGCCTGTCCCCATGTCCAAGAAGAAGCCAGTCGGGGTTTT
GGGGACTTCAGCTCCTGGTAGCAGCAGGCTGCCTGATGACCACTAGAGGTATGTCTGCCCTCGTCACCCTGCTG
CACACCAATCTGTGGCCCTTCATCATGCTAAGAACAAGAACTGCGCCATGGCTGGCTCCTTCTCTTCTCCAGCCC
ATCCCTCTGCAGCCTGTCTATCCCTGTCTGTGACCAATTGGTCGGGGCCCTGGGCTCTAGAGTGACTTTTGACGCCC
TCCATCCCTCCCGCCAGGCACTGTCTCCGCAAGGCCTGGTGCAGCCCTGGCAGTAAGTGGCTTGTAAGAGGCTC
AGACACCAAGCTGGGCCTGCAGAGGAGGGGCACAGTAGGACACAGTGACTGCCAGGTGTCCACACACCTGTAGG
CCTCTGAGCCAGCGTCCAGGGTACAGATGCGGGTGGTGGGGATGAAGGCCTGACCAGGGAGGGAGAAGCAGGTTT
GGAGAGGACCCTGTGCCACCCTGACAGACACCCTGGCTGGCCCTGACTGACTGTATTCTCTGGCCACATTCAAG
TCCCCATTGGTGGGGGCAGAGAAGTAGGACCAGGCCGTCTTGGCTCCAGAGCTCGAAGACCCCAAGACAGCCC
TCTGCTCTCAGCGCGCCACAGAGAGCCTGGGCTCAGCCTTCTGCATCAGGACATGGCCTCGTCCACTGAGGGCA
CGATTTAAACATTTGACATCAGAAGCTTTATTTGTAAACCTCACACAGATAAGGACCAAGGGCTGGCGGTGTGGC
CAGAGGACAGGGGAAGCTGAAGGCCCGTGTCTGAGCTCGGCAGTCCCTGCTCCTTGCAGTGAAGCCACCATGGGT
GACCGTCCAGCCTCACCCGGTGGCCTGCACAGTGAGGGAAGGGCTTCAGGGCCATCTGCTCCAGGGCAGGGGAC
AGGCCACCAAGGACCTTTGGCAAATGAAGGTTTACATTTCTGTAGTTTGTGTTTGTGTTTGTGTTTGTGTTT
TTTTAGCTATTAAAACCATTTGAATTTTAAACGACCTGATGAGGGCATCAGGTAAATTAAAGGATTTTGGGAAGA
TTCTTATTTTCAATTCTAATATCTGACAGATGCCATCAAGAATAAGCATTAAGGTATAAAAAATACTGTGTGTAT
AAAACAATGCCAAACCACATTCTACAGCAAATGCACTGTGCCATTTATAACCCTGACATCACCTCCCAAGGCTC
TCAAGGAAGATTTATTTTAAATAACTTAAATAGAAGTCTAGATGATATTGTTTAGGAATTTAAGAGGGTGGTGG
ATATGGTCTGTGAATAGCACTTCCCCTGAAGCCAGCTCATGGTCTGTTCATTGGTTTAAAAATGAGCTTGTAT
TTTGAGAAGCCCAACAAAAAAGTGATAAAAGTGTTGGTATNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNGTCATAAGACTACTAGTAAAAAATGTTCAATCAATGCCGTACAAAGACAGTACAAAAACCAAGTGCCCAAT
AGAAGGAGCAGCGAACTTGCCCAAACAGAAAAGCTCTAAATAGAACTTAGTATATACAAAACCACTCGGTAGAG
TTTTAGAAGTTTCTTCCATGTAAGTGAAGCATCTTGAGTCACTCAGACTT

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FIGURE 1380

MANSGPNSNRSQFFITFRSCAYLDKKHTIFGRVVGGFVLTAMENVESDPKTD RPKEEIRIDATTVFVDPYEEAD
AQIAQERKTQLKVAPETKVKSSQPQAGSQGPQTFRQGVGKYINPAATKRAAEEEPSTSATVPMSKKKPSRGFGDF
SSW

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FIGURE 1381

GAGGCTTTTCAGCCTCATTGAGGTACAGTTACATATCTTTTGCCCTTTTGCCCCGTCATAGCTATCTACAGCC
AATCACAGATCACAGAGTCACTGGACTATAGAGCTGGAAGGAAGCTCAGAGACAATGCCAAGGGGGCAGAAAATT
TATCAGAAGCCAGTCCCAGTGCCTTTCCCTCCATTTCTTCTGCAGGAAGACTATTTTGGGCTGCCTGAACATTGT
ATCAAACCTGCTACCTATACTATGGTCTACCTTTCCCTCCAGTGGAATTACAAAGGCACTAACTGAAATGCCTTCT
AGAAACAGAGAAAACGAAACTGTACTTATTTACTCTTGATACACAGATTATTTATAAAACAGATTGAAGTAACCT
GTTAACTGGCAAAAAGAGAATGAGATCGGATTTAAATGTATGGCAGTAAGTCCTATTGATCCCTCCAGTTATCTC
AGTATGACTGCAGTATATTCATTCACTAAAACCACTCACTAGATACCAACTACACATCTGGCACTGCAGATGTAA
AGGTCAGTCACACATGTTCTGACTTTACAGAGTTACAGTAGCAGTGAGGATGATATATGTGGAACAAAAAG
GCATTGATTCTATTAGAGCACTGTTAGGGCTCAAAGGAGAGAGGGGTCTTTCCACCTAAGAAATGAGGAATAGG
GTCATCATAGAAGTGACCTTAAGTCTTAAAAATTAAGAAGGGGATTCCAAGCTGCTTCAGACAGAGACACATCGA
GCTAAAACACAGAGGTATGAAAGAGCACAGGGACTTTAGGAATTGCACAGTTTCACTAACAGGAACAAAAGGCT
CAAGGGGGGCAAGAAATGAGGCTGTATGGAAGAGATTCAATGTAAGCACTTTATAAAATAGATTAAATTTCTGAT
TCAATGAAGCATTCTTGATCATTGTGTACAAGGCACTACATGCATCATGGAATTCATTAGGATGCATTGCCA
GCACTTGCAAGACTGATATTATTCAGCCTCAAGCTTTCCAGTGCCAAAGGGAAATGCTGACTGCTTTTCATATA
TTTGAGTCAAAGATTTTTATATGGTCAATGAAGACTAATATAAGGGCAGTGGGATTTTCACAGATGCATGCCAT
GTTGTGAGAGCCTCTTAGATTTTCTCAACTGTGAGAAAGAAAAACGAAATGTTGAAGACGTTGAGTCTGGAGA
GGGGATACTAATCACTGTCCAGTTGGGCCTGTTGGGAATGGGGAAATGGCACAGGAATGCAAGCCTCTCCACCC
TACCCCCCGAACTCCAGCCATACACTCATCGTTTACAAAATATAAATGAGTTAGCATTAAATGTTTCAGAGTAA
ATAATTCCTTTTCCCGAAATGCATGAAGATAGAGTAACAGACTTCTCACACTGTATTTTTAGGGTATGGAGAATT
TAGAAGGTAAAGAATTACTGCTTCAATTTTTAGTTAAAAAAAATCAGGAAGCTCTGTTTATTAGGCTATGC
ACCATGTGCACAGTCAAGAATTAGCAGAAACCCTCTGCATTTACAAACACTTGTGCTATAAAAAAGTAATTTTT
AAAAAGCCACGTGTGTGTGTGTCGTATATCNNNNNNNNNNNNNNNNNNTCTAACACGCCAAGGTTTTTGATACTT
TTTTACAAAAACTACAAGAGAAAACAAATATACCTGTCCAAACCATATACTTTTAAAGAGCATTTTTTTTTCCA
TACAAGCTGTTGTTAATTTGGGGGTAAAGTGCTGATTTGCAAACCTTCATCAAATTGTTCCCAAGTGGATTCTCCT
TGTTTGCTCCCCCTACCAACCCCAAAGTTACCATATTTGATGTAAGAATCAGGCATGTTAGAATGTTGTGTCAC
ACTAACTGATTCTGCTCTTTTTGTCTTGTCATTCAAGTTCCGTTAGCTTCTGTACGCGGTGCCCTTTGCAGTCTG
GTGTCTCTTCCAGAGGCGAGGGGGCTGAGGATGGGGTGCTGCATCTCACTAGCTATACTGGCATCATCTTGGTAA
ACATTCACTTCCCATGCCATTGGGGTTGCTTTTGCCAAGGTCACTCCAGGACCTCCTCGATTATAAATCTGGTAAAC
ATTTTCAGTCTTGCTCTTCCCTGACCTGAAAGCTTTACAAAAAGTACCAATGCCCAGGTCCAGCGCTGGAGATNN
NN
GAGAATTACTGCTCGGTAAGTGGGATGACTGGGGAGTGGGAGATCAAATACTCTAACGTCTCCAGCACCTATTTC
TAGAGATCAGTGGGGCAGAAAGGTAGAAATAAAAGGTGGAAGGGATGAAATGGGTAAGTGTGGGTGAATTAGTT
CCAGGAAAACGGCAATCTCCACTGTGGATTAGGGAAGGCGTCACTGAGGAGGGCTTTCTTAACAGTTCAGGTCA
GTGGAAGCCAACTTGAGGCACACATCGTGCAGCGGCATCCTCCGGGGAGGTCGGGTCAATTTACCCCATTTTACTG
CCGAGATGACCTAGGTCCAGAGACGGTAAGAGCGGTGTACGACTCACACAAGTCGGGGGTCTGTGAACCGAGG
TTGAGCCTGGCGGGCCTTCGGCCCGAGGTCTTTAAGCGAAGTACCAGACCCGGGGTTCAAAGCCCAGAGGTAGG
CAGGCGGCTGGCTCTCCGCCTCAGGCCTGGAGAGAACCCAGGGGTATGAACCTCAACCTCGCTCCCGCGTCCAGC
TGGAGGGGCGGAGCTGGCTGGCCCCGCCTCCGGGTAAACAAAGTTCTTTACAGACTAGGCGTGAGGGGATGTTG
CAGTCTTGTGCTCACTTCCGGGCGAAGAG

1529/1629
FIGURE 1382

GFSASFEVQLHIFCLLPCCIAIYSQSQITESLDYRAGRKL RDNAKGAENLSEASPSAFPPFPSAGRLEWAA

1530/1629
FIGURE 1383

GCCGCATTCCCGGTGTCGACTTACTAGCTGCAAGCCTCTGCCTGCCTTCCTGCGCGCCGTTCCCCGCTAGTCGCT
GCTGCTGGCGCGCACTCGCCGGGTTTTTCCTCCACGGCCTCGAGATGGTGGTGAATGTGGCACGGAGGAGCCGG
GCCTTCCAACCCGGTGGGCCCCGAGCTCCGAAAGGCCCCCTCGGCAGTGAGAGGGGCGGGAGCCCCGCGGGGGCCGC
GCCCTTCTCTCGCTTCGGACTGCGCAACGCTGCGCTCTGGGCTGACAGGCGGATTAAAACGGTCCCATCAAGACTG
AGAAAAAGCACACCAGCTATTGGCACAGCGTGGGCAGTGGGGCCTACAGGATGACTGACTTAGTCTACAGAGATC
CCGGCGTACTTAAGCAGGTAGTAATGATGGACAGATGAAGACTCTTAAGATGACAGAAGGTGATTTTTCTGGTGA
TCGAGGACTTCCGGGGTAATGACAGTGATGAAATGCAGGGGACCTGGTTGCCCCAAGTTTCCTGGCAGTGTGTG
ATACTGAGGAGGTGAGCTTGTTTCTGGAGCTGTGCTTTAAGGTAAAGTTGATCAGCTTAATCCTCCTGATCCCTT
TCCCATCGGATCTGAACACTGGTCTTGGTGGTCGTAAAAGGAGGAAAAGTAATAGTGAAGCTGGCCTAAATGTTG
TAATCTGGTATATGGCATGTGGGCTAGTTTCAGACAGGTTTCAGAGATGGTTGGATCTCTGAAATTGTAAAATGA
AGTATAATCTTAGGCTAAGGGAAGGATGCGTGTGAAGCTCTGGAGATTGATGTTACATGTAAAGCTGTCCTCATT
TGTGACTATGGACCTATGGAGTTGGGACAATCTCTATGGGAAGCAGAAGGCAAGGACCCCGGTCATTTTAGGTAG
AAACAACAGCATGCTAATGCAAAAAATTATGCAGTGTGCTACTGAACCTTCAGAGGTGATCAATAAAAGAAGAATA
AAAAGACT

1531/1629
FIGURE 1384

RIPGVDLLAASLCLPSCAPFPASRCCWRALAGFFLPRPRDGGECGTEEPGLPTRWARAPKGPLGSEGGSPRGPR
PSLASDCATLRSGLTGG

1532/1629
FIGURE 1385

GGCTCCTCCTTGAGGGAGAGAGCTGAGGAGGTGGCATTCTTGCTTCCCTGACTCACCCAAAGGAAGATTTACAG
CCCCTTGGCTGGGTGGGGAGTTATGCTGGGAAGTCTTCCAGGCCCCCTGGGGGTGGGAAGATGCTCAATGTTCAA
AGGAGATGGAACGAGGAAAACAGTTAAGCAACGATGGACTCCAGGGGGAAAACCGGAGAAGAAGAACTGTAATT
CCAGTCCGTCCACATGGCCCAGCAGTGAACGACAATTGCATGGTCAGAGAGAGCAAAAGCACCACGCCGACTGAA
AGCAGCTCGAATGTGGTGGGGCAGTGGGAGATAATGCCCTCATCTACCAAACAAGATCTGCCACCTTCGCAGAC
CACTAAACCTCATTCCTCCAGCCAGCTCCCCACCCCCATGAAGGCCAACTGACCAGAGAGCAGGGCTCCCGAGGG
TCGGGTTCGGGTTCGGGTTCGGGTTCGGGTTCGGGTTCGGGTTCGGGTTCGGGTTCGGGTTCGGGTTCGGGTTCGGGT
TTGCTGTCAAAGCATGCGACTCTTCTTTCTGATACTTGACATATTTCTTTTCCCGTTCAATTCATGGTTTCTGCC
CAAACGGAGCCACGTGAGGACGTCTTTGGGGATGTGTCTCCAAGAAAAGTGTGGGCTGCCTTCCTCACCCCTGGAT
GCCTGTGGGCTGCCTTCCTCACCCCTGGATGCCTGTGGGCTGCCTTCCTCACCCCTGGATGCCTGTGGGCAGCCTTC
CTCACCCCTGGATGCCTGTGGGCTGCCTTCCTCACCCCTGGATGCCTGTGGGCAGCCTTCCTCACCCCTGGATGCCTG
TGGGCAGCCTTCCTCACCCCTGGATGCCTGTGACTTGGTTTCCATGGGGGCTTCCTAAGCTCAGGGACCCCAAGCC
TCCATCAAATCTAATGACCCGCCTTGTCTCTGAACACACCTGTGTTGTCCCCGAGCCCCCTACCAACCCCTCTG
CAACCCGGCCACGCATTTCCCATCCTGAAGGGTCCAGCTCATAGGCCGGCCCATGTGTTCCCTTTACCCCTGCT
TTGTCCCTACCTGGTGGGGAGCTGTCCCTTCTGGGCCCTAGTGTGGCATTTCACACACAAATGTGTCTGTGGGT
GGTATCTGGGCCTCCCCCTGCAGTGAGGGGATGACCAATGTGCAGAGCTCACTGGGCCTGGATATGGGCTCGGGT
GGCACAGAACAGAGAGAAAAGTGCTCCGTAAAAGTGAGCTGCGATGCGGAGGTGGGCAAGCTCTTCCCTGGAGGGG
GAAGAGCTCTCAACCCAGAGGGATCTGACCAGGAAGGTTACCCCCCTCCACCCAGGAAGCCCTGCAGACAGT
ATGTGTTTTAGGCTTTGCTGGCCAAATGGTCTCTGCCGTGACTACTCAGCTCTGCCATTGTGGCTGCAGAGTGAC
CATAGACCTTCTGAAAGTGAATGAGTATGACTGTGTTCCAATAAACTTTATTGACAG

1533/1629
FIGURE 1386

MRLFFLIIDIFLFPFNSWFLPKRSHVRTSLGMCLQEKCLPSSPWMPVGCLPHPGCLWAAFLTLDACGQPSSPWM
PVGCLPHPGCLWAAFLTLDACGQPSSPWMPVTWFPWGLPKLRDPKPPSNLMTRLVSEHTCVVPEPLTNPLCNPAH
AFPILKGAHREPAHVFLPLLCPYLVGSCPFWALVWHFTHKCVLWVVGPPPAVRG

1534/1629
FIGURE 1387

TCGCATTTCTGCAGTGTGTTGCACTCTCAGGCCCCACCATTTCCTCCCGCATCTCTTAGGGAGAAGTTCTCGACGTCC
CACCTCCCCCTGGAAGGGTGCTGCTCCCAGAGACCTTCAGGCCAATGGCCCAATCTCAGTGCCCTCAGGGGAGAGG
GGGGTGCAAAAAACAGCCTGGGTACAAAAGAGGTGCGAGGGCTGTGAGATCCCGGAGGCACCGACGGGAAGCG
AGACGGAGAACAGGAGGGCAGGACGGGCTGGAGGTGGGGGATACTGCAGATGGAGGGAGCCACGGTGGGGGAGGG
CGTGGACCTGACCGTCTTGGCACAAGGCGGTTCGGGTGCAGACCTCCAGGCCCTCCGGGTAAAGGTGCCGCCCAGA
GCCCTCAGGCCGGGGGCGCACGGAACACAGGCAGGGTGCCTGTGGAGGGACGGGGAAAGCGGGGCGGGTTGGG
GAAGGCGCCCCGGGAACCTGAACCTCCACCCCGCTCAGTCTCGACCACTCCTTAAGCCCCACCCGCCCCAGG
TAAGGCGCAGTCCACCCCATTTCCAGTAGATTAACGCACAGGTGGGGGCGCGCTCGGGACATAGCTGCGCTAGG
GGACAGCGCGCCAGCCAGTTCGCGGGGCGAGGAGCAGGGCGGGGCCAGCAGGAACCCAGCTTTGTTAGCGAT
GCTCCCCGTGAGCCACGCGCCACGCGTACGCGCTTCTCAATGGGGCGGGCGTGGAGCCGCGCCCTGCGCGATT
GGCAAACGGGTGGCCACGATTGGCTGAGACCTGGCCCCCGCTCCTCGGCCCCAGGAGGGTGGGGCGTGGGT
GTGGGTGCGCGGCGCTGCTGCCCCGGGGATCTTGCGCGCTCCCGAACAGCCGTGTTGTGCGCAGGGCCGCG
CCTTCCCTCCACAGCGCGCTGCGCGTGCAGAGGTCTGGCGCTCTTGGGACTGGCGGGGCTGCGCGCGGGGT
TAGGGTGGGGGTACGGGAAGGCTCAACCCAGGACCTGCGTACCTTGCTTTGGGGGCGCACTAAGCACCTGCCGGG
AGCAGGGGGCGCACCGGGAACCTGCGAGATTTGCCAGTTGGGCGCACTGGGGATCTGTGGACTGCGTCCGGGGGA
TGGGCTAGGGGGACATGCGCACGCTTTGGGCCTTACAGAATGTGATCGCGCGAGGGGGAGGGCGAAGCGTGGCGG
GAGGGCGAGGCGAAGGAAGGAGGGCGTGAGAAAGGCGACGGCGCGCGGAGGAGGGTTATCTATACATTTAA
AAACCAGCCGCTGCGCGCGCTGCGGAGACCTGGGAGAGTCCGGCCGACGCGCGGGACACGAGCGTCCACG
CTCCCTGGCGCGTACGGCTGCCACCCTAGGCCTCTATCCCCGGGCTCCAGACGACCTAGGACGCGTGCCCTG
GGGAGTTGCCGTGGCGCGCCGTGCCAGAACCCCCCTTGGGGCGCCACAGTTTTCCCGTTCGCTCCGGTTCTCT
GCCTGCACCTTCTGCGGCGCGCGGGACCTGGAGCGGGCGGGTGGATGCAGGCGCGATGGACGGCGGCACACTG
CCCAGGTCCGCGCCCCCTGCGCCCCCGTCCCTGTGCGCTGCGCTGCCCGGCGGAGACCCGCGTCCCCGGAACCTG
TTGCGCTGCAGCCGGCGGCGGCGACCGGCCACCGCAGAGACCGGAGGCGGCGCAGCGGCCGTAGCGCGGCGCAAT
GAGCGCGAGCGCAACCGCGTGAAGCTGGTGAACCTTGGGCTTCCAGGCGCTGCGGCAGCACGTGCCGCACGGCGGC
GCCAGCAAGAAGCTGAGCAAGGTGGAGACGCTGCGCTCAGCCGTGGAGTACATCCGCGCGCTGCAGCGCCTGCTG
GCCGAGCACGACGCCGTGCGCAACGCGCTGGCGGGAGGGCTGAGGCCGCGAGGCCGTGCGGCCGTCTGCGCCCCGC
GGGCCGCCAGGGACCACCCGGTTCGCGCTCGCCCTCCCGCGCTTCTTCGTCCCCGGGCGCGGGGGCAGCTCG
GAGCCCGGCTCCCCGCGTTCCGCTACTCGTTCGACGACAGCGGCTGCGAAGGCGCGCTGAGTCTTGCAGGCGC
GAGTACTCGACTTCTCCAGCTGGTTAGGGGGCTACTGAGCGCCCTCGACCTATGAGGTAACAGCCGGGAGGCAG
GGAGGAGGGAGGGCCGGGGGCGGGGTGGAGGACGGGTGGGCAGGCCCGGCGGGTTCGCGCCCCCAGGAGCCCG
CGGAGCCGAGCGCCAGGCCGAGCGATGGCTTCGATTTGCTCACTCTTCATTTCCCCCAAAGTTTTTCAAGCCC
GTGCAAGACCGCGTGTGTTTGTCCGGGATTGCAAACTTCCCCCTCGCGGCTCAGCCGCCGACGAGGGAGGGGTA
GACGAGGGGAGGGGAGCGGCCGTGCGGCCGTGAGGTCTCTAGTGCTGGCGGATCCTGGGGCAGATTGGGGTGT
GGAGGCGGGGTGACTTTGCATTGCAATCGCGCTCCCGGGCCGGGGCGGCAGAAATGAGTCGGCGGGGCGCGGAGC
CCTGACTCACCGCGCTCCGAGCGCCGCCCCGCCCCCGCGTGTCTCAGACCGAGTCGCGGCACCCACGGACTC
AAGACTCCAAAACCAACCGAGCAACGAACTGCCGAGTTTCGCTTGGGGGAGGTGCGGGCAGGGCCGGCCCCGGG
GGGGTCTGCCCCGGGCGCGCCGCGCTTACGCGCGCTTTGGTTCCCCACCTTCCCCCGCAGCCTCAGCCCCGG
AAGCCGAGCGAGCGGCGGCGCGCTCATCGCCGGGGAGCCCCGCCAGGTGGACCGGCCGCGCTCCGCCCCAGCG
AGCCGGGGACCCACCCACCCCGCCACCGCCGACGCCGCTCGTTTCGTCCGGCCAGCCTGACCAATGCCGC
GGTGAAACGGGCTTGGAGCTGGCCCCATAAGGGCTGGCGGCTTCTCCGACGCCGCCCTCCCCACAGCTTCTC
GACTGCAGTGGGGCGGGGGGACCAACACTTGGAGATTTTTCCGGAGGGGAGAGGATTTTTCTAAGGGCACAGAGA
ATCCATTTTCTACACATTAACCTTGGAGTGTGAGGGGACACTGCTGGCAAACGAGACCTATTTTTGTACAAAGA
ACCCTTGACCTGGGGCGTAATAAAGATGACCTGGACCCCTGCCCCACTATCTGGAGTTTTTCATGCTGGCCAAG
ATCTGGACACGAGCAGTCCCTGAGGGGCGGGTCCCTGGCGTGAGGCCCGCGTGACAGCCACCCTGGGGTGGGT
TTGTGGGCACTGCTGCTGCTAGGGAGAAGCTGTGTGGGGCACACCTTTCAAGGGAGCGTGAACCTTTATAAA
TAAATCAGTTCTGTTTACCAGTGGCTCCTATCACCTACACTTCCAGGTGACGGCCAGACTTCCGTGGTCACTAC
TCCTCAAACCTGCTGCCTCCTCCGTAGGGTGGGTCTGGGTGAGATCTGG

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FIGURE 1388

MEGATVGEGVDLTVLAQGGRVQTSRPSGLRCRPEPSGRGRTEETTGRVRVEGRGKRGGGLGKAPREPEPPTPPQSRP
LLKPHPAPGKAQSTPIPSRLTHRWGRARDIAALGDSAPSEVAGARSRAGPSRNPALLAMLPVSHAPRVRRASSMGF
GVEPRPARLAKRVAHDWLRPWPPPPRPQEGGAWVWAARRVLPPGILRASRTAVLSPGPRLPSHSARCACEGLAAL
GTGGAARGVRVGVREGSTQDLRTLLWGRTKHLPGAGGAPGTRRFRLGALGICGLRPGDGLGGAHALGLTECDR
ARGRAKRGGRRARRRKEGVRKATAAARRRVIYTFKNQPPAPRLRRPGVRPHARDTSVPRSLARTACHH

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FIGURE 1389

AAGCTTTCCTCTTTGCATTTTGGCATTGAAAACCTCCGAAGAGCGGTTTTTGTTTTTTATTTAAAGAAGATGATA
CATATGTGTACCCGATTCAAAACTAGAGAATAGAATTTAAAACATAATTTTCAAAGTCTTCAAATATGCCTAAAG
GTAACAATGTCATCTTTTAATTGCCAATTTCTCTACCACTTTCAAAAAATTACTTCCAAGGATTTAATGAGCTCC
TTCCTTTCAACAGAAAATGGACTATTTTCCTTTTCAGATTTACTATATGCTGTCACTCCAGCTTTATAACCGCATG
TGCATACACAAACATTTCTTTCTCTCTTGCAGGTGGCACAACCCAGGAAGGGGAAATCTGTGGTTTAAATCTTT
ATGCCTCATCCTCTGAGTGCTGAAGGCTTGCTGTAGGCTGTATGCTGTAAATGCTAATCGTGATAGGGGTTTTTG
CCTCCAACCTGACTCCTACATATTAGCATTAACAGTGTATGATGCCTGTTACTAGCATTACATGGAACAAATTGC
TGCCGTGGGAGGATGACAAAGAAGCATGAGTCACCCCTGCTGGATAAACTTAGACTTCAGGCTTTATCATTTTTCA
ATCTGTTAATCATAATCTGGTCACTGGGATGTTCAACCTTAACTAAGTTTTGAAAGTAAGGTTATTTAAAAGAT
TTATCAGTAGTATCCTAAATGCAAACATTTTCATTTAAATGTCAAGCCCATGTTTGTTTTTATCATTAACAGAAA
ATATATTCATGTCATTCTTAATTGCAGGTTTTGGCTTGTTTCATTATAATGTTTCATAAACACCTTTGATTCAACTG
TTAGAAATGTGGGCTAAACACAAATTTCTATAATATTTTTGTAGTTAAAAATTAGAAGGACTACTAACCTCCAGT
TATATCATGGATTGTCTGGCAACGTTTTTTAAAAGATTTAGAACTGGTACTTTCCCCCAGGTAACGATTTTCTG
TTCAGGCAACTTCAGTTTAAAATTAATACTTTTATTGACTCTTAAAGGGAACTGAAAGGCTATGAAGCTGAAT
TTTTTTAATGAAATATTTTAAACAGTTAGCAGGGTAAATAACATCTGACAGCTAATGAGATATTTTTTCCATACA
AGATAAAAAGATTTAATCAAAAAATTTTCATATTTGAAATGAAGTCCCAAATCTAGGTTCAAGTTCAATAGCTTAG
CCACATAATACGGTTGTGCGAGCAGAGAATCTACCTTTCCACTTCTAAGCCTGTTTCTTCTCCATATGGGGATA
ATACTTTACAAGGTTGTTGTGAGGCTTAGATGAGATAGAGAATTATTCATAAGATAATCAAGTGCTACATTAAT
GTTATAGTTAGATTAATCCAAGAACTAGTCACCCTACTTTATTAGAGAAGAGAAAAGCTAATGATTTGATTTGCA
GAATATTTAAGGTTTGGATTTCTATGCAGTTTTTCTAAATAACCATCACTTACAAATATGTAACCAAACGTAATT
GTTAGTATATTTAATGTAAACTTGTTTTAACAACCTCTTCTCAACATTTTGTCCAGGTTATTCAGTGAACCAAAT
AAATCTCATGAGTCTTTAGTTGATTTAAAAAA

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FIGURE 1390

MSSFLSTENGLFSFQIYYMLSLQLYNRMCIHKHFFLSCRWHKPGRGNLWFKFFMPHPLSAEGLL

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FIGURE 1391

GGCCTCCGCCGCCGCTCGGGAGGTGAGGACGAGGAGGAAGCGAGCAGCCCAGACAGCGGCCACCTCAAGGATGG
AATCCGACGTGGTAGGCCCAGAGCAGATACTGTCCGCGATTTAATAAATGAAGGAGAGCATTTCATCCAGCAGAAT
CCGTTGTAACATCTGTAATAGGGTGTTCACGGGAGAAATCGCTCCAGGCTCACAAAAGGACTCATACAGGTGA
GAGGCCCTATCTGTGTGACTATCCAGACTGTGGAAAAGCCTTTGTTCAAAGTGGACAGCTCAAAACACATCAGCG
TCTTCACACCGGAGAGAAAACCTTTGTTTGTTCAGAAAATGGCTGCCTGAGCAGATTACCCATGCAAACCGCCAC
TGTCCGAAGCACCCCTACGCCAGGCTGAAGAGAGAGGAGCCACGGACACACTCAGCAAACATCAGGCTGCCGAC
AACAAGGCCGCGGCCGAGTGGCTGGCGAGGTATTGGGAAATGAGAGAGCAGCGCACCCCCACTTTGAAAAGGCAAG
CTGGTTCAGAAGGCTGATCAGGAGCAGCAGGACCCTCTGGAATACCTTCAGTCTGATGAAGAGGACGACGAGAAG
AGAGGGGCCCAGCGCCGGCTGCAGGAGCAGCGGGAGCGCCTGCATGGAGCCCTCGCGCTCATAGAGCTTGCCAAC
CTGACTGGGGCGCCACTCCGACAGTAGCTTGGACACTGACTCTTCCACTGTACAAAAGTACTGCCCAGCATACTT
AAAAAGTAGATCCTTGGGCATAAGCTAAGCACCTTATTTGCTTATCATAGGCTGCTATTCTGTAGAAAATTTATGA
AGAATGTTATTGCCCCAGAATATGGGGTGAGAGAGAATGCACTTTTTTAATATGGAAATGAATTCATCGTAAAG
TTTAAATATTTTTGTAAATATGGACTGCACAGTACAGGGTAGAAAACACTACATATTGTGGGAAGCTAGATTTTGCA
AGTTTAATGCATTTCATTGGAAGCAGTTCTCACAGGAAGCACTTTCTGAATAAGACACTTGTTTGAAAAACAGAAT
GGTACAAATAGCCAAAGAAGATTAAAACAGATTATTTATAAGATCATTTTTAACAATATATATTAGTATGTTTAA
CAATACTGTAAACACTGAAGCAAGCAAGAAAGTATAAAATATGTAAGATAGATAATTTAATTGCAAAATACTGT
GCCCACTAAGGCTAGAGAAATGGGAGGCTATTTTGGAAGATGTTCTAAGTAATGGACTTAGAAGAAAATAGATAT
TTGAGGCTCTTGGAAGATGCACAATAGTTCAGAATTTTGAAATTGGAGCAAAATCAGTCTTATTCTATCTGGG
GCTTTACAACCTCAGTATAATGTTTAAAGTTTGAAAAGCACTTGTCATCCCTAGCATGTTAACTTGGGAACTTTTCG
ACATTTTCATATTTCTCATTTGCTGAAATTGAGTGATTAATCTTGCAAAGTCTAGGTAACATAGTAATTGGTAATT
TTAAAAATACATATTAAGGGCCCTGTAATGAGATTGGCACTTGGATTTTACTAAAGGGACACCTGCAGGGTTG
TTTTGTAGTGAAATGTTTATAGATCTTTGTGTAGCAAACACTACATTTTAATTGTACTGCTTGTTTAGAATTATTA
GCAAATGGAAGCCTCCATATTTATATTTTTCAGTGCATAAAGCCACCTTCTTGCTTTACTTCAGAGTAACATGCCA
AGCTATTTTGTGTTCACTAAATTTAGCTATCAGTTAAACACTGCAGAAAATATTAGCTACTCAAATAAGTAGGCT
TCTGAAATAGTTTAACTGCAAGTGTGTTAACTTGTGTGGTGGTTTGAAGCCATTTTCCAAATAAAGTTATTAA
ACACCACCTTTATGTACTGAAGCATGAACAGAAAAATCAAGAGCTGAGCAGACCACCTCCTTTATGTAGGCAAAAC
TTCCATCATTTTGGCTTTTGTCTAAACAGAACTAAATGACATGCATAGCATGGTAACCTTACAGATCGCTTAATT
GGAGTAAAACTCAGAGTAATAGAGGGAAATATGGGCTCTTCAGTGCCTTTTTAGCTTTTTTGAGTTGAAGACGTT
CCTACAGATGTAGTTTAAACATTACAAAGTAGGCTTCTTTATCCAAAAATCCCAATGTGTGCATAGTACACAGATA
GTTTAAATATGTAGCCACGGGGGAAGGGGAGGCATGTAAATGTCTTGAAGAGGAGAAAAAGTATGAAAGAAGATA
CGATAGTTACGAATAATGTGTATGATGAGGACATACTTTAAAAATGTAATTCCTCTGTACAGTAAATTACAAATC
TTIAGGGATTTTTTTGTAAATAAGAGAATTTATATTTGTAAATGGTCTAAGAATTTTTTTGTAAATGTGGTATATAGA
ATTTTAATTTGGAGCACTTATAAGCTGGTAAGAGAGACTATAGCATCTGAATTATCTTGGTTTTATGTTTCAGCAT
TTCTCTAGAATTTTTTGTCTCTCAAATATGTGATTTAATGAACATAAAACAACACTCATCAGTCTTGGGAAATTTG
AACTTTGATCAACTTAACTAAAGAAGGAAGGGTAGTAAGAATTTTTCAAATACAAATATTTGCCAATTCACAGAT
GATAACATTTAAGGCCCTCAAAGTAAGGGTTTTTCCCTGTTTCTCCAGTCAGCTTTTGTCAACTCTAATAGTTT
TTTCATAAACATTTTTTATTTGTATAATTGCAACAGTTTAAAGAAATTATCACAACTATTTAGAAACATTTAAAT
GTTCTTTTGTATATAAGCTATATACTTGAAAAATACATTGGTATCTAAAATTTGAGGTGTGTTAAGACTGCTTT
TTGTTTTAAAAAATGGTTTACATTCAAATTTTTGAAGTGTTTTATGCTTCATATGGCTAAGTTGTAGTTTGGCAG
AGTTAACAGCATAAGAATAAACATGCTGTAATTTTAAAGATGCTTTGAATAAAAAATTTATTTTAATTT

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FIGURE 1392

MKESIHPAESVVTSVIGCFHGRNRSRLTKGLIQVRGPICVTIQTVEKPLFKVDSSKHISVFTPERNLCLFRKWLP
EQIHPCKPPLSEAPLRQAEERGAHGHTQQTSGCRQQGRGRVAGEVLGNERAAHPHFERQAGSEG

[illegible]

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FIGURE 1393B

ATTGAGATTTTGAATCTTTTTGGTACCTTTTGGTTAATGACATAGCCTCCTGAAATTCTGGATGTCTTCAAAGTC
AGTTTTGCTTCTTTATCCTGAAAATCAGATTACAAATGCTGAAGGCATTTCTTGGGCCCAGTGTAGCTCACGCAA
TCTCTGCTACCCATAAGCCTTGATGAAGATGATACAGTCCGGACTGTGAGCATGGTGCTTCATGTATATGTGCTG
CCAGTAACAAGAATTTTTTTGTTTTGTTTTGTTTTGATAAGGCATAAAAGAACTCATTCTTGGACATCA
ACTGTAATTCCATCATTCCATGTCTGCGGATACAGACAATAAAAAAATGTTGTGTAGTCAGTACTAATTACTGA
CATTATAAGCATTCTCAAATGCAATAAAAAATGCTGGTTGTTTCACGCTGGTAGTAAAAGTTGCCACAGCCTAAGTT
TGTTTCCCTTTCTGACCTGCTGATATTGTATGTTAGGCATATGCCTTAGGTTTATCACCAGCTGCTTCCAATGCA
GAATTAAAATCAATCTTAAAGCTTTCATGATCAGGGAAGGCTGAAGCTCTTATCCTCAGGATTTCCAAGTGAAAG
TATCCACTTAGAGAATTGGGAAGTAAAAAAGAGCAAGAGATGTTATCTTTTCTCTTGAGGAAGCACACTCT
TATTTTTTTCATCAAATTTTATAAAGAAAAACAAATGTTAATACTAGCATTAAAGAGCAAACCTAAAATTTTCAG
AGGAAAGCAACTTTCATGAATAATTCATTGAAAGATTTTCACAGTCTGGCAAGATTAGGTCATCCAAATAAAAGTG
CTAATGGTCAAAAACATGCACCGTCTATAATATTCTCATCAAGAAATCTTTTTGTCATATAATGATAAATGCTTAG
ATTAGAACAATGATTTTATAAAAAATATTCTATCAAAAGTATGCTAGATAATTGCATTTCATTGAAGAAAACAGAA
CTTCAGTACCTAAATATTCCAGAAAAACCATCTTAATTTTGGAGATTTTAAAAAATAATTAGATGCATTTAGGAA
ATGTGCTGTTTCTTTTTAATATTACTCTATAGTATATATTCTAGGGATTAATGAATTTGAGCATCACCTTTCAAT
AAAAAATTAATTTGCCAATATGAAAGCAGTATTTAAGTGGCCAAACCGTGGTAACATAAAACCATTACATATAT
AATTCAGAGCACATAATTCAGGGCAAAGGATGACTTGAAAATTAACCTCCAGTCTTTATTCTGCAAAACACCCA
CCGATGCTGAGGATACAAGTGAACATTCTTTCCAGCATTGTTTTGAAAAGCCCATATTAGCAAAGTNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNAACAAGTAGATTTTGCTATTAAGTTGCAAACCTAGTGTCTCTTTGAATTAACAA
TTATGCCCTATCTAGAAACCCCTTAGTCTCAATAATTAGCAAAACATTTGAACCTTTAATTCTCACCTGGCTACT
GAGACTATAATCTTAGGGTTAATTCAAATTCCTGTAATTACCAGGCTTAAACCTAAATACTGCTTACAGCCTATC
CATTAGTAACCATTTAAAAATGTACAGATACTTCTTTTAATCAACTGGAGGACCTAAACCAAGTATGACGATATG
TTAGTGAAAGATTTTGCTGGTTGAGGCATAGTACATTTTAACTTATATTTTCAGGAATTGTTCTCAAGCAGGAACAC
TCTTTTACATATTTATTTTCAGGCTTGTCACCTCTCATAAACGAGGCAGCAAACCCAAAATATTGGCTCTTCTTATA
AATAGGCGCCTTTATATAAAGAACATAAAACTCTTAAGACTAATTTACACCAACACAGGCAGCTTCATAATAGT
AACCACCTCTCCCTCCCCACTAAAAAAGATAAAAAACAAAGTATAATTAGTCTTTCTTATTAGATTTTTGTCTTTG
ATGATATTACGTATTTATGTGTAGGGTAGTAATCACAATTTATCCTTCATCTTCATTGTAGTTGAATCAAATAAA
AGTATTCTTTATTCAAATAATGTGAAGTTGGGTGTCTCAAACCTTCATTTAATGAATTGATGAAAGGTTTAAGAC
AAAATTCACGTTGGAGGGAAATTAAGTTACATACAAAAACACTGGTTTTAACTGTGGGACAATATTTGGATTAGA
AAACCATCTCTAGATATAACCTACTTATATTTATTTTTAAATGGTATTTTATTTTTTAAATAACAAACCCAAT
GTTGTCTTATTTCCACTTTGATTGTAAAATGACATTCAATGCTTAATACCAAAATATATATCTATATTCACATTT

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FIGURE 1394

FQLGWRPLCVYWGEGLKNNYPKLFNVLPXXXXXXXXXHYTILSSDLRPPFGPMASWRLKVFCTL

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FIGURE 1395

ACGAGGCTGAGCGGGACCTGCGAGCAGCGCGGGCGGCAGCCCGGGGGAAGCGTCCGGGACC**ATG**TCTGGAGAACT
ACCACCAAACATTAAACATCAAGGAACCTCGATGGGATCAAAGCACTTTCATTGGACGAGCCAATCATTTCTTCAC
TGTAAGTACCCAGGAACATTCTGTAAACCAACGAACAACTCGAGAGTGCAGAGAAAATAGTACATGATTACAG
GCAAGGAATTGTTCTCCTGGTCTTACAGAAAATGAATTGTGGAGAGCAAAGTACATCTATGATTTCAGCTTTTCA
TCCTGACACTGGTGAGAAGATGATTTTGATAGGAAGAATGTCAGCCAGGTTCCCATGAACATGACCATCACAGG
TTGTATGATGACGTTTTACAGGACTACGCCGGCTGTGCTGTTCTGGCAGTGGATTAACCAGTCCTTCAATGCCGT
CGTCAATTACACCAACAGAAGTGGAGACGCACCCCTCACTGTCAATGAGTTGGGAACAGCTTACGTTTTCTGCAAC
AACTGGTGCCGTAGCAACAGCTCTAGGACTCAATGCATTGACCAAGCATGTCTCACCAGTATAGGACGTTTTGT
TCCCTTTGCTGCCGTAGCTGCTGCTAATTGCATTAATATCCATTAATGAGGCAAAGGGAAGTCAAAGTTGGCAT
TCCCGTCACGGATGAGAATGGGAACCGCTTGGGGGAGTCGGCGAACGCTGCGAAACAAGCCATCACGCAAGTTGT
CGTGTCCAGGATTCTCATGGCAGCCCTGGCATGGCCATCCCTCCATTCAATTATGAACACTTTGGAAAAGAAAGC
CTTTTTGAAGAGGTTCCCATGGATGAGTGCACCCATTCAAGTTGGGTTAGTTGGCTTCTGTTTGGTGTGTGCTAC
ACCCCTGTGTTGTGCCCTGTTTCCTCAGAAAAGTCCCATGTCTGTGACAAGCTTGGAGGCCGAGTTGCAAGCTAA
GATCCAAGAGAGCCATCCTGAATTGCGACGCGTGACTTCAATAAGGGATTG**TAA**AGCAGGGAGGAAACCTCTGC
AGCTCATTCTGCCACTGCAAAGCTGGTGTAGCCATGCTGGTGAGAAAAATCCTGTTCAACCTGGGTCTCCAGT
TACGGAAACCTTTTAAAGATCCACATTAGCCTTTTAGAATAAAGCTGCTACTTTAACAGAGCACCTGGCGTGGGC
CAAGTGCCGTGATACTCCCTTACACTGAATCATGTTATGATTTATAGAAATACCTTTCCTGTAGCTTTTATAGTCA
TTGTTTTTCAAAGACGATATACCAGCCCTCACCCAGGTTTTAAAAAGCACTGGTAGGCATAGAATAGGTGCTCA
GTATATGGTCAGTAAATGTTCTATTGATTATCAATCAGTGAAAAAAAAAAAAAAAAAAAAAGGAGATTATAA
AAGGGATGATGAACATGGAGCTGCATCTTTTTAAACGTTGTTTTTGTATGCTTCAGACTCTTAATGCTTTTATAT
AAAGCTATCAACTGTATGTTGATCACAGTTTATAAGAAAGAACAAATCAAGATTGGCAATCCTTGCCGATCTTTT
AGAAATACCTTTTCTGGAGAAAAAAATCCACATGAAGTGCAATAAGCTTATAAAGCTAAGTAGTTATTAATATT
TCTATTAACATGATACAAAGGATGATGATTGTAAGTGTTTACTGACTGGCAGCTTTTATTTTCAGTATTAGCACAG
CGTCTTGCCAGTGTGGAGGCCATGTATTATTTTCAGTTCAACTGGATGAAATGTTAAATAAACTCAGAATGAAAA
AAAAAAAAAAAAAAAAAAAA

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FIGURE 1396

MSGELPPNINIKEPRWDQSTFIGRANHFFTVTDPRNILLTNEQLESARKIVHDYRQGIVPPGLTENELWRAKYIY
DSAFHPDTGEKMILIGRMSAQVPMNMTITGCMMTFYRTTPAVLFWQWINQSFNAVVNYTNRSGDAPLTVNELGTA
YVSATTGAVATALGLNALTKHVSPLIGRFVPFAAVAAANCINIPLMRQRELKVGIPVTDENG NRLGESANA AKQA
ITQVVSRILMAAPGMAIPPFIMNTLEKKAFLKRFPWMSAPIQVGLVGFCLVFATPLCCALFPQKSSMSVTSLEA
ELQAKIQESHPELRRVYFNKGL

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FIGURE 1397A

CCGGCCCCGGCCCCGGCCCCAGCCGCTCCTGCTGGGCGCCCCAACCGGGTCCGGCCCCGGGGGGCGGGGGCCGC
GGCCGCCGAGGATGGGGAAATCCAACAGCAAGTTGAAGCCGAAGTTGTGGAGGAGCTGACCAGGAAGACCTACT
TTACCGAGAAGGAGGTCCAGCAGTGGTACAAAGGCTTCATCAAGGACTGCCCCAGTGGGCAGCTGGATGCGGCAG
GCTTCCAGAAGATCTACAAGCAATTCTTCCGTTCCGAGACCCCCACCAAGTTTGCCACATTTGTTTTCAACGTCT
TTGATGAAAACAAGGACGGGCGAATTGAGTTCTCCGAGTTCATCCAGGCGCTGTCGGTGACCTCACGGGGAACCC
TGGATGAGAAGCTACGGTGGGCTTCAAGCTCTACGACTTGGACAATGATGGCTACATCACCAGGAATGAGATGC
TGGACATTGTGGATGCCATTTACCAGATGGTGGGGAATACCGTGGAGCTCCCAGAGGAGGAGAACACTCCTGAGA
AGAGGGTGGACCGGATCTTTGCCATGATGGATAAGAATGCCGACGGGAAGCTGACCCTGCAGGAGTTCCAGGAGG
GGTCCAAGGCAGACCCGTCCATTGTGCAGGCGCTGTCCCTCTACGACGGGCTGGTATAGTCCCAGGCTGGAGCTG
GATGCCTGGGAACCACTCACCTCCTTCTGTGCCATGAGGCCACCTCAGCCCTGACACCAACCCCGTGCCTCCACC
CAGCCTTCTTCCGCATCCACACACAGCCGGCTGCCCTTGACCCGGGAGGCCCCGGCTCTCCTCTCCCCTGTCTCTG
CACCCATCCCCCGCTGAAGCCACCGGCTCCAATTGCCAGCAACCTCTGCTTGTCCGAAAACGACAACACGAAA
TGGAAAAGGCTACAGCCCTCTGCATAAACCAAGGACTTGGCTGCCTCGCAGGCAGCCTCCGTTCTCTCCGCTCTC
TTGCGCGTGTGCTTTTGTTTTTTATTTTGAACAGACGTTTTTAAAGAAAAAACAACCTACCTTCTGTCTCTAGA
AGACACAGACTGACAGATGGGGTGAAGGCCTGGGGACCTCAGAGAACTCTGCCTTGCCCTCGTCCCTCGTCCCTTC
GGCAGCCGGAGAGGCTGTGGGTGGGCGAGGGTGTCTAGGGGTTCTGCCTAGTCAACGTTATTTGTGCTCCCATC
TTTTGGCAGCAAAACCACTGCGTGGCTAGGATGATTAAATTATGAGGATGATGATTTTTTTTTGTGATAACAGTAT
TGTGCTTTTTTGTGGGGAAGTGAGGTTTTTTTTTATATACATATATAATTGATATCTTTAATTTATTGGTTGTT
AACTGTTGCTGCTGCCTGGTGTGTCTCAGCTCCAGGGCTGCGGGCCACCGTTTACATGTGCACGCCCTGACC
CACCTGCCCCACGCCGACTTGGGAGGATGGTGGCCTGCAGCGGCCAAGAAGCCAAAAAAATTTTTTTTTTTTTCAG
ATACTGTGCTTGATTTTTTGGAGAGGGGAGAGGTGGAATTCCTAAATGGCTAATGCACTGTTCCCTCCAGCCCGA
ATGCCTCCTGCCAAACCCCTTTTCCCTGCTGCCTCTGTCCCCGCATCCTTGTCTCCCTGGGTCCGTAACATTT
TTCCGAGGATGAACAGGGGACATCTTAGGTTTTCTCAACTCTTGCTTTGGTGTGTGCCGCAGCATGAAAACAG
GGCCCTAAGGCTGGGAGCTGGAAGAAGGGGCATTGGGTACCCAGGCAGAGTCAGGAGAGGTGGTCTTTGAAGTA
AGTTAGCAGAAATCAAGGGGACCCCGCCTCCTTGGGCTGGGGAGGGGATTTCAGATAGTTCATAACTCTCTCC
CGCTCTGCCTTCCCTCCTTCTATCTGCTTTTTTCCAGTAACTGCATGGTGTCTTCCCTGGCCTTCTCTTGGCT
CAAAGGCTGGGAGGGAGGGAAGGAGAGAAGAGTTCCAGGCAATCCCATCAATATAGTCCCTACACCTGGGGCTGC
GGCCACATGTCTTCACGGAGGCTTCCAGCGGTGCCTGCCACTGAGGCAGGTGCGGCCCCAGGACCATCACCAGG
AATGCGAGGCCACCTGGACCAGAGGTAGGAGCCCAAGGTCCGGCCCTTGCTCTTTGATTGTGGGCAGCCTCCTG
CCCTCTCTGGGTCTCAGTTGCCCCATCTGCAGAGCGAGGAGGCCCGGGCTGGTTGGTCTTGAAGGCCCTTTTCCA
TGCCGACATCATGTCACTCTAGGCCTGGGGTTAGTTTTCTGTGGCTGGTGTGCTGTGGTTAAGTTTGCTTGAC
CCCAGCAGCCCCGAGGGACTGTCTGAGTCACAGCACAGCCCCCTATTGCGTGGCTGCTGGTGTGTGGGGTCACTTCC
AGCAGATGAATGTGTATGTGGCACACCTTGTCCCTTCCCGCAGCATTTTCTGGTTCCCCCAGACCCCTTGAGCG
CTCTTTGGGACCCAGAAGGAGTCTTGCACAGGGAAGGCTTGAGGTGAGAAGCCGCTTCCAGACTGTGAGGGCC
AGGCCTGGGTCTAGAATTCTTGCTGCTGCTTTGCAGAGTCAACAGCCCCATCAGCCCATGTTTTAGAGGGGACACT
TTGGTCTCGGTTCCCAACCTCAGCAAGCAGGCCTCCAGCCCCAGGAAGGCCCTTGCCGTAGTGACGTTGCCGTG
TGGGGCTGCGTGGCTGTTCCTTGGCTGGAGCATTAGCCAACCCAGCGTCCCCCTGAGGCGTTTATTGGCA
GCCCCCTAGGACTGCACGCTGGCCCCACGGTAACCCCCCTCCCCACCAACATCCTGCAGGGATGGGGTCACTG
GTTCCACCTTACAGGCCACTTTGAAGGGTGGATTCTTTGAGGCCCTGCCAGTCGGCTCCCTGCTCAGCTGCTG
GCCCCGGGCGACCTGGGACTCAGCACCAACGGCTGAAGTTTCTCAGCTGGGCTCTGACCTGGGGTCTGGGGCAGGG
AACGAACATGGTGGCTTTGGGCTGAGAGGATGAGGGAGGTCTTTCCAGGTCAAATTACTTTCTTTGGCCTCTG
CCTGAGGCTCGATTTGCCTCTCTGGTCCAATGGGACTGACACTGTTGTACAACCTGACCTGTGGCTGAGGGTGTG
TGGGCTTAAGCATGTGGACCCCTTCGGTGTGTCTGGCCTTCTCCATCGTCTGCCCTTTGGCCTTTTGGTTTGA
AGCCACAGGTGTGGCTTCTGGCCTTAGCAGATGGTATGCTTGGGACCGCAGCCAGCATGCCGTTGGGGCCACA
GCCCAGCCAGCCAGAGCTGCCGAAGGGCCGCCCTTCCCGGCCCTGGCGGGGTGCTGGACACTGGCCATTTTC
ACTAGAGTTTGCTGGCAGGGACCGATCTCTGCCCCCTCCTCTCCCCAGGCCTCTGGCTGCAGTGATGCCGAGA
ATCCTGAGCCAGGTGCCCTCTGAGCAGCCCGTGCCTCTCTCCACAGCGCGCTTGGCCACCAATGCGGCTCGCTT
CAGATGCTCTGATGCAGAGGGCACGCCCATAGTCCCTCTGCAGAGCCTCGCACTGGGGCCAGGGCAGGCACACAG

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FIGURE 1397B

CCCAGGCGGCCAGTCGGCCACGGCCTGTCCTCTTCCTCGTAGCGTCTGCTCCTCACTTTGTGTTGATGGTGA
AGGAGAATGTTCCGATTTTCCATGATCTAAGCAGGCCACGTTTAAAATAACATCAAGGCAAGCGTACGTGTCACC
CTCTGTACTGACATCTCCTCCCCTGAAATGCTTTTCAGTTTGACAGCCCGTTTCCTAGACAAGTGCACCTGGGGT
TTCAGGAACTTTGTGTTTTTTCGGAGGGGGTTGGTGGGGAGGTCGGGATGCCTGGGATCCCTTCCTGGAGAGGCA
GGCTGTCTCTGGAAAAAGCCTCCATTGCCCACCCGCCAGGCGGAAAGTCACCCTGTTCCCAGCGCGGTTTCAGCA
TTTAATTTTAAGGGAGCTAAGGAAGCGCGGCGCGCCCCCTGGTGGTGGTAAGCCGCCAACGCACCTGGGGGCTGC
AACCCACCGGACGGGTGGTCCGGAGGGAGGCTGGAGCGGGGAGGCGAGGAGGGGGCTGTGAGTCCTCAGAGGCC
CTGGGCCACCACATTTCTGGCAGCGTTTCCCAGACACCCCTCTGCTAGGCCATCCCTGGATAGCAAGTGAATTAA
CTTAAGGGCACTGTGATGGGAAGCCTTGCCCCCTCTTTTTTTTTTTTTTTAATATCTGCGGAATAAACCCAA
TGGTTAATTTTGAATGAATAAAAGGCTTTTGTGAATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1398

MGKSNSKCLKPEVVEELTRKTYFTEKEVQQWYKGF IKDCPSGQLDAAGFQKIYKQFFPGDPTKFATFVFNVDEN
KDGRIEFSEFIQALSVTSRGTLDKLRWAFKLYDLNDGYITRNEMLDIVDAIYQMGNTVELPEEENTPEKRVD
RIFAMMDKNADGKLTLLQEFQEGSKADPSIVQALS LYDGLV

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FIGURE 1399

GTCACCCCCAGCGGGCGCGGGCCGGAGCACGGGCACCCAGCATGGGGGTACTGCTCACACAGAGGACGCTGCTCA
GTCTGGTCCTTGCACTCCTGTTTCCAAGCATGGCGAGCATGGCGGCTATAGGCAGCTGCTCGAAAGAGTACCGCG
TGCTCCTTGGCCAGCTCCAGAAGCAGACAGATCTCATGCAGGACACCAGCAGACTCCTGGACCCCTATATACGTA
TCCAAGGCCTGGATGTTTCTAACTGAGAGAGCACTGCAGGGAGCGCCCCGGGGCCTTCCCCAGTGAGGAGACCC
TGAGGGGGCTGGGCAGGCGGGGCTTCTGTCAGACCCCTCAATGCCACACTGGGCTGCGTCTGTCACAGACTGGCCG
ACTTAGAGCAGCGCCTCCCCAAGGCCCAGGATTTGGAGAGGTCTGGGCTGAACATCGAGGACTTGGAGAAGCTGC
AGATGGCGAGGCCGAACATCCTCGGGCTCAGGAACAACATCTACTGCATGGCCAGCTGCTGGACAACCTCAGACA
CGGCTGAGCCACGAAGGCTGGCCGGGGGGCCTCTCAGCCGCCACCCCCACCCCTGCCTCGGATGCTTTTCAGC
GCAAGCTGGAGGGCTGCAGGTTCTGTCATGGCTACCATCGCTTCATGCACTCAGTGGGGCGGGTCTTCAGCAAGT
GGGGGGAGAGCCCGAACCGGAGCCGGAGACACAGCCCCACCAGGCCCTGAGGAAGGGGGTGCAGGAGGACAGAC
CCTCCAGGAAAGGCAAGAGACTCATGACCAGGGGACAGCTGCCCGGGTAGCCTCGAGAGCACCCCTTGCCGGTGA
AGGATGCGGCAGGTGCTCTGTGGATGAGAGGAACCATCGCAGGATGACAGCTCCCGGGTCCCCAAACCTGTTCCC
CTCTGCTACTAGCCACTGAGAAGTGCACCTTAAAGAGGTGGGAGCTGGGCAGACCCCTCTACCTCCTCCAGGCTGG
GAGACAGAGTCAGGCTGTTGCGCTCCACCTCAGCCCCAAGTTCCCCAGGCCCTGAGTGGGGTGGCCGGGCGGGCCA
CGCGGGACCGACTTTCCATTGATTCAGGGGTCTGATGACACAGGCTGACTCATGGCCGGGCTGACTGCCCCCTG
CCTTGCTCCCCGAGGCCTGCCGGTCTTCCCTCTCATGACTTGAGGGCCGTTGCCCCCAGACTTCCTCCTTTCC
GTGTTTCTGAAGGGAGGTACAGCCTGAGCTGGCCTCCTATGCCTCATCATGTCCCAAACCAGACACCTGGATG
TCTGGGTGACCTCACTTTAGGCAGCTGTAACAGCGGCAGGGTGTCCAGGAGCCCTGATCCGGGGGTCCAGGGAA
TGGAGCTCAGGTCCCAGGCCAGCCCCGAAGTCGCCACGTGGCCTGGGGCAGGTCACTTTACCTCTGTGGACCTGT
TTTCTCTTTGTGAAGCTAGGGAGTTAGAGGCTGTACAAGGCCCCCACTGCCTGTGCGTTGCTTGATTCCCTGAC
GTAAGGTGGATATTAAAAATCTGTAAATCAGGACAGGTGGTGCAAATGGCGCTGGGAGGTGTACACGGAGGTCTC
TGTAAGCAGACCCACCTCCCAGCGCCGGGAAGCCCGTCTTGGGTCTCGCTGCTGGCTGCTCCCCCTGGTGGT
GGATCCTGGAATTTTCTACGCAGGAGCCATTGCTCTCCTAGAGGGGGTCTCAGAACTGCGAGGCCAGTTCCTT
GGAGGGACATGACTAATTTATCGATTTTATCAATTTTATCAGTTTTATTTATAAGCCTTATTTATGATGTA
TATTTAATGTTAATATTGTGCAAACTTATATTTAAACTTGCCTGGTTTCTAAAAAAAAAAAAAAAAAAAA

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FIGURE 1400

MGVLLTQRTLLSLVLALLFPSMASMAAIGSCSKEYRVLLGQLQKQTDLMQDTSRLDPYIRIQGLDVPKLRHCR
ERPGAFPSEETLRGLGRRGFLQTLNATLGCVLHRLADLEQRLPKAQLERSGLNIEDLEKLQMARPNILGLRNNI
YCMAQLLDNSDTAEPTKAGRGASQPPTPTPASDAFQRKLEGCRFLHGYHRFMHSVGRVFSKWGESPNRSRRHSPH
QALRKGVRRTRPSRKGKRLMTRGQLPR

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FIGURE 1401

GCTGTGGACGAAGAGGCGGCCTCGGTGGTAAGTGGCGGCCGCTGGGACCCAGCCAGGTACCGGTCCGGCTCGGCC
CTGCCCCCTTTCCGGCCGCTCTCACTCCTTCCCTCGGCCTCGAGTTCTCTCGTGGGCCCGTGGGGCCGCCGCGGGG
TCGGGGCTGCGAGGCAGCGCCCGCCGTTCCATGGTAAGCGGTGCTACGGGACGTTTCGGAAGGAAACCTCGCTAGA
GCAGGGGACGCCTGGGCTCCTGGCTTGACCACGGGGCCTTTGCACGGCCAGGGCTTTGCGACCGCAGTGTCTTCCT
TCTGTCCCCGGTCGTGCGCCGTGCCCCCTCAGCGCGGCTCACGTTTCGGAACACGTCTGCCTTTCATGCCTCCCGA
AGAGCCTCCCCGCATCCCGTGCCCCCTGCTCGCTGCTGCCGCTGACCCCTGGGCGCTGCGCTGGTCCAGAGCGTG
TTGTCTCTGACGCCGTCAGAACCTGAGCTCCCTGCGAGCTGGGACTCCGCCGTGTCTTCATTGCCTCCAGTGCA
AAGCAACTGCTTGCAAGAGAACAAAAGTGTGTTTCAGGTGCACAGAGTAGAAAATTCAAGGAGCCTGAAAGGGTAT
TTGGTGAAGACTTGATGTGTTTTTCCCAGTCCTAACCTCCAAGGCCAGTTCTCCCCTGGGGCAGAGGGAAACCC
GTTTCTTACGGGTCTGCAAAGAAAGTCTATGCAGGAACATCTACGTGCGTTTCTGCAAAGGTCAGTTACTTTAC
TTGGGGCTCTTATACTTAACGTAGCTCGGAGAGCGCCCCATGCATTTCAGATACAGGTGGGATTCTCCGGAAACG
GAGTTTTATAGCACCAGACTTTATCCCTTTTCTGTAGAAATTTAGGGTTTTTGCTGTCTTTTATAACGAACAAT
GCTAGCTTGACTATTGCTTGTACAAACCGTTTTTTGCCCAAGTCGGACTATTTTCTTAGGTTAAATTCCTTGGTG
CAGAAGTGCAGGGGCTGTATTTAGGCCCTTAAAGGGGTGGTACCAAATCGCCCTCCCCACCAGCATAAGAGGGG
GCCGGCGACACCTTGCCCAAGCTGGATTTTGCAGACCTGGTAGGCGTGAGATAGTATTTACTGTAGCTTGTGT
TTCTGTAAGTATAGTCGAACGTCGTGATGTTCTGTACATCTATGTTACGTTGATCATTGTTACCACTGACAG
TCGTTTCGAGATTGGAAAATATGTTTATTATAAACGTTTGACTATTTAAAAGCCATTTGTATT

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FIGURE 1402

AVDEEAASVVSGGRWDPARYRSGSALPLSGRSHSFPRPRVPRGPFVGAAAGSGLRGSARRSMVSGATGRSEGNLAR
AGDAWAPG

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FIGURE 1403

AACAACTTTCTTTTATTAAAAATGTACATAAGTAAAAGGAACGTGGTTTAATTGTGCAAAGAGTAAGAAATACAG
ATGAGCAAATAACACGTATTAAAGCCACCTACGATATACCACCCAGAAGTAACCAGGCTGTTGAATTTTATAGAGA
CTGGGGTGCAAACACATTTTTTCACTCCCTTGTCATATATCTGGGAGCTCTGCCATATACAGACACAGACGCGG
TGTCCACAGGCGATGCCTCTGCTGGGAATGCTGCAAGCAGGAGTCTATCCTTTTCTGGTACTGGCTCGGGGGCCC
TCCTCAGCGCCCAGGTCACTCTAGCATCCAGGAGTCCAAAGGCCCGGCTGTGCAGGCTGCAGAGGTGATCTTGGT
GTGTTTTCTTCCAATAGGCTACAACTCTGGCACCCATGGCTGGTGGCTGGCATTCAACTCTCCAGCAGCCAGGG
AGTCCATTTTCTTGTTTCTCTGCTGGCCATCCTCAGGACTTGCGGCGGGGAGTGGGGGGCCCAGGGTGTGCTGCC
ACCTCGCCCGGCGCGGGTTGCGGCCCCAGGGCCCGCGCTCCAGGCTG

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FIGURE 1404

GCGCGGCCCATGGAGTCGGGGCTGCTGCGGCCGGCGCCGGTGAGCGAGGTCATCGTCTGCATTACAACCTACACC
GGCAAGCTCCGCGGTGCGCGCTACCAGCCGGGTGCCGGCCTGCGCGCCGACGCCGTGGTGTGCCTGGCGGTGTGC
GCCTTCATCGTGCTAGAGAATCTAGCCGTGTTGTTGGTGCTCGGACGCCACCCGCGCTTCCACGCTCCCATGTTT
CTGCTCCTGGGCAGCCTCACGTTGTCTGGATCTGCTGGCAGGCGCCGCTACGCCGCCAACATCCTACTGTCTGGGG
CCGCTCACGCTGAAACTGTCCCCCGCGCTCTGGTTCGCACGGGAGGGAGGCGTCTTCGTGGCACTCACTGCGTCC
GTGCTGAGCCTCCTGGCCATCGCGCTGGAGCGCAGCCTACCATGGCGCGCAGGGGGCCCCGCGCCCGTCTCCAGT
CGGGGGCGCACGCTGGCGATGGCAGCCGCGGCCTGGGGCGTGTCTGCTCCTCGGGCTCCTGCCAGCGCTGGGC
TGGAATTGCCTGGGTGCGCTGGACGCTTGCTCCACTGTCTTGCCGCTCTACGCCAAGGCCTACGTGCTCTTCTGC
GTGCTCGCCTTCGTGGGCATCCTGGCCGCGATCTGTGCACTCTACGCGCGCATCTACTGCCAGGTACGCGCCAAC
GCGCGGCGCCTGCCGGCACGGCCCGGACTGCGGGGACCACCTCGACCCGGGCGCGTGCAGAGCCGCGCTCGCTG
GCCTTGCTGCGCACGCTCAGCGTGGTGCTCCTGGCCTTTGTGGCATGTTGGGGCCCCCTCTTCTGCTGCTGTTG
CTCGACGTGGCGTGCCCGGCGCGCACCTGTCTGTACTCTGCGAGGCCGATCCCTTCTGGGACTGGCCATGGCC
AACTCACTTCTGAACCCCATCATCTACACGCTCACCAACCGCGACCTGCGCCACGCGCTCCTGCGCCTGGTCTGC
TGCGGACGCCACTCCTGCGGCAGAGACCCGAGTGGCTCCCAGCAGTCGCGCAGCGCGGGCTGAGGCTTCCGGGGGGC
CTGCGCCGCTGCTGCCCCGGGCCTTGATGGGAGCTTCAGCGGCTCGGAGCGCTCATCGCCCCAGCGCGACGGG
CTGGACACCAGCGCTCCACAGGCAGCCCCGGTGACCCACAGCCGCCCGGACTCTGGTATCAGAACCGGCTGCA
GACTGACACCCTCGGCCCCAGACTGTCTTCCCAAGTTTTACAGACTTGTCTTTTTTACATAAAGGAATTTGTAGG
AAATGCAGCCAAAGGTGCAGTCGGAAAAGATGCAGGGGAAATGTATTTATGCAGCGACACCCCAATGTGAACA
AACAGACAAAAATCTGTGCCCTCGTGGAATTGACGTTCTGCTTGGGAACACAGAAAAGAACTCGGTGATGAAAT
AATGGAGATGATTCCAGTGACAAACGACAGAGATGGTGATGGTGGTCAGGGAAGACCTCTCTGCAGAGGTAGTGA
CTTGTGATGTGAGCTGAGACCTCTGTCTGCTGGGAAGACCAAAAAGAAAAGCATTTTACAGGATGAGGGAATGGCATGCG
CAAAGGCCCTGAGGCTGAAATGTGCCCATGTGTTCTAAGAAATGCAGCGATGCTGGTGTGCCTGGAGCAGGGACG
GAGGGGGAGAATGGGAGGAGACAAGGAGCTGAAGGAGTAGTTCCCGAAGGACCTTGTGGGTGATATAGAGGACTT
CGCTTTTGTCTGAGTGAGGTGGGAGCCATAGAAGCTTCTAAGCAGAAGAGGGACTTGCCCTAATTCAGGTGATC
ACAGGTGTCTTGTGGCTCCATGGGAGGTTGAAAACACAGAAGGTGAAGGGGGGCTGCACTGAGCCACAGGAAC
AATGATGGAGATTCCAGCTAAGCCCAGACCCCGTGGATTCTAGATAGATTTTAGAGGCAGCAGACAGAATTACTG
AGGAATTGAGTGTAAGAGTGGAATAAAAGTTATCAAGGACAATGCCAAGGGTGGGGCACCCCCAAATTTGACTTGT
GGAGACTCAGCCAAATCCTATCTGGTAATAAAATTTCTTTTTTATTTTTCTTTTCTTTCTTTCTTTCTTTCTTTCT
TTTTTTTTTTTTTGTAGTTGGGATCTTGTGCTCTGTCAACCAGGCTGGAGTGCAATGGGCACAATTATAGCTCACT
GCAGCCTGGAACCTCCTGGGATCAAGCCTGGAGTTCTTGCTTCAGCCTCCCTAGTAGCTGGGACTACAGGCATGCA
CCACCATGCCAGTTAATAAAATTTCTTCAAATGCAAAAAAAAAAAAAAAAAAAAAA.

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FIGURE 1405

MESGLLRPAPVSEVIVLHYNITGKLRGARYQPGAGLRADAVVCLAVCAFIVLENLAVLLVLGRHPRFHAPMFLLL
GSLTSLDLAGAAYAANILLSGPLTLKLSPALWFAREGGVFALTASVLSLLAIALERSLTMARRGPAPVSSRGR
TLAMAAAAGVSLLLGLLPALGWNCLGRDACSTVLPLYAKAYVLCVLAFAVGILAAICALYARIYCQVRANARR
LPARPGTAGTTSTRARRKPRSLALLRTL SVLLAFVACWGPFLLLLLLDVACPARTCPVLLQADPFLGLAMANSI
LNPIIYTLTNRDLRHALLRLVCCGRHSCGRDPSGSQQSASAAEASGGLRRCLPPGLDGSFSGSERSSPQRDGLDT
SGSTGSPGAPTAARTLVSEPAAD

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FIGURE 1406

ATGTATAGTATTGCTCACGTTAGCAGTTTTCTGTAAGGAGGGCAAGTGTGAGGATAATAGGTGGACTTTTTACTC
ACCTATTTTACCACAATCTCACCTGCAGGTGATGGTCAATGCTTGCTGCTCCATCTTTATTCATCGTTAATGTT
AATTTATGACAACCTCAGGGGGAAAAACATTAACAAGCCTAGTTTGGTTACAGGTACACACAAGCTTGAATATTTCT
CTGCACTGAAATGAAAGTGGCATAGTTCATCACACCTGCTACATTTTGTAGAGCATCTTATCAGCCATAGAAAT
AGGACAATCTATAAACTTTGGGGAGGGTGGGGGAGGAAATGACAAAGTGTCTGTCAAAAACAGGCATAATCTAA
AACAAGGTGGATGTAGCAAATCTCTGTCACCTGCTTGAGAACTTTGAGCTTGTGGCAGTTTTGCAGACTTACATGA
CTTCAGCACTTTACGACATATTTTTTACTATGAATGTTCAATACAATTTAATATTTATAACTGATTTCTGAGGGA
TCTGCTCCATGTCTATTCTGTTATCTGCATGAAAACAAAATGTATGCCAATTTTCAGTATGTCAATAATCAAGGTT
TTAAATGTTTGGAAGAAAATACAAACAAGATTGCTGATCTGTTCTGTATTAGTGACATTCTGGTACTTCTAGATT
TGCAATAAATTTATGGATTTTTTATTTAAAGAGA

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FIGURE 1407

CIVLLTLAVFCKEGKCQDNRWTFYSPILPQSHPAGDGQCLLLHLYSSIMLIYDNSGGKT

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FIGURE 1408

GAAGTTTTACTATGTTTAATAATTTAGTGAAATTTGGGCTATGTGTTTAT**TG**ATTTCAGCTCAATCCAGAGGAAAA
TTTTAAAGGCTTACAGCCTTAGGATTATAGGATACTATATAATACTTTTGGTACAGAGATAGAATTAAATAACAT
AAAAATCAAAAATTTATTAGGCTAAAAATTTGAGGGGAGAAGTGGTATGAAAATACAAATTCAAGGAGTAAAAGGA
AAAGTGGGGCATTCCCTTGCTACTAAAAATTGCCTTGTTCCAGGTAAGACTGATCATAAAAAAATGGCCCTGTTC
TAAAAATTTTAAAAAGATCATAGTATCTATCAAATAACTTATATTAGAACCTCCTGGGCTAAATTTAAAAAGTA
ATACAACAGTTTTTATTTAAACATGTAGTGTCTACGGTATGCCAGCACTTTGCAGCTATTTATAATGAGAAATTTT
AGATGTCAATATAGCAATGTGCAAGAAGATAGAGATTTTCAAATTCACCTTAAGAGTATCTGAGCATAAAATGTT
AAGATTGCTGATCGGATGTGAGGGCGATCTGGCTGCGACATCTGTCACCCATTGATCGCCAGGGTTGATTCGGC
TGATCTGGCTGGCTAGGTGGGTGTCCCTTCCTACCTCACCGCTCCATGTGCGTCCCTCCCGAAGCTGCGCGCTC
CGTCGAAGAGGACGACCAACCCCGATAGAGGAGGACCGGTCTTCGGTCAAGGGTATACGAGTAGCTGCGCTCCCC
TGCTGGAACCTCAAACAAGCTTCCAAGATTGCTGATCTAGGGCCACTAAGTGATGAAGCAAAAAGGATGGCTAA
AAAGGACCTCAACCCTTTTGACTTTAAAAGGAAAAATAGCTTAACCTTCAACCTGTGTGACATTTAACTTTTTGAA
CCCAACCGTAAAAGCTATCTTCTAACCAACAAAAAGTTAATAATTACATTTGGAATTATACAGAATTAGAAAATT
GGCATTAAAAATACTCAATAATTTGTCCCTGGTTTTTAATTTTCAAATATTTTCTTTTTGAAGAGCCAGATTC
CAGTGATCCTGCCTCTCAGAAATTTCCACATTTCTATTTTTCATTAGGCCTTAAGAAGCTGCATTTGTAAACTT
GTGTTTCATTATTAAAGCTTAATTTATTTTTATATAAATAGTATGTGCTTTGTGTACATAGAGAATTAAGTGAA
TGAGTCACACAGATGTTGGCTGTTGTTAATGTGAAAATTAAACAGCTGTATCACATTTTGAAAAATAAAAGTTTC
ATCTGAATGAATATAGCAAAA

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FIGURE 1409

SFTMFNNLVKFGLCVY

AGAGCGAGGACGAGGAGGAGGAGACGAGTAAAAAGGGGAGGACCGGTGCGAGTGAGGCAGCCCCGAGGCTCTGCTC
GCCACCACCCAATCCTCGCCTCCCTTCTGCTCCACCTTCTCTCTGCCCTCACCTCTCCCCGAAAACCCCTTT
ATTTAGCCAAAGGAAGGAGGTGAGGGGAACGCTCTCCCTCCCTTCCAAAAACAAAAACAGAAAAACCCCTTTT
CCAGGCCGGGGAAAGCAGGAGGAGAGGGGCCCGGGCTGGCCATGGAGCTGCTGTGCCACGAGGTGGACCCGG
TCCGACGGGCCGTGCGGACCACAACCTGCTCCGAGACGACCGCGTCTGCGAAGCTGCTCACCATCGAGGAGC
GCTACCTTCCGACGTGCTCCTACTTCAAGTGCCTGCGAAGGACATCCAACCTTACATGCGCAGAATGGTGGCCA
CCTGGATGCTGGAGTCTGTGAGGAACAGAAGTGCAGAAAGAGGTCTTCCCTCTGCCCATGAATTACCTGGACC
GTTTCTTGCTGGGTCCCGACTCCGAAGTCCCATCTGCAACTCCTGGGTGCTGTCTGCATGTTCTTGGCCTCC
AACTCAAAGAGACCAGCCCGCTGACCGCGGAGAAGCTGTGCATTTACACCGACAACCTCCATCAAGCCTCAGGAGC
TGCTGGAGTGGGAACCTGGTGGTGTGCGGGAAGTTGAAGTGAACCTGGCAGCTGTCACTCCTCATGACTTCATTG
AGCACATCTTGCGCAAGCTGCCCCAGCAGCGGGAGAAGCTGTCTCTGATCCGCAAGCATGCTCAGACCTTCATTG
CTCTGTGTGCCACCGACTTTAAGTTTGCCATGTACCCACCGTCGATGATCGCAACTGGAAGTGTGGGAGCAGCCA
TCTGTGGGCTCCAGCAGGATGAGGAAGTGAGCTCGCTCACTTGTGATGCCCTGACTGAGCTGCTGGCTAAGATCA
CCAACACAGACGTGGATTGTCTCAAAGCTTGCCAGGAGCAGATTGAGGCGGTGCTCCTCAATAGCCTGCAGCAGT
ACCGTCAGGACCAACGTGACGGATCCAAGTCGGAGGATGAAGTGGACCAAGCCAGCACCCTACAGACGTGCGGG
ATATCGACCTGTGAGGATGCCAGTTGGGCCGAAAGAGAGAGACGCGTCCATAATCTGGTCTCTTCTTCTTTCTG
TTGTTTTTGTCTTTTGTGTTTTAGGGTGAACTTAAAAAAAATTCTGCCCCACCTAGATCATATTTAAAGAT
CTTTTAGAAGTGAGAGAAAAAGTCTACGAAAACGGAATAATAAAAAGCATTGGTGCCTATTTGAAGTACAGC
ATAAGGGAATCCCTTGTATATGCGAACAGTTATTGTTTGATTATGTAAAGTAATAGTAAATGCTTACAGGAAA
ACCTGCAGAGTAGTTAGAGAATATGTATGCCTGCAATATGGGAACAAATTAGAGGAGACTTTTTTTTTTCATGTT
ATGAGCTAGCACATACACCCCTTGTAGTATAATTTCAAGGAAGTGTGTACGCCATTTATGCGATGATTAGATTG
CAAAGCAATGAAGTCAAGAAGGAATTGAAATAAGGAGGGACATGATGGGGAAGGAGTACAAAACAATCTCTCAAC
ATGATTGAACCATTTGGGATGGAGAAGCACCTTTGCTCTCAGCCACCTGTTACTAAGTCAGGAGTGTAGTTGGAT
CTCTACATTAATGTCTCTTGTGTCTACAGTAGCTGTACCTAAAAAAGATGTTTTATTTTGGCAGTTGGACA
CAGGTGATTGGCTCCTGGGTTTCATGTTCTGTGACATCCTGCTTCTTCTTCCAAATGCAGTTCATTGCAGACACC
ACCATATTGCTATCTAATGGGGAAATGTAGCTATGGGCCATAACCAAACTCACATGAAACGGAGGCAGATGGAG
ACCAAGGGTGGGATCCAGAATGGAGTCTTTTCTGTTATTGTATTTAAAAGGGTAATGTGGCCTTGGCATTCTTCT
TTAGAAAAAACTAATTTTTTGGTGTGATTGGCATGTCTGGTTCACAGTTTAGCATTGTTATAAACCATTCCATT
CGAAAAGCACTTTGAAAAATTGTTCCCGAGCGATAGATGGGATGGTTTATGCAAGTCATGCTGAATACTCCTCCC
CTCTTCTCTTTTGGCCCCCTCCCTTCTGCCCCAGTCTGGGTTACTCTTCGCTTCTGGTATCTGGCGTTCTTTGG
TACACAGTCTCTGGTGTCTCTACCAGGACTCAAGAGACACCCCTTCTGCTGACATTTCCATCACAAACATTCTCTCA
GACAAGCCTGTAACTAAAATCTGTTACCATTCTGATGGCAGAGAAGGATCTTAATTTCCATCTCTATACTTCTC
CTTTGGACATGGAAGAAAAAGTTATTGCTGGTGCAAGATAGATGGCTGAACATCAGGGTGTGGCATTTTGTTCC
CTTTTCCGTTTTTTTTTTTTTTTTTATTGTTGTTGTTAATTTATTGCAAAGTTGTATTACAGCGTACTTGAATTTTT
TTCTCTCCACTTCTTAGAGGCATTAGTTAGCAAAGAGGTGGAGCAACAACTTTTTTTTTTTTTTTTTGCACAA
TTGTAATTGACAGGTAATGAAGCTATTTGTTAAATATTTGCCTTTTTAAGTAAAAAAGAAAAATCAGAACAGGG
CTATTTGAAGAATTATTTTATACAGATTCTGCCTTGTTCATAGTATGAGGGTTGAAGACGGAAAAACAATCTA
AGGGTCTCTCATTTTTTTTTAATTTTGTGTTGTTTGTGTTTGGTTTTTTTTTTTTTTTTTGGCGTGTCTAAGAAGCTAAAG
TCATCCATCCTTATTCAGTTGACAGTACCTAGCTGTAATGTTTACAGAGTGTGCTGCTATTTTATAAACATTT
TTATAATATATTATTTTACTGCTTAAATTCCAAGTCTGAAGTAGATGGTTGAGATATGAGTTCTTCGTACTGGA
AAAGCCCTTCCGTAGTTTGTGTTTCTTCTGGTAGCATATTCATGGTTGTTTTTTTTTTTTTTTTTGGTTTTTTGG
TTTTTTTTTTTTTCTCTGATCACATTCTTCAAAGACGGAGTATTCTTTACCTCAGGTTTACTGGACAAAATCAAT
AACTACAAAAGGCAATGATTACAGCTTTTGTGTTTTCATAATACCTCACAAACCGTACAGTTTCTGCTTGGGAGCCCCA
TTCGCATGAGGAATACAGAAGCAGTGTGAGCAGGGCTGACTCCCTCTCAGGTGGAAGGCAGGGCGGTCTCACTCC
CAGGGACCTTTTGGTTCATGGAGGCCATCGGGCTCCCAGTTAGACCCTGGTATCCTCATCATGATGGAAAAAATA
CATTGAACCAAGGGATCCTCCCTCCCTTCAAGGCAGACGTTTCAAGTACAAACATTTATGCGGTAGGCTCAGATGT
CGTAATTTGCACTTAGGTACCAGGTGTGAGGAAACAGACTAAAAAGAATTCCACCAGGCTGTTTGGAGATCCTCA
TCTTGGAGCTTTTTCAAAGCGGGGCTTCATCTGCAAAGGGCCCTTTCATCTTGAAGTTTTTCCCTCCGCTCTT

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FIGURE 1410B

CCCCCCCCCTGGCATGGACACCTTGIGTTTAGGATCATCTCTGCAGGTTTCCTAGGTCTGAATCTGCGAGTAGAT
GAACCTGCAGCAAGCAGCGTTTATGGTGCTTCCTTCTCCCTCCTCTGTCTCAAACCTGCGCAGGCAAGCACTATGC
AAGCCCAGGCCCTCTGCTGAGCGGTACTAAACGGTCGGGTTTTCAATCACACTGAATTGGCAGGATAAGAAAAAT
AGGTCAGATAAGTATGGGATGATAGTTGAAGGGAGGTGAAGAGGCTGCTTCTCTACAGAGGTGAAATTCAGATG
AGTCAGTCTCTTGGGAAGTGTGTTTAGAAGGGTTCAGGACTTTGTGAGTTAGCATGACCCTAAAAATTCAGGGGA
TTTCTGGTGGGACAATGGGTGGTGAATTTTGAAGTTTTGGAGAGGGAAGTGGAGCAGCCAGCAAGTAAGCTAGCC
AGAGTTTTCTCAAGAGCCAGCTTTGCTCAGCACACTCTCCTGGGCCCAAGGAGTCCCACGGAATGGGGAAAGTG
GGAACCTTGGAGTTCTTGGGAATCTTGGAGCCTAAAGAGAAACCGAGGTGCAAATTCATTTTCATGGTGAAGTACC
CTTGAGCTTAAACAGAAGCAGCAAAATGAAAGAACCGGACAAATAAGGAAGGGCACAAGCCTACCCGACTCTATTT
ACAGTCTGTAACCTTTCCACTCTTCCTGTAGTCCCGAGGCCCTGGGTCTTCTAGCTTTTCTCTTTCCCATCCTT
GGGGCCTTGTGTGATGATGGGTGTGGGGCTGCCGATGGGAAAGTCGGGGGTGTTAGGCTTTTCTGCCTGCTCCT
GCTTAAACACAAGAAGGAATCCTGGATTTTGCCTCTCCTTAGCTCTTAGTCTCTTTGGTAGGAGTTTGTTCAC
GAGGAGCTCTCCCCCTTGGATTTGAACCTGCTCTTTTTGTGTGTGTGTCTTTCTCTTCTTTTCTTACCTCCC
ACTAAAGGGGTTCCAAATTATCCTGCTTTTTTCTACCTTGTGTGTGTCTATCTCGTCTTTACTTCCATCTGTT
TGTTTTTTTTCTCCATCAGTGGGGGCCGAGTTGTTCCCCCAGCCTGCCAAATTTTGATCCTTCCCCCTCTTTTGGCC
AAATCCTAGGGGGAAGAAATCCTAGTATGCCAAAAATATATGCTAAGCATAATTAACTCCATGCGGGTCCATAA
CAGCCAAGAAGCCTGCAGGAGAAAGCCAAGGGCAGTTCCTCCGCAGAACACCCCATGCGTGCTGAGAGGCGAGC
TCCTTGAAGAAGGGCTGTTCTTCCAGGAGGCCCTATTTTGAAGTGCCTCAGGACCCCACTGGAGAGCACAGCAT
GCCTTACTACTGGGTCTCCTTGGTCTATGTGCTCTGTACTGGAGGCTCTGTTCTGCCTCTTATCAGCCAGGTCA
GGGGCACACATGGCTTAAGTGACAAAGCCAGAGGAGAAGACAACCCTGACAGCATCACGCTGCATCCCATTGCTA
GCAGGATTGGCAACTCTTCAGACGGAGCTGCGCTTCCCTGCAGTCTAGCACCTCTAGGGCCTCTCCAGACTGTGC
CCTGGGAGCTCTGGGACTGAAAGGTTAAGAACATAAGGCAGGATCAGATGACTCTCTCCAAGAGGGCAGGGGAAT
TTTCTCTCCATGGGCCACAGGGGACAGGGCTGGGAGAAGAAATAGACTTGCACCTTATGTCATGTAAATAATTGA
TTTTCTAGTTCAAGAAGATAATATTGGTAGTGTGGGAATTGGAGGTAGGAAGGGGAGGAAGTCTGAGTAAGCCAG
TTGGCTTCTAAGCCAAAAGGATTCTCTTTGTTTATCTCTGAGACAGTCCAACCTTGAGAATAGCTTTAAAAGGG
AAATTAATGCTGAGATGATAAAGTCCCCCTAAGCCAACAAACCCTCTGTAGCTATAGAATGAGTGCAGGTTTCTA
TTGGTGTGGACTCAGAGCAATTTACAAGAGCTGTTCAAGCAGCCATCCATTTGTGCAAAATAGGGTAAGAAGATT
CAAGAGGATATTTATTACTTCTTCATACCACATGGCTTTTGAAGATTCTGGATTCTAAACAACCCAGAAATGGTCA
TTTCAGGCACAACGATACTACATTCTGTGTGTCTGCTTTTAAACTTGGCTGGGCTATCAGACCCCTATTCTCGGC
TCAGGTTTTGAGAAGCCATCAGCAAAATGTGTACGTGCATGCTGTAGCTGCAGCCTGCATCCCTTCGCTGCAGCC
TACTTTGGGGAAATAAAGTGCCCTTACTGACTGTAGCCATTACAGTATCCAATGTCTTTTGACAGGTGCCTGTCT
TGAAAAACAAAGTTTCTATTTTTTATTTTTTAAATTGGTTTAGTCTTAACTGCTGGCCAACTCTTACATCCCAGCA
AATCATCGGGCCATTGGATTTTTTCCATTATGTTTCATCACCTTATATCATGTACCTCAGATCTCTCTCTCTC
CTCTCTCTCAGTTATATAGTTTTCTTGTCTTGGACTTTTTTTTTCTTTTCTTTTTTTTTTTTTTGTCTTAAAA
CAAGTGTGATGCCATATCAAGTCCATGTTATTCTCTCACAGTGTACTCTATAAGAGGTGTGGGTGTCTGTTTGGT
CAGGATGTTAGAAAGTGTGATAAGTAGCATGATCAGTGTATGCGAAAAGGTTTTTAGGAAGTATGGCAAAATG
TTGTATTGGCTATGATGGTGACATGATATAGTCAGCTGCCTTTTAAAGAGTCTTATCTGTTTCAGTGTAAAGTGAT
TTAAAAAAATAATAACCTGTTTTCTGACTAGTTTAAAGATGGATTTGAAAATGGTTTTGAATGCAATTAGGTTAT
GCTATTTGGACAATAAACTCACCTTGACCT

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FIGURE 1411

MELLCHEVDPVRRAVRDRNLLRDDRVLQNLLETIERYLPQCSYFKCVQKDIQPYMRRMVATWMLEVCEEQKCEEE
VFPLAMNYLDRFLAGVPTPKSHLQLLGAVCMFLASKLKETSPLTAEKLCIYTDNSIKPQELLEWELVVLGKLKWN
LAAVTPHDFIEHILRKLPQQREKLSLIRKHAQTFIALCATDFKFAMYPPSMIATGSVGAAICGLQQDEEVSSLTC
DALTELLAKITNTDVEDCLKACQEQIEAVLLNSLQQYRQDQRDGSKEDELDQASTPTDVRDIDL

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FIGURE 1412

AAAAAAGAAAAAAATAAGTGAGCTGAACTCACCTGAAGTGGTTTACTTCTGTGGGTAAAGAAGTTCTAGTCA
GTGTTCATAGTCGTTTCGTTTTGATAATTGTTGAACCAATTTTGTTTTTAAAACCTTTAGACTCTGAAAGTAATA
TTTTGACTAAGAATGTAAATATTTCCAAACTAAATTACTCGGGAAGTAAACGCTTTTTTTAAAAGTATTTTTACT
GGTTTTATACCAATATTATATGCAGAAATCACAGGATGAATTTAGAATTAAATCTCAATTAGTTCACCTTTGGCCT
AGATTTATGAAAAATGCATGCCTCGTAAAGAGTCCACTGTATTACAGAGTAAAGTTGCTTTTAGTGTTCACTTGA
TGACTTGGAGAGTAGGAATTTGCAAAATCTGAATTTAAGGAAATTCCTTTAGGATAACCATTTCAAAAATAAAA
TTGCTATGCAATCTTGAATATTTCTCTTTTGCCTCGTAAATGAAAATGCATTCACAGTTTCTGTAAATTATTT
AGCAGCCTTAAAGTTTATCAAAAAATGTCCAGATTCACGTCAGCATGCTTGGCCCTGCATTTAATTTAAGAA
GGATTAATAATAATGCTCTGAATTTTCGAAAGGGATTCTCCTAAACCCACCCACTTCTCTTGCCAGGCTGCTT
TTTAAAAATATTTTTTTATTTTTTACTTATTTTTAAATTTCTCTTTTTATTTATTTTTGGTTTTCTTGTTAGCC
CCCTGTTATATGGGAGAACGAAAATTGTTATATTTGAAAGTACTTATTACATTATTTTTATTTTAGTATCTTGA
TGCTCCTGTCAAAGGGAAATGAGGCTTTTAAAAATAAGTACCTTAATTCCTTTATTGACTTTTTGCCCTAAATT
GCTAGGTGTGACCCAGCAATCTTTTAGGAAGAGATTTTACAGTGGTGCTTTATTTATATCAATAATCCAGTATAG
TTAGGCTGTTCAATTCCTCATAATAGAGTACATAACAGAAAAGTGGGACTTTCACATTTTCATATTTAGGCACGTT
CCAATTTAATTCAAAAATACTCTGTAATCTACATCTAAAAAACCGATTCCCTAATTCGAATTTATTGGTACC
AAAGCTCTCTTTGGCTATAGACAATTAAGAGTTGACCTTTTAAAGTTAATGTATATGCTTAAAAACAGTTTLAGGA
AAATATTTGGTAGACAAAGAGTTTCAACTTTAAATGTTCACTATGTCATTTAGTGTCCAACCTTTACGGATAGGTT
GACTATCTAAATAGGCATTTTTTAGTCATTAAAAAAATCTAGTCACCAGGAGGATCCCTATAACTCAAATAACT
TGTTTGTAAGAAAATTTGTTTACTTACCCATTAGTAAGTTCCTGCATATTCATTATAAGATGGCAAATCAAAC
TTTTCTAGGATGAAGACAGCTTATTTTTAAGTTGTATAGTCTTAGTTGGTTTAGGGTCTCAATTTAATTAATAA
AATACTTGGTTTTTTATTTGCTTGTCCFTTTGAATTCCTGTTTTAATAATTTTAAAATGAGCACAAAGAAATGTTGA
AGTTTCAATTAATCTCTCTGAATGATGTTTTTTTCTCTGTGATGAGTTGTTTCTGACTTTTTTCCTTTTGTAT
TTGTAATGTTGATTAAAGATGTAAAAATAAAAGTGTGCCTGATTATTTTTGC

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FIGURE 1413

KKEKKISELNSPEVVYFCGLRSSSQCS

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FIGURE 1414

GCGAAC TGGAGCGGGAGGCGGGCGGCCGGAGGGCCCAGGACAGCCCCGGGAGGGCGGGCGAGGCGGAGCAGGAGCGC
CCCGGCTCCGGCCACATTCTCAGAGTCAGGAAAAGGGGCGAGAGGCCACATGTCTCCCTCTCGCCCAACTGAAAA
CGAAACGGCGCTCCAGCAGATTGGGTGGAAAGAGCTGGGTCTCTTTTCTCTGTTTTTACGCTAGAAAGGGCTTG
TAAACATTGTTCTTTTTAAAAATGACCTACCCAGGCATTTGTTTGGGCACACTTCTGTCTGGGGTCATCGTTCC
TAGGTGGCTTCGGACCTGGGACTTTTCCTGTATCTGCACATTGTCGTTTTATACACAATTGCCAAGGTGGGACTG
CTTTCAACTTTACTGTGCTTGAAGCTGCAGAGGTTCTGCCCTGATGTTTCCTGGAATAATGCTGAGGACTGCCTT
TCGGGTAGCCGCCCTATTCACTTCACTTCATCTCGGAAATACCTGACCCCTGCCTTGGATCCAGCGGCCCTCCTG
AGAGCTGAGGAAGGAGGAAATCCTATGTGTCTGCTCCCGGAGCTGCCACAACCCATCTTCCACAACCTCGGAAC
TGAAAAAAGGAACCCAGGACACGACTTTGCTTTTCTTTTGGACCTAGTTGGTGATTATACTCTGTCTCCCATGGA
GACCACGTCTTGCATCCTTCCTTCTATATGGGATTTAGGATAGAAATTAAAAAGAAAACATATTATTTTGAGTCT
TGATTTGGAGAAAGGTAGTATTAGGAGGAAGTAGGCTATGATACACATAGAAAATTTGAGGACAGTGTTACTTA
ACAAGGACATTTCTGTCTCTGCAGAAGTCACAGCTTGGAGGAAACCACTTTGCACTATTTGATGAGGAATTTGGC
CACCAAACCACTGATACTTTCCCAAAGGTTTGGCAGAAATTGTTTTTTGAGTGGCTCACCAGAGTACCCAGAAGA
ATCAGTATGGAATTAGAGGACAGTGGCCTACCCTAAATAAAGACATGAGTGATGTATAAAGTCTAGTGTCATTT
ATTCAGAAAATATCAAAATTATTCTGGGAGCTATGGGTCAAAGTTGATAGGCACAAACAAACAAAAACGAAAGGT
ATTTTAAATTCACAGCTTGATAAGTAAAAGGGAGATGTTGTCAATTTCTCTTCTCAATCCAACCTTTAGATTTTC
AAGCCGGAAAAAGGGTAATTAGAAGTTAGAAATTGTTATTGCCAGAAAATAGCTCTAAACCCTG

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FIGURE 1415

RTGAGGGGRRRAQDSPGRAARRSRAPAPATFSESGKGARGHMSPSRPTENETALQQIGWKELGLFSLFFTLEAC
KHCSF

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FIGURE 1416

TCACATTCTATCTGTTTATACGAAGGTTGTAGACACACAGCGTATGTACATATGCCTAGTTGCTCTCATTCCCTT
GTTTCACATCTCAAGCCTAACCCAGACTGAAAAGGTTTTGAAGGCTGAGATTATTCATCACCCCATCATTATAGA
AAGCAGGGCTGGCCCAAGGTTCTCACAGTGGGAGCAAGGTGGATTTTAACTCTGATCAGTGTTGTAGCTCAAATA
TAAAAAGAACTGCAGCACAAAAGTCACAAGGATAAATGATCCCCCTCGTTCTTCTCCCATAAAAATAAGCAGCCAA
TTGAAGGTGGAAGTCAGTACAGTGCGGCATTCCCAGAGGCGACAGAACCTAAGATTCCATTTCTAAAGACACTGC
TCAACAAGAAGACCACCTGGGATGTCTTACATAAAACCATTGGCCTGGCAGCTTTTGGCTGAGTTCTCTATTCTG
GTTCAAGCCAGCATCACAGCCTATCTGTGGTTTTAACAACCTGATGGAATTTGTATTTTGAGAACCTCATCCGTT
AGCATGAAGCAAACCTCAAAGCATTGTTGCTCATCAGTTGTCTCTGTTTGAGAAAGATTTTGATTTGTTTACTTG
TAGTGAAGCTTGACCATACTTCTCCAGGGGCTTTTTAAAAAGATGAATGTGTGAGCTTGTAGATTTGTCCCCATG
AATGAAACCACAAGCAAATTCTCTTCTCTCTCCAGCCTCCCTTCCTCCCTCTTGTTTCTTCAGTGGCCATCTGT
GCATTATGTTCCCATTTGCCAGGCCCTCTTCAAGCAGCTTATCTATGAGTGAATTCAGAACTTCAAATTATAAAG
GACACCCAGATAATTGGCCTGTTCTCCAAAGTATCTGTCCCCTGTGCTGCTGCCAGATTTCTTCTTAATGAATA
CATCCAGTGACAGTGGGATTCTTGAGCTTGTCCGTATCTGTGAGAAAATGAGCTCTCCTGCTTTGTAACAGCTTG
TGGCTCAGGGAAAAAATGACAGCCATTGCACAAGTTTCCTTTGAATGTAGTTTTCTTTCCCATAAATGATACTT
TGAGAATACAGTTAAGGGGTATTAGTTTTCTATTTTCATGCTTGGCCTGTGTGTGAGAATAACACAAGCTGTCAC
TGCAAATCAGTAGCTAAAAATGCTTTGTCTGGTTAATGTGAACATTTAATATTTGGCTCAATTAATAAATTAACCG
ATGAAAGTACATGTCATTGGAATTTGAAAATACCTTTTGTACGGAATACTTAAAGGGCATCACCCATGACTAAAC
CAGTGCTTTTAAAAATATGGAGAATATGGGGAAATTTAATATGAGTTGGGATACTTGACTCTTTTTTTTAAACCTC
TCTACCTGTTTGGCACAAACAGGGTATTGATAAAGAGTGGGCTCATTGTTATGGCAAAGGATTCATTGCATCTCT
GTGTTTTTAAAGTGGGTAAATTGTTTTTTTGCACCTCAGTCACATGATTAAAGCAGACAGAACAAGAGATCAGTTATT
CATTATACCATACTTTTAAAAAATATTGAGCCAGGCCCTGGGGAAAGTGGGAAGTGAGAGCCAGAGCGGCGTGG
CTGATAGTCTAGGGCAGTGCTATCCA

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FIGURE 1417

HILSVYTKVVDTQRMVYICLVALIPLFHISSLTQTEKVLKAEIIHHPIIIESRAGPRFSQWEQGGF

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FIGURE 1418

CTTCTAATCATTCTCTAGAAATGCAAATTCCAAATTCAAATTGATAGTTTTTCATTACAGTTCTCTGTCTTTCCCATC
TATCTTAAGACAGGAGCTTTCCCTCCCTCCCTGCACCTGGCCCCCTTCTCAACAAAGATATTTCTACAATTATTA
CCACTTCAGCCACTGCTTCTAAAACAAAGAAGGAAAAAGAAAGTCATTTCATGAAGATGTAACTTTGTGAGGGTA
AGAACATTTTTTACTCATGGCCAGGTGATAAGATATCAAGAGTTAGGGGTGAGGACAGATACCAAGGGTGAGAGAA
TTTTCACTAAAAGTAGTAGGATTCTTGCTTAAACTGGATTCTATAAGACAGAAAAGGAAGCCCAAGGTCAGGGTC
TAGTGGAAGAGAAGGCTCCGGGGAGCCCGACCTGAGTTTGATCTAGGAGAGTCTTTGTCAATATCCTGTAGAATA
TGACCTTCACCTCATTCTTTCTTTCTCAAGTGTATCTGGACTGTATTTGGCCTTTTGGGCTTCCAGGTGACTTTT
AGAGTAAGTTTATCAAGATCTACAAAATAGCTACTGAGATTTTGATTTGAATAGTATTTCTTCCTGATAATTC
TGAGTAAAATTCATTTTAAGGAAGTAGGAGGGGCAGTGGCCTGATGAAAAGCAAAAATGAAGAAAAGAATAAGGA
AAGACACAGTTTTGCCATCACCAGCCAGTGTTTAGTGATCTTAAATAGCTGCTTTTGTTTTGAGCATCATTTG
TTGGGTATGGAGTTGCAGAAGTTGGGTGAGGGACACTGGCTTCTAGAATCAAATATTGGCCTCCATAGAGTGTT
TCTGTACAGTGAGTTGGGAGGATGGGCAGGGGCCACTGAGGACTGTGGCGTGTCCCCACGTTAGAGTGATCTCA
CACAGAGCCTGTCCTGAAAATATAGTTATTTTTTAAAAAGTGTTTCCCCCTCCTTTTCATTGGCCATTTTCTCTTT
TACTACTCTTTACCTAGCAAAGGGTGGGCATGAGAAACCTGGTCAGTGGAAGAGAAAGCCATTTTGCAACAGTGG
TTATAGGGGTGGGAGAGTAAAATTTCTGGTTCTTGGGGAAGCTAAGCCCATTGGTAGGACCAGACTTTTGTATG
TGTTTTCTTCCTTTAGTCATCTACTAAGGTTAATAAATACCTT

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FIGURE 1419

MCVSSFSHLLRLIN

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FIGURE 1420

GTGTTTGTAGTTCTGTCCAGCTCACATTTTATCTTCATACTTTGAGTAGCCTCCTTCCATGAATGGATCATCCAG
TGGCCGCACTTAGGTTCTCCTATGAAGATTTTGTGTATTGTACCTCAGAACCATCTCCATATTCTCTANNNNN
NNNNNNNNNNNNNNNNNNNNATTGAATAGAAGTATTTACTAGATGAGGAGGAAAACCCTAAAACAAAACATGAACAT
AAAATATTTTAAAAGGAAGACATACAAACAGACACTATAACCAAATAAGATGACAGAATTAAGGCCTTATGCCA
CAGCCAGAGTTGAAAAATGCAGAAAAAAGTTTAAAAACAAGGAATTAAAGCCAAACCTAACTTTTATCAAAATA
AATGTAAAAGTGATGAAAGAATCTGTTAAGATATCAGATTGTAATATAAAAGATACTAGAAACAAATGCCAATAG
AACACTTAAGTACATTTTATATATTCATCCATTAGAATATATAGCTGTCAGAAATGATAGAGAATTACATATGTG
TGCAAAAGTTTTTGTATCCATGTGGAAAAACACAGGAAGCTAATAGTACTGTTTTTCTCTGGAGTGGGTGTAAGGG
TAGAGACTTAACTCTTTACATCCTTATGGCAGCCTTCGAATACCTTTTAACTCCCAGTTCCCTTAACTGGGGGTG
TGTATCCTAGAATCCTCGACCCATTAGAAAAGTATATTGTAGACATCATACTCTTTACCCTTTAACTACACATG
CACTTCATAAGAACAAGCATGCTGTCTTACCCAAGTACAGCTATCAAGTTCAGAAATTTAACATTGCCATAATAC
TTTACAGTCCATATTTCAATTTTCAATTTGCTGTTTTATTGGTAATTTTTTTTCAGCTCCACGATCCAGCCTAGGATC
ATATGTTGTATTGCCATAACCCTCTAATCTGGAGCAGTTCCTCAGCTTTTCTTTGTTTTTTATAATAGTAATATA
TTTGAAAAATACAGGACAGCTAAAGGATAGAGTATCCTTCTATTTGGGTTTTTCTGATGTTTCCTCATGGTTAGA
TTGGGGTAGTGAGTGAGGGTTGAAATGCTGTAAGTGATATGTATTGCAGGTATACATCCAGATGCACAGAATGT
CCATTTGTCCCTTATTGGTGATGCTAATTTTGATCACTTGGGTAAGATGTCCAGTTTCTCCAGTGTATCGTTATT
GTTTTTCCTTTTGCAATTAGTGGGTAATTTGTGAGGAGAACTTTGAGACCTTGTTGACAATTCGTTCTCATC
AAATCTACCCCTCCTAGGTTTAGCATCCTTTGACGATTCTTGTCTGAATAAATTTTTACTAGGATGTTTCCAAAA
TTGTGATTGTTCTAACTCCATTATTATTTCTGTATTAATTAGTCATCATTCTACTGTAAGGAAGAGGTTTCCCTT
TATCATCAACTTCGAGTAAGTACTTTTTTCTGAGCCATTGAATATTCCTTACTAGATGTGGTGCCCTTTTACCC
CAATTACTTAAGTTTGTATTTCCAAAGAACAAGGGTGTTTTCTGCATAGCCATAGCACAATTACCAAAATCAGA
AAATTAA

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FIGURE 1421

MIEELHMC AKVFVSMWKTQEANSTVFLWSGCKGRDLTYILMAAFEYLLTPSSLNWGCVS

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FIGURE 1422

AGTCGCTGTTTGGGACGCTGGGTGTGCGGTGTTCTGTCTCCGCTCCCGTTTCGCTGTCACAGCCCGTTCCCTCCC
GGAGCCCGGGACAGGCTGGGCGCGCGCCCGTGTGAGTGAGCGGGACTCAGGGCAGAAGTGTCCCCTCACTGCGTT
TTTTTTTCTTTTATCCAAAGAACGGGGCAGTTAGTACGCTTGCCCTTCTGTCGCCCCGTTGGGAGCGGGGTTGG
TGTGCGGAGTGGTTCGCCCTTTTTTCTTTAGAACTTGTGAGCCTTTTTTTTTTTTTTTTTTCTTTCTTTTTTTT
AGGCTCAGTGCTGTCCGGGCTGGTTTGCCCGGTCCCTGACTAACGGCTTTCTGCCCCCTTCTCTCGCCACCCCTGC
CCAAGGTCGCCCCCTCTGCCCTTCGCCCTGTCCCGGGAGGGTGGGAAGCTTTGACCCCGCCCTGCCACTCGCGTC
TCCGCAGCCGTAGCCGCGCCTGTCCCAATATGAATAGGGTCAACGACCCACTTATTTTTATAAGAGATATTAAGC
CCGGACTGAAAACTTAAATGTCGTCTTTATTGTCTGGAGATAGGACGCGTGACCAAAACCAAAGACGGCCATG
AAGTGAGATCGTGCAAAGTAGCAGATAAAACGGGCAGCATCACTATTTCCGTGTGGGATGAGATCGGAGGTCTTA
TACAGCCAGGGGATATTATTCGGTTGACCAGAGGGTATGCATCCATGTGGAAAGGATGTCTGACACTTTATACTG
GAAGGGGTGGTGAACCTCAAAAAATTGGGGATCTAGGTGCGGTGCAGGCAGCCGCAATGCGAGATTCCATACACT
ACTACCCTGGTAATGATCTCCACCCTGACCTGGAGGAGCCATCCTCTCTAGGGGTGTAAAGATTTTGTATGGTTTA
TTCAGAAGTGCCAAATTTTCACTGAACCCAACCCAGATTATCGAGGACAGCAGAACAAGGGGCACAGAGTGAACA
GAAGAATAATTCATGAATAGTAATATGGGTACAGGTACATTTGGACCAGTGGGAAATGGTGTTCACACTGGCCC
TGAATCAAGGGAACACCAGTTTTTACATGCTGGCAGAAGCAATGGCCGGGGACTTATAAATCCACAACATAAAGG
AACAGCTAGTAATCAAACAGTGATGACCACAATAAGTAATGGCAGGGACCCCTCGGAGAGCCTTTAAAGATGACC
TATGCTAAATACTCATGTGTAGTTTTTATACTACATGCCCTACTTGAACACTTATTGCACCTTTATTTATTGTTA
ACTGTGAAAAGTACGTCTTTTATTGGGTTTCTTTTATATTCTTGGTTTGTTAAGAAGAATGGTTTGTTTTTATA
GCAAAACTGTTAAGCTGCTCGAGTCTCCTGTTGAAGAATGGGAACACTGAAAAGTAGGGGCATTTATTTTTAGAG
TAAAAAGATTATTGGATAGCCTTTAAAAAACCTGCACCCATTTTCATGGGTGAGTTACTTAAGACATCAGCTTTAT
AGCCTCTATGAGTCTATCTTCTGTATAAGTTTTGTAAATATTTAACATAAGGCTTAATGGGAGATGTTCTTTTGTC
TTGTATTTCAGATATTGCCAACTAAAGCAATAACCATCAAAAAACACAAGAACTTGTCAATGCTAGCAGTAATTTT
TGAGTGTTTGTGGCTCTCGGAATGATTGACTTCGTTTCACTGACTACTATTAAGATTTTCCAAGGACTGACTCATC
CCAAATTTTTTGTGTATTACCAAAAAAACAGATTCCTTATCAGAATTTGGAATAGAATGTGATCTCTATTGCAAC
AAGTAATTTTTAAAGAAAGCTACATTTATTTTAGAGTAGTGCTCCTAACATGTATTATCAACTTTGTGGATTACA
TTGGAGGAAAAATTTAAACTGGGGCCTTGAATATTTATTTTTTGAACACTACCATGTTAAATACTGAAGTATAATT
TGGGGGAGTTATAAAGTTATGATAAACATTCTGATTATTTTAAACAATAGTTGTGGTAGATAAACATACTGG
AGGTGAGTAAAAATTGAATTCATATAGTAACATGCAGTCTGAAGTCCTAGTTACTTAATAGGTACTCAGCCTGGAG
TGAAAATCCTGGGTACTGACTTTGAGAGGAGTGAGTGTGCATGTTGTCAAAGTTTCTGAACACAGTTCACATAGC
CTTATTAGCAAAAGTTTTAAGAAATGGCTCTATCAAAGAAGCAATTGCAGCTTTATTCAGAAATATAAAAGTGGA
ATTTATGTACATGTCATAAGTGGTACCCACTTCCCTTTTTTACTGTAGGGTGGATAACTCTTAGGATTTAACTCT
TTGAATATTATCTCTTGAATAAAGCATGTGTTAATGTTAACAACCTACGTAATTTTTGCCCTTTCAATGACTTA
CAGTGGAGAGCCAGTACATCTTAACTACTGTTGTAGTGATGGTATCAACCTCATGGTTACTTAGCTCTGCATTTG
TTGCTTTGTTTTTTTTTCCACTTCAAATCACAAAATAAGTAGATTTTGTCTGAAAACCTCATAGCATTTGAAT
ACAAAAAGTTGTGCCAGATTGTTTGCCCTAATTCAGTGTGTTTAAACAATATTTTCACTACACACTATGTATTAGG
CACTGTGTGGAAAGTGTTAAGGGGTAGACAAGATACCGAATAATCTCCACAAGTTTATTTGTGGTCTATAGTACT
TTTGTAAGTGGGGTTACAAAAATTATAGAAATTTTTTCTTTGTTTCATATGCATATTCATGATTATAATTTGGC
TTTGTGTGTGATTAATGTTTTCTTAAGATTTTACATTATAGAATACCTCAAAAGAGTTGTCTAAGGACTGGGA
TAGAGAGTATGTTTCATAAAATTGTAGATGTTTAGAATTTTTAAAAACCTACAAATTAGTATATGATTGTTTTA
TATAAGTAAGATAGGAGCAACACTTTAAATTATTTGTGGGAGAATACAGCATTAAGGTGATTTTAAAGAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1423

MNRVNDPLIFIRDIKPLKLNLVVFIVLEIGRVTKTKDGHEVRSCKVADKTGSITISVWDEIGGLIQPGDIIRLT
RGYASMWKGLTLYTGRGGELQKIGDLGAVQAAAMRDSIHYYPGNDLHPDLEEPSSLGV

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FIGURE 1424

GGTAGCGACTGGGGCTCCGTATTCTGTTCACTGGAGTGGGTTTTATATATACCCAATAAATAGAAGTGTGACTGG
CCTGTCCAATCTCGAAGTCAGAAAAGGGCCATGGGTAGCATCACATCCTTTAGAGACTGGATGCAGTCACCAGACT
TTGAGGAAAGAGGGAAATTCATCCCAACCTGTCATGCTAGCTAAGAGAGCAAAAAGTCAAGAATATGAACAATGT
GACCTAGGCTCTGAAAGCTGACCAAGACACCATCTAAATAAACCTGGACTGACAATGAAAGGACTTTTCGTTCTCC
CTTAAATAATGTTCAAAATAGCAAGGAAATAGAGCTTCAGATGTGTCTTGTGTACCTGGTCTTTCATGTGACA
GTCAAAGATCCACAATGTGAAAGTGGGATTAACCCATCTGTGAAGTTCTAGTCTGTGCAGTCACAATTGACCACT
GCAGGTTTTAACAAGAGGACCCTGTGGGGACACAACAGACTTCAATTCTTTAGCCAGCTTTTCCTTGGCTCAGAA
TATGGAGAGAGCTGGAGGCCCTCAAACCAGAGGATGTTGCTGGTCTTCCCAGGAGAGAAATGAACATATCTTTT
GTAAAAGTAAGTTTCAA

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FIGURE 1425

VATGAPYSVHWSGFYIYPINRSVTGLSNLEVRKGPWVASHP

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FIGURE 1426

GACTCTTACCTACTTCGGGGCCCACTTTGCTGTTCATCCGCCGAGCGTCCCTGGAGAAGAACCCGTACCAGGCTGT
GCACCAATGGGCCTTCTCTGCGGGGTTGAGCCTGGTGGGCTCCTGACTCTGGGAGCCGTGCTGAGCGCTGCAGC
CACCGTGAGGGAGGCCAGGGCCTCATGGCAGGGGGCTTCCTGTGCTTCTCCCTGGCGTTCTGTGCACAGGTGCA
GGTGGTGTCTGGAGACTCCACAGCCCCACCCAGGTGGAGGACGCCATGCTGGACACCTACGACCTGGTATATGA
GCAGGCATGAAAGGTACGTCCACGTCCGGCGGCAGGAGCTGGCGGCCATCCAGGACGTGTTTCTGTGCTGTGG
GAAGAAGTCTCCTTTCAGCCGTCTGGGGAGCACAGAGGCTGACCTGTGTTCAGGGAGAGGAGGCGGCGAGAGAGGA
CTGCCTTCAGGGCATCCGGAGCTTCCTGAGGACACACCAGCAGGTCGCCTCCAGCCTGACCAGCATCGGCCTGGC
CCTCACGGTGTCGCCTTGCTCTTCAGCTCCTTCCTGTGGTTTGCCATCCGCTGTGGCTGCAGCTTGGACCGCAA
GGGCAAATACACCCTGACCCACGCTCTCCAGGGCAGAAGTCGCGGTGGGCTCAGTGGGTGCCCTGAGCGGGGTC
TCTCAGACTGACGTGAGGCCTTGGTGGGCTGCACTCTCACCTGGAGGCTCCGGGGAAGCATCTGCCTCCAGGACC
ATTCAGGCTGTTGACAAGTCAACTCCTCATGGCTGTAGGACTGAGGTTCCCAAGTCCTTGTCCCTGGTCCTGTGG
TCCCTCCACCTTCAAACCAGCAATGGTGCATTGAGCAAATTGTGGTCAAATATACATCACATCAAATTTACCATC
TT

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FIGURE 1427

AGCAGTGGCCCAAAGAGGAGCAGCAGACAAGAGTGCAGTGGTGGCTGCCGCCGCACCAGCCTCAGTGGCAGATGA
CACACCACCCCCGAGCGTCGGAACAAGAGCGGTATCATCAGTGAGCCCCCTCAACAAGAGCCTGCGCCGCTCCCG
CCCGCTCTCCCACTACTCTTCTTTTGGCAGCAGTGGTGGTAGTGGCGGTGGCAGCATGATGGGCGGAGAGTCTGC
TTGACAAGGCCACTGCGGCTGCAGCCTGGCCTTCCCTGTTGGCCAATGGGATGACCTGGCGGGCGGCCATGCGGT
GGACAAAAGCAACCCTACCTCAAAGCACAAAAGTGGTGCTGTGGCCAGCCTGCTGAGCAAGGCAGAGCGGGCCAC
GGAGCTGGCAGCCGAGGGACAGCTGACGCTGCAGCAGTTTGCGCAGTCCACAGAGATGCTGAAGCGCGTGGTGCA
GGAGCATCTCCCGCTGATGAGCGAGGCGGGTGTGTCCTGCCTGACATGGAGGCTGTGGCAGGTGCCGAAGCCCT
CAATGGCCAGTCCGACTTCCCCCTACCTGGGCGCTTTCCCCATCAACCCAGGCCTCTTCATTATGACCCCGGCAGG
TGTGTTCTGGCCGAGAGCGCGCTGCACATGGCGGGCCTGGCTGAGTACCCCATGCAGGGAGAGCTGCCTCTGCC
ATCAGCTCCGGCAAGAAGAAGCGGAAACGCTGCGGCATTGTGCGCGCCCTGCCGGCGGCGCATCAACTGCGAGCA
GTGCAGCAGTTGTAGGAATCGAAAGACTGGCCATCAGATTTGCAAATTCAGAAAATGTGAGGAACTCAAAAAGAA
GCCTTCCGCTGCTCTGGAGAAGGTGATGCTTCCGACGGGAGCCGCCTTCCGGTGGTTTTAGTGACGGCGGGCGGAA
CCCAAAGCTGCCCTCTCCGTGCAATGTCACTGCTCGTGTGGTCTCCAGCAAGGGATTCCGGCGAAGACAAACGGA
TGCACCCGTCTTTAGAACCAAAAATATTCTCTCACAGATTTTATTCCTGTTTTTATATATATATTTTTTGTGTC
GTTTAAACATCTCCACGTCCCTAGCATAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1428

MAVDKSNPTSKHKSGAVASLLSKAERATELA AEGQLTLQQFAQSTEMLKRVVQEHLPLMSEAGAGLPDMEAVAGA
EALNGQSDFPYLGAFPINPGLFIMTPAGVFLAESALH MAGLA EYPMQ GELPLPSAPARRSGNAAALCAPCRRRIN
CEQCSSCRNRKTGHQICKFRKCEELKKKPSAALEKVMLPTGA AFRWFQ

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FIGURE 1429

GAGGCTACTAAGGTATTTGGCTATTATAAAATAAAATAGTGATGAACACGTGTACAGGTGTTTGTACGGACATAAG
TTGTCATTTCTCTTGAGTAAATACCTAAAAGTGGGCTTGCTGGAGTTTACTACCCTTGATGCTGCTGTTGACA
TGGAAAAGATTGAGGAACAATTTGCTAATCTGCACATTGTTAAATGTTCCCTTAGGAACCAAAGAGCCCACTTACC
TTCTTGGTATAGACACATCAAAGACTGTCCAAGCAGGAAAGGAAAACTTGGTTGCTGTTTTATGTTCTAATGGAT
CAATCAGAATATATGATAAAGAAAGGTTAAATGTACTACGAGAATTTAGTGGATATCCTGGACTTCTTAATGGAG
TCAGATTTGCAAATTCCTGTGACAGTGTATATTACAGCATGTACTGATGGCACTGTGAAATGCTGGGATGCTCGAG
TAGCCAGAGAAAAACCTGTTTCAAGGTTACCTTCCAATATTTTTATCAGTTTTGATATTAATTGTA
ATGATCATATTATTTGTGCTGGTACAGAAAAAGTTGATGATGATGCATTGTTGGTGTGTTGGGATGCAAGGATGA
ATTCTCAGAATTTATCTACAACCTAAAGACTCACTTGGTGCATATTAGAGACACATAGTGATGATGTCACTCAAG
TACGTTTCCATCCAGCAATCCCAACATGGTAGTCTCAGGTTCACTGATGGCCTGGTAAATGTATTTGATATTA
ATATTGATAATGAGGAGGATGCACTGGTTACAACCTGTAACCTCAATTTTATCAGTAAGCTGTATTGGTTGGTCTG
GGAAAGGTTATAAACAGATTTACTGCATGACACATGATGAAGGATTTTATTGGTGGGATCTTAATCATCTGGACA
CTGATGAACCAGTTACACGTTTGAACATCCAGGATGTGAGAGAAGTAGTTAACATGAAAGAAGATGCTTTGGACT
ATTTGATTGGTGGCTATATCATGAAAAGACAGACACATTGCATGTTATTGGAGGAACAAACAAAGGAAGGATTC
ATTTGATGAAGTGCAGCATGTGAGGACTGACCCATGTGACTAGCCTTCAGGGAGGGCATGCTGCTACAGTCCGTT
CTTTCTGTTGGAATGTGCAAGATGATTCTTTGTTGACTGGAGGAGAAGATGCACAGTTGTTACTTTGGAAACCTG
GAGCTATAGAGAAGACCTTTACAAAGAAAGAGAGTATGAAAATAGCATCCTCTGTGCACCAACGAGTACGAGTTC
ATAGTAATGATTCTTATAAAAGAAGGAAAAAGCAGTGAATAATGCATTTGGCACTTTGTTTGGTAGGTTTTATAGT
TTCAAATAGTCCCTTCTGTTTACTACCCATGGTAGACATGTTTAAAGCTTTATGTAACCAAGCCAGTTAGCAA
ACAGTCTGGAAAAATATGGTGAGAATGGTTTAAATCCGGTCTTCACATATTCTAAAAAATTTTAAAGCCTCTAA
GTATAAAATCAGTGAGTTGAAAGTAAATTTCTTATTTAAAGAACCCATCTGTTAATGTAGTAAATGTTGGCTTT
AAAGAAATAGCTCCGATAAGGACTTTTTAGAAAGGAAATACTTGGTAAACCTTAATAAAACAGGTGGTTGGCTGCA
TTTTTTAAGCCAGTTTTTTTACATTTTAAATTGTCTTTATTGTGTATAAAACCAGATTAGACTATATTCTTCATC
TGAGGAGCATCTATATGTTTAAATACACCTAATGTATTATGCTGGAGTATTTAAATGTAAGTATTTTAAATGAGTAA
ATAGAATTAACCTTTTTTACAAATGAAATGATAGGCATCTATGTAAAGTGAGAAAAATATGTTTCGTAAATATTT
GCATCTTTAATATTGTTAGTAAGTAGTAAACAGGTGTTTTGCTGATTGAAAGGAAGTTATCTTGGTAAATTGAGA
CTCAAAGTGAAATACAAAAATGAAAATATTTATAATAGGACTCGACTTGGAGAAATTGCTATTCTTCCTGTTGTC
CAAACCATAAATCTGAGGATAACCTGGGCTTTTCTCTTCTCCTAACCAGTTTTTCACCAAGTCCTGTG
CCATTTACCTCCTAACGTCTGTGACGTATCCTTTTGCCTTTACCTCACCATTATTACCCTAGAGAAGACTTTCA
TTATTTCTCATCTGGATTACCAGCTCGATCTCTAATCTGCTTCAGTTTCATCCTTCTTGCTACTTCTAGGCTAAAC
ATCAAAAACAGATCTGGTAGGGGCGGGGAAATGAGGGGGAAGAAACAAAACGATGGTGCCTCATGCTGCTTA
AAATCTTCAGTACATTGATGTTTTGATGGCGGACTACATAAGCGTTAAAAATTGTGTTTTTTCAGAACTTTTAAAA
TATAAGACAGTGCTATCTAGTGAATAAAAAAATTAGTTTGAAGATATCTGGAGAAATCGCATTCATAAAACAAT
TGGAAGTGAAACTATTAAAAACAATAGGGCTTTTTTAAATTAATAATATTTAAATTCAAAAGTAATTAATAGTGT
TGGAAGATGTAGGTGAGAAAAATATTCCTGAAAGTAGAAGTGAAGAGACAAAGAGAAAAAGATGAAAGCCACAGAA
GATAAATACAGGGGTCAAACACAGACTAACAGTTTTAGAAAGTGAAAAAGTTAAAAAAGAAATGGGGGCAGTGG
GTTATTAGAAATAACATAAATGGCTGGTATGGTTTGTCTGTGCTCCTACCCAAATTTTCATCTCGAATTGTAATCC
CCATAATCCCCATGTGTCTAGGGAGAGACCTGGTGGGAGGTGATTGGATCATGGGGGTGGTTTCCCTACGATGT
TCTCCTGATAGTGGGTGAGTTCTCACAAGATCTGATGGTTTTATAAAGGGCTCTGCCCCTTAACTCCTCACTCT
TTCTCCTGAAGCCTTGTGAAGAAGGTGCTTTGCTTCCCCTTTGCGTTCCCCCATGATTGTAAGTTTCTTGAGGCC
TCCCTGGCCATGCTGAACTCTTCAGTCAATTAAACACTTTCCTTTATAAATTAATAAAAAAAAAAAAAA

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FIGURE 1430

MEKIEEQFANLHIVKCSLGTKEPTYLLGIDTSKTVQAGKENLVAVLCSNGSIRIYDKERLNVLREFSGYPGLLNG
VRFANSCDSVYSACTDGTVCWDARVAREKPVQLFKGYPSNIFISFDINCNDHIICAGTEKVDDDALLVFWARM
NSQNLSTTKDSLGLAYSETHSDDVTQVRFHPSNPNMVVSGSSDGLVNVFDINIDNEEDALVTTCSISSVSCIGWS
GKGYKQIYCMTHDEGFYWDLNHLDTDEPVTRLNIQDVREVVNMKEDALDYLIGGLYHEKDTLHVIGGTNKGRI
HLMNCMSGLTHVTSLQGGHAATVRSFCWNVQDDSLLTGGEDAQLLLWKPGAIEKTFKKESMKIASSVHQVRV
HSNDSYKRRKKQ

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FIGURE 1431

GAAAAATGAAACGTCTTTGTGGTCCGGGGCTGAGACCCACGAGGAGACTGGGCGGGATTTCTGGCGTTAGGAGGC
GGGGCCTTTTCGGCTTTGGGCGCGAGTGGTTTAAAGACAGTTGGTGTGCGTTTCGGCTTCTCGGGTCGGATTCCGCG
GTCCCAACCCCTTCCCATGCGCGACCTGAGGAGTTGCAGTTTCTTCGCGCCCCCGCCGCTCCCTCTTCTCC
CTCCTCTTCAGACGCCTCTGCAGCATCTTCCCCGGGCGGCCAGTGAGTTTGGGCTGGCCAGTTCCGAGCAGGAG
CAGCGGCCCAACGGTGGACCAGCTGGAGGAAGTGGAGCTGCAGATCGGAGACGCAGCCTTTTCATTAACCAA
TCTTGAAGCCACATCTGCAGTATCAGCTCAAGTGGAGAAGTTCGCTTCAAATGTACAGAAAATGCACGTTTCCT
TAAACGTGGCGGGACCTCTTGAAAGAAGGCTATGATTCTTTGAAACCTGATGACTGATTGGCATACTTCGTTG
TTTAATAATGACTGCAATAATTCATACTTCTTATGTCATATTTTGTACATGTACCACACATATAGGATGACCTCT
GTCCAGCAGTTCTGTATATACTCAGAATGAAATTTTCTTGGTTTTCTTGGTTTTTGTGAAAGCAGAATACCGAT
GCTATTTTTTGTGCGGACAGTACTTGTGTGCTTAAATACTTTATGCCTCTGAACTTTCATAGAATCCTTTAT
GAAAGTTAACTTCATCAATAGACGGTTAATATTAATAGAGCCACAGTGCTACCAGTAGCAAAGTGGTAGACCAT
TATTTGTTTTGCAACAAGATGCTAAGCATGGCAGACTTTGAAGTTGCGTTTTATCTTAAGGACCAAGGGAGGTAA
CTTTAAGGTTGCCAGTGGTGGATCCAGCTCCGTTAGGCTAAGTTGTCTACAGCTAATGATTGTGTCTTTATTCTA
TATCCCCAGCACCTAAAACAGGGTCACACAACATTCCTAAATGTTTGTGTAATAAAAGAGTTAACAACATAAT
TGAAAGCTTTTTTCTTCTATATTTAGCATGAAGACTGTCATTGTTTCTCTAGGAAATGTATGAATCTGAACTT
TTTTGACTTGAAGAAAAACATTCTTTTTTACAGAGATTGGACTTTGATGATAGGTTTTAAAAATATATGATAA
ATATTTTTTGTACTTGTGTGATTTTTTTTTTAAAGACTTTACTTCAGAAAGGGAAGACTGTTTAGAAAGAATGC
ATATTTTTTCCCTATTTATTTCTGTGGTTACTGCTTTTGCAGTTTAAACAGTGTTTGTATTTGATATTTGTATATG
TTGATTGCTATCTTAAAGTGCCTTATCAGATTTATGGCTCTGTGCTATTACTTTTTTGGAGCTTTGCAAGTTGTG
TACATAATAATTCTAAAGAAGTTACTTTGTTTGCAATGCATCAAATTTAAATGATGTGATTTTTTTGTATTATT
TGATCTTAGTGACAGTGTCTATTTTGCATCCTGTATCTTATGTTGCTTTTGGTGTGTGTGTGTGTGCAACG
ATTAAGCCAATAATTCTCTACCATATATAACTTCTGGACATTTTGTATACAACATCTTAATTCTTTGTAGATAT
GGAGATAGGTACAGAATAATTCTAATGCCCCACAATGGGGCTATGAGAGGGGACAGATGGATGGGCAAAGAAT
AGTTTTGTTTAAACATATTAGGTCATAGTTCTTGATTAGTTTTTTTAGTTAAAGATAAACACATAGGGTGTGATTT
CTATACCAAAGATATGCTTATTTTCAAGTATTAGAAAAATATTCTTCTTACATCTCCTGAAAATTGCAATTTTTAA
ATGTGTAAAAATAAATTATTATTTAAAGCACATTTTATTTCATTGTTTGGATTCACTTAAACTTTTATT
GACATATTTCAAAGATATAGGAAAGGTAAATGATTTCAAGAAAATCCGTGTATTTCTACCATGCAGATGTAATAA
ATGTTAGCATTTGGCTATATTTTCTTCAAGACACATATGCATGTAATTGCAAATGTTAGATACATTTGAAGTTT
GCTTTGTTACCTGTTTGTATCCTGTGCTCCGTTCTCCTCCCTCCCGAGTCCCGAGAGGTAACCACTAGAGGGGGCATA
ATATAGCATGTGTTTTATATTTTAAACAAATATATTTTTTAAAGCGCTACAAAATATTGTTTTATATATGT
GGTAGCCAGCTTCCAGATGGCCCCAGTGATCCCTGGCCTCCTGGTGTTCATGCCCCAGTATAGCCTTCTCCTGCA
TTTTACAGTGCTGACTTTTGTAACTACCAGGATATTGAGCAAAATGCAGTGTGTGATTTCTGAGGCCATANNNNNN
NN
NN
TTTTTGCTCATTTTTCTATGTTGTTTTTTTTTACTTGTGAGTTTTTAGATATTACATATTTTGAATACTAATGATC
TGTTATGTATGTTCCAATTATCTTTTTTAGTCTGGTTTGTCTTCATATTTTGGTTATGAAATCTTGAATTTTTAA
AAACGTAATTTTACCAATCTTTCATAATGATTTGCTTTTTCTGGTTTTTGTATAGGAAATGTCATAAAAATAGTC
CTATTCAGCCTTCCAAAAGTTACAAAATTTTTGGTTTTTAAACATTTAGATGTTTAGTCCAAGTGAATTTGTTTCT
TTTATGGCATGATTTTGGAAATCTTGTTTTAAATTATTTTACATATTTATAGCTGTTCCCTCCAAGTATCAATTTTT
CAAGTGCAACATCTGTATGCAGTTACTATGTAAGGGCCAGATTCTGACCTTTCTGTTCTTTTTATCTGAAGGAA
ATTTGAACATGCCACCCCAATATGCCGATTTGGCATACTGATTATTTGAGCTAAAGGTGCTTGACTAACAGT
AGTTGCAGAAAATGGCTATTTTAACTGTCCTTTTCTACCTGTAGCAAGCCATACAACTTCTTTGATAAAGATGCT
TTCCTGATACCAAGATGAGAAGATGGCTCTAATCAGCTGAGACAGCACCAGAGGAATCTACAAACAAGAACTAT
TAGTTTCTTAAACATATATTTACCTTCCACAGTTTCTGCCTCTGGAAGCCTAAAAGTCTTCTTCTGCTTGTGCA
CACTTCTCTGAAATGTATTCTTTGTGGAAGATGCTATATAGTCCAGAGTTGTAAGCCACTACTTGTGTTTACCTT
TTCATTGAGTTTTCTCCTGTGTGATGTACGTTGCATATATTAATAAAATTACTTGTTTTTCTCTT

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FIGURE 1432

KMKRLCGPGLRPTRRLGGISGVRRRGLSALGASG

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FIGURE 1433

GTAAAGCATTGCTTGAGGTTGCCAGGTAGTTTCGCCTTACACTTCTTGTCCTCCAGTGCAATTATTAGTAGAGCTC
CCTTTCCTGTCCTCAATTTCCGGTTGGGGATAAATTGCATTGTCGTTTTGGTTTGAGATAGGAAGATGAGGGGAGG
AAGGAGGTGAGGCGGTAAAGGGCGTTCTCTCTCTTGGGTCCCGCGCCCAACTTCCGCTGGCCCAAAGAACTATA
ATTTTGAACCAACAGACCTCTGCTGGCATCTGCGATTGCATTTTTCTGTGTTTTAACAACGGCTGTGCTAGACGAA
GTGGTGAAGCCCAAAGACTTATTTTTGAGCTCGCTGTAAGACTGAGAAATCACGTAGTCCTTCTGAAACCACTA
AGAGGAAAAATGCTCTGTGACACTGCATACAGATGTAGGTGATATTAAAATTGAAGTCTTCTGTGAGAGGACACCC
AAAACATGTGAGATGGAGTCTCGCTGTGTCCCCAGGCTGGAGTACAATGGCGCGATCTAGGCTCACTGCAACCT
CCGCCTCCTGGGTTCAAGCAAGTCTTCTGCCTCAGCCTCCCGAGAAGTGAAGAGGAGGCAACAGTATTTGGGGC
AAGAAGTTTGAGGATGAATACAGTGAATATCTTAAGCACAATGTTAGAGGTGTTGTATCTATGGCTAATAATGGC
CCGAACACCAATGGATCTCAGTTCTTCATCACCTATGGCAAACAGCCACATTTGGACATGAAATACACCGTATTT
GGAAAGGTAATAGATGGTCTGGAACTCTAGATGAGTTGGAGAAGTTGCCAGTAAATGAGAAGACATACCGACCT
CTTAATGATGTACACATTAAGGACATAACTATTTCATGCCAACCATTGCTCAGTAGCTATGATAGACCTGGACA
AATAACTTGACAAATTGCTGGAACACACTTATTGTGGTTTACCCGGTTTTAATTATGAGCCAGCTTGACGTGGTT
GTGGCCGTGGGGCGAGATGAAGCTACACTGTGAGGTGGAGGTGATCAGCCGGCACTTGCCCGCCTTGGGGCTTAG
GAACCGGGGCAAGGGCGTCCGAGCCGTGTTGAGCCTCTGTGAGCAGACTTCCAGGAGTCAGCCGCCGGTCCGAGC
CTTCTGCTCATCTCCACCCTGAAGGACAAGCGCGGGACCCGCTATGAGGATTCCATATGGCTCTCATATCATTC
CATTCCATCTCTGCCAAGATTTGGATACCGCAAAAATTTGTGTTTGTGGAAGATTCTGTCTGAACTCTTTCATTC
AAGGAACTACTACCATGAATCTGCATTCTGTTGCCACACTGTGGTCTTAGTAGATAATTTGGGTGGTACTGAAG
CACCTATTATCTCTTATTTCTGTTCTCTAGGCTGTTATGTTAATTCCTCTGATATGTTAAAGTAATGGGTGAGAC
CAGAAAAAGAAATTTCAATAACAGATCAGTTTGGGGTGATGTATGATTTTGCAGCGTCAAATTGGAGTAAGGGA
AGATTTCTGTATACTTGCTGGAGAGGAGGAATGTGTATAGTTACTCATTTAGATGACTCCAAAACCTTTTATTAAA
ACCAATTTTAGTTTT

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FIGURE 1434

MSVTLHTDVGDIKIEVFCERTPKTCMESRCVPQAGVQWRDLGSLQPPPPGFKQVFCLSLPRTGRGGNSIWGKKF
EDEYSEYLKHNVRGVVSMANNGPNTNGSQFFITYGKQPHLDMKYTVFGKVIDGLETLDELEKLPVNEKTYRPLND
VHIKDITIHANPFAQ

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FIGURE 1435A

CTTGGCTCTCTGTGCCTCAGTTTCTCATCTGTAAGGTGGGGATAGATGATGGCAATACCTGCTTCAGAGAGTGAA
AATTAGATGAGATGATGTCTGTAAAATTACGTAAGACGGTACCCAAAAGTAGTACTATTTTTCCCTTTTCTTATT
AGAGCAGGTTGGGCACGTTTTGATGTCCGTGGGAATGAGCAGGTAGAGAGGGTGGTATTGAGGCTGGAGGGGAGA
GAAGGGACCCACAGATGGGGAGAGAAGTCTTGGGTGCCTGTTTTATCCCAAACCAGGGGAAGGAGGGAAACAGGTA
GGGCTGGCTGCAGGAAAGCTTGCAGGTATGGGGTACACAGTTAAAAGGGAGTGTCTTCTGATAGTCTTGATGCAG
GCCTGGAGGTCGTTTGTTATGGGGGTGGAGGTCCTGATGTACATTGTGGCGGTAAGATGCCGTGCTGTCTTTGCC
ACCAGCCTGTGGCAGCCCTGGTGTTACACCAGGGCAGGTGGGCAGTTTAATGTATCTCAGGCCAGATGACCTGCC
CTGCCCACCTGTTGAGGCTCCAGTAGATAGACGTGAAAGCACAGTATAAGCATAATGCACCACTTTAATCCTTTT
CTCTGAGGAGCTGGAAGGCCTGTAGTCACCATCTGAGCCAAATGTCATTCAAGTACTTCACCTGGGTTACACACC
ACACTTTGACCCACTATCTCATTTAGTCATCACAAATGGGTGAANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
NN
NN
CAGGATGGAAAGATGTGTAGGGATTGTCTTCTCCATTTGATAGATGAGACAAGAGCTGGGTACTCTGATCTCCAT
CCCAAGCACACAGAGCTTGGGGCCCCACAGGCCTGGTGTGAATCCCACTCCACTACCAGAGGCTGTGTGCCTTTG
GACCAGGCATCTTGCTTCTCTGACCCTATATACAGCTGCAGAAGAATTCCTTGCAGGTTGCTGTAAGGATTTGGA
GGGAAACTGTTGCCCAGCACACAGTACACATTCTGGGAGCCATCGTTTTCCCCAGTGCACTTTTCTGCAAATGTG
GATCTACATCCCACTTGATGCTGAGACCAGCTGCTGTGATCTTGCAATTTGTTTAGCGCTTGTCTCCTTGAGG
CAGTAAAGTGGTGGCACCTGACCGGAGCATGTAGCCACCTATGACTTCCTGAGTGGGGTGGTGTGGGGAGGGCCC
TGAGGAGTCTGTGGTCTTAGGCCCTGGATTTTCATCAGGGCTTTCTGCTCCTTCTGGTGCCTCAGTCCAGGCA
AGATAGGGTCCCAGAATCTTACAGCCCAGAGGCCACCTGTTGCAACTTCTTTTTTACAGATGGAGTCATCAGAAC
CCACTGTGAGGAAGTGACTTCTCCTTGAGGTACCCAGACACTCCAAACAGAGCAGAGCAAAAGCGCCTAGAACT
TGAAATTTTGGACCTGTCTCCAACACCCTGGGGATTTCCACCAGGAAGCCTTCAGTCACCATCCAGGGGATTTTT
ATCGCCACAAAGGGTAATTCTGCTCCATCCCTGCTGTGACTCAGCTGTGACGTTGAACCACACAAGCCAGAGAG
AAGAAGATAAAGTCATCAGAGCTCCTACTCACCAGAGAGTGAGGCCAGGCCAGGACTCCACAAGGCTGGTCCCC
TGCCCTGGAGCAACTTAAACAGGCCCTCTGGCCAGCCTGGAACCTTGAGATGGCCTCCAGCTCAGGCAGCAGTCC
TCGCCCCGGCCCCCTGATGAGAATGAGTTTCCCTTTGGGTGCCCTCCCACCGTCTGCCAGGACCCAAAGGAGCCCAG
GGCTCTCTGCTGTGCAGGCTGTCTCTCTGAGAACCCGAGGAATGGCGAGGATCAGATCTGCCCCAAATGCAGAGG
GGAAGACCTCCAGTCTATAAGCCCAGGAAGCCGTCTTCGAACCTCAGGAGAAGGCTCACCCCGAGGTGGCTGAGGC
TGGAATTGGGTGCCCTTTGCAGGTGTGGGTGCTCCTTCAAGGGAAGCCACAGTCTGTGCAAGAGCATGAGGT
CACCTCCCAGACCTCCCACCTAAACCTGCTGTTGGGGTTTCATGAAACAGTGGAAGGCCCGGCTGGGCTGTGGCCT
GGAGTCTGGGCCCATGGCCCTGGAGCAGAACCTGTGAGACCTGCAGCTGCAGGCAGCCGTGGAAGTGGCGGGGGA
CCTGGAGGTGATTGCTACCGGGCACCCCTGCTCCGAGAGCCAGGAGGAGCTGGCCCTGCAGCACTTCATGAAGGA
GAAGCTTCTGGCTGAGCTGGAGGGGAAGCTGCGTGTGTTTGAGAACATTGTTGCTGTCTCAACAAGGAGGTGGA
GGCCTCCCACCTGGCCCTGGCCACCTCTATCCACCAGAGCCAGCTGGACCGTGAGCGCATCCTGAGCTTGGAGCA
GAGGGTGGTGGAGCTTCAGCAGACCCCTGGCCCAGAAAGACCAGGCCCTGGGCAAGCTGGAGCAGAGCTTGCGCCT
CATGGAGGAGGCCCTCCTTCGATGGCACTTTCTGTGGAAGATCACCAATGTCACCAGGCGGTGCCATGAGTCGGC
CTGTGGCAGGACCGTCAGCCTCTTCTCCCAGCCTTCTACACTGCCAAGTATGGCTACAAGTTGTGCCTGCGGCT
GTACCTGAATGGAGATGGCACTGGAAAGAGAACCCATCTGTGCTCTTTCATCGTGATCATGAGAGGGGAGTATGA
TGCGCTGCTGCCGTGGCCTTTCCGGAACAAGGTACCTTCATGCTGCTGGACCAGAACAACCGTGAGCACGCCAT
TGACGCCTTCCGGCCTGACCTAAGCTCAGCGTCTTCCAGAGGCCCCAGAGTGAAACCAACGTGGCCAGTGGATG
CCCCTCTTCTTCCCCCTCAGCAAACCTGCAGTCACCCAAGCACGCTACGTGAAGGACGACACAATGTTCTCAA
GTGCATTGTGGAGACCAGCACTTAGGGTGGGCGGGGCTCCTGAGGGAGCTCCAACCTCAGAAGGGAGCTAGCCAGA
GACTGTGATGCCCTGCCCTTGGCACCCAAGACCTCAGGGCACAAAGATGGGTGAAGGCTGGCATGATCCAAGCA
AGACTGAGGGGTGCACTTCGGGCTGGCCATCTGGTTAGGATGGCAGGACGTGGGCTGGGCCCACAAAGGCAAAGG
GTCCAGAAGGAGACAGGCAGAGCTGCTCCCCTCTGCACGGACCATGCGACACTGGGAGGCCAGTGAGCCACTCCG
GCCCCGAATGTTGAGGTGGACTCTACCAAATGAGAAGAAAATGGAACCAGGCTTGGAACCGTAGGACCCAAGCA
GAGAAGCTCTCGGGCTAGGAAGATCTCTGCAGGGCCGCCAGGGAGACCTGGACACAGGCCTGCTCTCTTTTCTC
CAGGGTCAGAAACAGGACCGGTGGAAGGGATGGGGTGCCAGTTTGAATGCAGTCTGTCCAGGCTCGTCATTGGA

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FIGURE 1435B

GGTGAACAAGCAAACCCAGACGGCTCCACTAGGACTTCAAATTGGGGGTGGATTGAAGACTTTTAAGTTTCCT
TCCAGCCCAGAAAGTCTCTCATTCTAGGCCTCCTGGCCCAGGTGAGTCCTAGAGCTACAGGGGTTCTGGAAACAT
TCAGGAGCTTCCTGTCTCCAGCTCCTCACTCACCTTCAGTAACCCCCACTGGACTGACCTGGTCCACAGGGCA
CCTGCCACCCCTGGGCCTGGCAGCTCAGCTTCCCCAACACGCAGGAGCACACCCAGCCCCACATCCTGTGCCTCC
ATCAGCTAAACACCACGTCACCTTCATGCAGGTGAAACCCAGTCACCTGTGAGCTCCAGGTGCAGCCAGAGGCACC
TCAAGAAGAAGAGGGGCATAAACTTTCTCTTCTGCCTAGAGGCCCCACCTTTGGTGCTTTCCAGAATCCCGTA
ACACCTGATTAAGTGAAGCATCCACTTCTTTTCAGCAGACTGATCAGGACCTCCAAGCCACTGAGCAATGTATAAC
CCCAAAGAAATAATTTTTAGAACTCTTTTCGAAGTTTTCTAAAGTGATGGTTTGGGAGTTGTTTGTACTGAGC
CAGGTTTGAAAAGGCCATTGCTGAGTTTGGGTGGTGCCACCAGTTTTGTCAGGTGGCATCAGAGGCTGGCATGCT
GGCAGGAACATCCCTCTTAGCCCCAGTCTTCTCTTTTCTATAATGAGACCCACCCAGCTTGCCTCCCTCCCTG
GCTTCTCTGACCCTCAAAGGAGATGCCACGCAGGACAGACTGGAGAGAGAAGCCTGGGCAATACTGCCCGCTGT
CATGGCCTGGTGGTGGCCACACCTATCTTCTACCTTGGAGGCCACACCCAACCTTTCCAAAGACCCTGAGACAA
GTCAGGACCCTACTACTCTCCCTGCTGCTTTCTGACAGCTTACTCTTCTCCACCTGCTGAGCCTGTGCCAGA
CTCCATTGCTCAAATCGTTAGGGTTGCTTCTATAAAAAATGGGTCAGTAGCCCTTCTGTCTCTCCAGCCCAGCA
TACAGGAGGATCAAAGGAGGTGACGAGCATCGTGGCACGGCAGTCTCAATGGGTGAGAAACCCAGGCCAGCTGG
GCTCTAAGCCTGGCATCCTGTCTAGTCTTACAGTGAAGATCAGAGGAAGCCTCTCCCTTGCCCTCTCCA
GCTCTAGGGGTTTTAGGAGGCCCAACTGCAATAATGGAGCACTAGTGCTTTTATGTGCAATGGTGTCTGCCATG
CACGACAGCAGCAAACATTCTGGGGCTGCTTTTTATTGTTCCACGGCTGACAGCGTGGCAGCGGAGACTGTGGA
GGCAGTGGAGACTGACTTCTTCTGCTGACAGCTGGATGTACACATGAAGGTCTGGCCTAGCGAGTGATGGGTC
TAGGCCCTGAACTGATGTCTAGCAATAACCTCTTGATCCCTACTCACCGAGTGTTGAGCCCAAGGGGGGATTT
GTAGAACAAGCCCCCATGAGAAACAGCTGTTACTCTACACTTTTGATTGCCTATTTCTGATGGCAAGAGATACAT
ACTCTCTTCAAAGAGCATGAGATGCAGCCATTCTTTCAGCAAAGCTTCATTGACACCTGCACCTGTTAACTGTGT
TCGACATTGAAGGGAGAAAGGCAAGATGTGCACTCTGGACTCAAGAACTCTTAGTTAGTGGAGGAAATGAGCA
GATAAGTAGATCATTATGATTGAGAGTAGGAGAAGCTTAGAGAAAGCACAGAACCCAGATCCAGCTGGTGAAGG
AGGGAAGGCTTCAGGCCTTTAAGCTCAGCCTGAGAATATTGTGAAATGCAGAGGATGGGGAAAAGGGAAGAGTAC
CGACTTGAAAACGGAGAGCTGTCTTGGCTGAGGGCAGGGTCTGTGTGGCAGGATGGGGGAGGGAGTCAGAAGGGT
CAGATGAACTGGAGTGTAGACAGCATCAGATGCAGCAGTGCCACCGCCCCCCCCCAACCCCCGCCCTGCCCA
CAGAGCACCTGCTGGTAACCTGGGCCTATTGAAAGCAGGATGAGATGATAATTTAAGACACTGAATGATTTCTT
TTCCAACAAGCTCTATGTTAAGTGCATCAAAGATGTGACATTGCATCTTTTACAGGTGATTCAAGGGTGGGGGA
GGCAAGATGCAGGCAAAGCCACCGTTTCACTGGGTGGATTAGTAGGTCCCCACCCCCAGCAGTTCCCGAAGGT
GCTGGGGAGATTTTTAAACACCAAGTGACAGAATCTACCCCCGTAAGTGATAAAGCCTGAGCATCAGGATGAAG
TCTCTGCAGGGGAAGGTTCTGATGCCCCAGTCAAGTCTGACTGGCCGTTGGGGGCGAAAGGTGTGACTGAAGCA
CTGACAAGGTGGGTGGAGGCACTAACCTGTAACACCTCCTCTGGCTTGGAAAGTTTTGCTTCATCAACTACAGCT
GGAACCTCCGGGGGCAAGGCAGAAGGGCCAGAACAGGGAGGTCTTCTACTGAGGGGCTGTCTATCGATGTCCTGAG
ACATTTGTGGAGCTTCTGGTATACACAGTGCAGACAGTTTCCCTGAGAAGCTGATTGTCTAAAAGTGACACAAA
CCCTCTTCTGCCACGTGCCCCCGAAAAGCCCATCAGAAACCTGAATGGCTTCCCGTTGCCAACTGAAGCATCCT
CACCCTGTACATTAGAACCCCTGCGGAGACTTCATCCTGATGCTCAGGCTTTATCACTTAACAGCCCCTGAAGT
GCACTTAGAATACCAGGTGCTGCCGGCTCCTGGGTCTGGCCATAAGGTGCGCTCCTTACTTGGTTTTCTCTGACTC
CTAATCCAAATGAGCCAAGGGTCTGAGGGGCTGCACAGGCAGTAGGTGTGGAGCACAGCTCTGAGCCCAAGCCTG
GGCTCCAAGCTGCGCTGCTGCTGTAGGGCCTGATCTCCACCTATCCCTTCCCTGCAGGTACCTTCATGCTGC
TGGACCAGAACAACCGTGAGCACGCCATTGACGCCTTCCGGCCTGACCTAAGCTCAGCGTCTTCCAGAGGCCCC
AGAGTGAAACCAACGTGGCCAGTGGATGCCACTCTTCTTCCCCCTCAGCAAACCTGCAGTCACCCAAGCACGCCT
ACGTGAAGGACGACACAATGTTCTCAAGTGCATTGTGGAGACCAGCACTTAGGGTGGGCGGGGCTCCTGAGGGA
GCTCCAACCTCAGAAGGGAGCTAGCCAGAGGACTGTGATGCCCTGCCCTTGGCACCCAAGACCTCAGGGCACAAAG
ATGGGTGAAGGTGGCATGATCCAAGCAAGACTGAGGGGTGCACTTCGGGCTGGCCATCTGGTTAGGATGGCAGG
ACGTGGGTGGGCCCACAAAGGCAAAGGTTCCAGAAGGAGACAGGCAGAGCTGCTCCCTCTGCACGGACCATGC
GACACTGGGAGGCCAGTGAGCCACTCCGGCCCCGAATGTTGAGGTGGACTCTCACCAAATGAGAAGAAAATGGAA
CCAGGCTTGAACCGTAGGACCCAAGCAGAGAAGCTCTCGGGCTAGGAAGATCTCTGCAGGGCCGCCAGGGAGAC

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FIGURE 1435C

CTGGACACAGGCCTGCTCTCTTTTTCTCCAGGGTCAGAAACAGGACCGGGTGGAAGGGATGGGGTGCCAGTTTGA
ATGCAGTCTGTCCAGGCTCGTCATTGGAGGTGAACAAGCAAACCCAGAGGGCTCCACTAGGACTTCAAATTGGGG
GTTGGATTTGAAGACTTTTAAGTTTCCTTCCAGCCCAGAAAGTCTCTCATTCTAGGCCTCCTGGCCCAGGTGAGT
CCTAGAGCTACAGGGGTTCTGGAAACATTCAGGAGCTTCCTGTCCTCCAGCTCCTCACTCACCTTCAGTAACCC
CCACTGGACTGACCTGGTCCACAGGGCACCTGCCACCCTGGGCCTGGCAGCTCAGCTTCCCCAACACGCAGGAGC
ACACCCAGCCCCCACATCCTGTGCCTCCATCAGCTAAACACCACGTCACCTTCATGCAGGTGAAACCCAGTCACTG
TGAGCTCCCAGGTGCAGCCAGAGGCACCTCAAGAAGAAGAGGGGCATAAACTTTCCTCTTCCTGCCTAGAGGCC
CACCTTTGGTGCTTTCCAGAATCCCGTAACACCTGATTAACTGAGGCATCCACTTCTTTCAGCAGACTGATCAGG
ACCTCCAAGCCACTGAGCAATGTATAACCCCAAAGAAATAATTTTTAGAAATCTCTTTCGAAGTTTTCCTAAAAA

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FIGURE 1436

MASSSGSSPRPAPDENEFPFGCPPTVCQDPKEPRALCCAGCLSENPRNGEDQICPKCRGEDLQSI SPGSRLRTQE
KAHPEVAEAGIGCPFAGVGCSFKGSPQSVQEHEVTSQTSHLNLLLGFMKQWKARLGCGLESGPMALEQNLSDLQL
QAAVEVAGDLEVDCYRAPCSESQEELALQHFMKEKLLAELEGKLRVFENIVAVLNKEVEASHLALATSIHQSQLD
RERILSLEQRVVELQQTTLAQKDQALGKLEQSLRLMEEASFDTFLWKITNVTRRCHESACGRTVSLFSPAFYTAK
YGYKLCLRLYLNGDGTGKRTHLSLFIVIMRGEYDALLPWPFERNKVTFMLLDQNNREHAIDAFRDLSSASFQRPQ
SETNVASGCPLFFPLSKLQSPKHAYVKDDTMFLKCIVETST

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FIGURE 1437

GGGGGCGCGGCCGGTTACTCGCTTACCGGAGGCTTCAGTCCCCGGCGGCGGCGACAGCTAGGGTTCACGGCCA
CTGGGGCAGAGGAGCCGCGAGAAGATGTGGGTTTTTGGTTACGGGTCCCTGATCTGGAAGGTGGATTTCCCTTAT
CAGGACAAGCTGGTCGGATACATCACCAACTACAGCAGGCGCTTCTGGCAGGGCAGCACGGACCACGCGGGGTC
CCCGGCAAGCCTGGAAGAGTTGTGACTCTTGTTGAAGATCCTGCGGGATGTGTATGGGGTGTGTGCTTACAGATTG
CCAGTAGGAAAAGGAAGAAGAAGTAAAAGCATACCTTGACTTCAGAGAAAAAGGAGGCTACAGAACCACAACAGTC
ATTTTTTATCCAAAAGATCCCACAACAAAACCATTTCAGTGTATTGCTATATATTGGAACATGTGATAATCCTGAT
TATCTTGGTCCTGCACCTCTGGAAGACATTGCTGAACAAATTTTAAATGCAGCTGGTCCAAGTGAAGAAATACA
GAATATCTTTTTGAACTTGCAAATTCATTAGGAACCTTGTGCCAGAAGAAGCAGATGAGCATCTTTTCGCTTTG
GAAAAATTAGTAAAGGAACGTTTAGAAGGGAAACAGAACCTCAATTGCATATAATTTAGTCTTCAGAGAATTAAC
TTCAGTGCACAATGACAATATGATTTGGAAATACGTTTACTTAAAGATCTTATTTTTAATGTAGTGAGGATATTA
TTAAACTTTTATTTTAACTGGAAATGTCCTGAAACACATATTTAAATATTGGGATACAGTGAAAGAAAAATTC
AAATTTTAATAACATAAAGATTTCTAACTTTATGTTATTGAACACTTACTACTAGAAGTGAGTTCTTTAGAAA
AATACAGTGAAGGACTCAGTTCAGTCTTGTTTTATCAGAGTGATAATCATCCTGTTTCACATCCCAATACTATT
TTGAAATTCATAACAATTAAACCAAAATTCCAATAAATATAAGGTTATGCCTTCAATATATTCCTATACAATTCT
GTAACCATGGTTTAAATAACACAAGCTTAAATAACATGCTTAGAAATACACAATAATATGAACAGTATTTTCAGC
CTTAATTGTGAATTTCTTGTTATTCAAGTATTAAATGAAATCTTTGAGTTTTTAGCCAAAAATTGGCATTTTT
AAAATACGAAAATTTCTTGGAATTATAATGTACTGTACCTCTTCTTTTTTAAATAAAGGCATTTTACTATATGG
AAAACTAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1438

MWVFGYGLIWKVDFPYQDKLVGYITNYSRRFWQGSTDHRGVPGKPGRVVTLVEDPAGCVWGVAYRLPVGKEEEV
KAYLDFREKGGYRTTTFVIFYPKDPTTKPFSVLLYIGTCDNPDYLGPALEDIAEQIFNAAGPSGRNTEYLFELAN
SIRNLVP EEAD EHLFALEKLVKERLE GKQNLNCI

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FIGURE 1439

GCTCAGTGGGGGCGGCTACTGCTCATGTGATTGTGGAGTAGACAGTTGGAAGAAGTACCCAGTCCATTTGGAGAG
TTAAAACGTGTCCTAACAGAGGTGTCCTCTGACTTTTCTTCTGCAAGCTCCATGTTTTTCACATCTTCCCTTTGAC
TGTGTCCTGCTGCTGCTGCTGCTACTACTTACAAGGTCCTCAGAAGTGGAATACAGAGCGGAGGTTCGGTCAGAAAT
GCCTATCTGCCCTGCTTCTACACCCAGCCGCCCCAGGGAACCTCGTGCCCGTCTGCTGGGGCAAAGGAGCCTGT
CCTGTGTTTTGAATGTGGCAACGTGGTGCTCAGGACTGATGAAAGGGATGTGAATTATTGGACATCCAGATACTGG
CTAAATGGGGATTTCCGCAAAGGAGATGTGTCCCTGACCATAGAGAATGTGATTCTAGCAGACAGTGGGATCTAC
TGCTGCCGGATCCAAATCCCAGGCATAATGAATGATGAAAAATTTAACCTGAAGTTGGTCATCAAACCAGCCAAG
GTCACCCCTGCACCGACTCTGCAGAGAGACTTCACTGCAGCCTTTCCAAGGATGCTTACCACCAGGGGACATGGC
CCAGCAGAGACACAGACACTGGGGAGCCTCCCTGATATAAATCTAACACAAATATCCACATTGGCCAATGAGTTA
CGGGACTCTAGATTGGCCAATGACTTACGGGACTCTGGAGCAACCATCAGAATAGGCATCTACATCGGAGCAGGG
ATCTGTGCTGGGCTGGCTCTGGCTCTTATCTTCGGCGCTTTAATTTTCAAATGGTATTCTCATAGCAAAGAGAAG
ATACAGAATTTAAGCCTCATCTCTTTGGCCAACCTCCCTCCCTCAGGATTGGCAAATGCAGTAGCAGAGGGAATT
CGCTCAGAAGAAAACATCTATAACCATTAAGAGAACGTATATGAAGTGAGGAGCCCAATGAGTATTATTGCTAT
GTCAGCAGCAGGCAGCAACCCCTCACAACTTTGGGTTGTGCTTTGCAATGCCATAGATCCAACCACCTTATTTT
TGAGCTTGGTGTTTTTGTCTTTTTTCAGAACTATGAGCTGTGTACCTGACTGGTTTTGGAGGTTCTGTCCACTGC
TATGGAGCAGAGTTTTCCCATTTTCAGAAGATAATGACTCACATGGGAATTGAACTGGGACCTGCACTGAACTTA
AACAGGCATGTCAATTGCCTCTGTATTTAAGCCAACAGAGTTACCCAACCCAGAGACTGTTAATCATGGATGTTAG
AGCTCAAACGGGCTTTTATATACACTAGGAATTCTTGACGTGGGGTCTCTGGAGCTCCAGGAAATTCGGGCACAT
CATATGTCCATGAACTTCAGATAAACTAGGGAAAACCTGGGTGCTGAGGTGAAAGCATAAATTTTTTGGCACAGA
AAGTCTAAAGGGGGCCACTGATTTTCAAAGAGATCTGTGATCCCTTTTTGTTTTTTGTTTTTGAGATGGAGTCTTG
CTCTGTTGCCAGGCTGGAGTGCAATGGCACAATCTCGGCTCACTGCAAGCTCCGCCTCCTGGGTTCAAGCGATT
CTCCTGCCTCAGCCTCCTGAGTGGCTGGGATTACAGGCATGCACCACCATGCCAGCTAATTTGTTGTATTTTTTA
GTAGAGACAGGGTTTCACCATGTTGGCCAGTGTGGTCTCAAACCTCTGACCTCATGATTGCTGCCTCGGCCTC
CCAAAGCACTGGGATTACAGGCGTGAGCCACCACATCCAGCCAGTGATCCTTAAAGATTAAAGAGATGACTGGAC
TAGGTCTACCTTGATCTTGAAGATTCCTTTGGAATGTTGAGATTTAGGCTTATTTGAGCACTACCTGCCCACTG
TCAGTGCCAGTGTCATAGCCCTTCTTTTGTCTCCCTTATGAAGACTGCCCTGCAGGGCTGAGATGTGGCAGGAGCT
CCCAGGGAAAAAGGAAGTGCAATTTGATTGGTGTGATTGGCCAAGTTTTGCTTGTGTGTGCTTGAAAGAAAATA
TCTCTGACCAACTTCTGTATTCGTGGACCAAACTGAAGCTATATTTTTTACAGAAGAAGAAGCAGTGACGGGGAC
ACAAATTCTGTTGCCTGGTGGAAAGAAGGCAAAGGCCTTCAGCAATCTATATTACCAGCGCTGGATCCTTTGACA
GAGAGTGGTCCCTAAACTTAAATTTCAAGACGGTATAGGCTTGATCTGTCTTGCTTATTGTTGCCCCCTGCGCCT
AGCACAAATTTTGACACACAATTGGAACCTACTAAAAATTTTTTTTTTACTGTTAAAAA

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FIGURE 1440

MFSLPFDVLLLLLLLLLRSSEVEYRAEVGQNAYLPCFYTPAAPGNLVPVCWGKGACPVFE CGNVVLR TDERDV
NYWTSRYWLN GDFRKGDVSLTIENVILADSGIYCCRIQIPGIMNDEKFN LKLVIKPAKVTPAPTLQRDFTAAFP R
MLTTRGHGPAETQTLGSLPDINLTQISTLANELRDSRLANDLRDSGATIRIGIYIGAGICAGLALALIFGALIFK
WYSHSKEKIQNLSLISLANLP P SGLANAVAEGIRSEENIY TIEENVYEVEEPNEYCYVSSRQQP SQPLGCRFAM
P

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FIGURE 1441

TCGACCCACGCGTCCGACTTCGGAACTGAATAAGGTGATTAGTGACCTGACTCCAGTCAGTGAGCTTCCCTTAA
CAGCCCGACCAAGGTCAAGGAAGGAAAAAATAAGCTGGCTTCCAGAGCTTGTCGGTTAAAGAAGAAAGCCCAGT
ATGAAGCTAATAAAGTGAAATTATGGGGCCTCAACACAGAATATGATAATTTATTGTTTGTAATCAACTCCATCA
AGCAAGAGATTGTAAACCGGGTACAGAATCCAAGAGATGAGAGAGGACCCAACATGGGGCAGAAGCTTGAAATCC
TCATTAAAGATACTCTCGGATTTGTCCTACAGCTTAGTATTGTGGTTGACAGCGATACTAGGGCTGACAGCACAG
AAGTCACAAGAGAAGAGTGGAAGGGCAAGAATTCAAAGCATTTGTTCATACAATGTGGCAACCTCTTTTGCATAG

TTGCGTAGGATCCTGTTTGTAATGCTATCATAAATATTCTGTAGTTTTTTTTTTTTTCTCTCCCAACTGGAGCTAT
GACACTTTTTATTGGATTCAGTCTTGTCCTTGCTAGAAAGAACTTTATCTTGTTGACGCATGAGCTGTTTAAA
AATTATCCTATTAAATGTTGGTTAATAGTTGTGCAGTTTTTCATTTAGATGGAAAGGCAATGCAAATTTGCCT
TTGTTTTCTGTCACCTTCCAACCCCTGAGCACTTCTAGTCAGATACAGATTCATCAGTGTATGCAACATCCTTTG
TAATTTAAAATAAAAAAAGATGAAAAAAAAAAAAAAAAAAGGGCGGCC

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FIGURE 1442

MREDPTWGRSLKSSLKILSDLSYSLVLWLTAILGLTAQKSQEKSGRARIQSICSYNVATSFA

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FIGURE 1443

AAATTTTTTTCTACTAGCTACTGAGGCTGCCACATCTGGATGGAAGTGAAGTGGAGGGGGAAAAGAATGAAAAAC
TCAAAAAGAAATCCCATGAGGGTGTCTTGCTTTCTCTCCTGAGTTACAATACTTTAGCAAAATCATGAGGCTTTAG
AGATATGGTGTAGTCTGCAAACTTCTTAATGCCCTTACCCACATTTACCATGTTTCCTGGCCTTCCTCTGTGTCA
ACTCTTAGCTCTTCCTAATCATTATTTAATACATGAGTGAGTTTAGTAGTGATCATATTTCTCAGGTCCTTTAGA
AGCTGGAATTTTAAAAGAATTAGAAGGAGGAGTATGTGAATTCTTTGGAGCTCACTGCCTGACTTGCTTATGACC
AGGAAAATCTATCCCCTGTATCTAATTTTAAATTTTCATGGTTAAATTTGAGAATTGTGGAAACCAAGTTCCACAAG
GCTATTCTCATATTTCTCCCAATTTCTTTTTCAGCCAACCTCCAAGGATATGTATCACCTTTTGACTTAATTTGCTT
TCTCTAAGGGAAAGGGGAAAAAATGTTACATAGCTCCACTGCAATGTTTTTTATAATAGAGGAGAGATATTGTA
AATAGAGACTGCCAGCCAGTTTCCACAAAAAACGAAGAGTTCATAAATTTGACATGTTTGAACCCATAAAGCAT
TTTCTTTGCTTGGAACCATTATAAAAGTAAGTGAGTTTTCAGGCTCTATATACATTTTAATTCCTCACGTTTTAT
ATTGGAGAGTTCGGTACAGACTGTCCATTACTGCACCAAAGAATGAGTGAAGTGTACCTATAGGGAAAGAACA
CTTCTTCTCCTGCTGTTTGGGAACCATCTCAGTGTGGCGTAATGGTTAGGAGTACAGATTCCAGATCCTGTTTC
TTAGATTTAAATCTTGACTCTGCCACATACTAGCTGTCTGACTGAACCTTGGNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNCAGTACTTACCTCATAGAGCTGTTGTGAAAAGTGATGACTGAATATGTAAAAGCAC
CCTAGAAACAGTGCCTGGCACATGCTAAGTGCTTTGTTTCATTATTGTTGTTATTATGTAATTTCTCTCAGACTG
AGAGCACTGTTAGTGACCCAAGTAAATTTATAGTTTTTAAGTACAGAGGAAAAATAAAGCCTATTTTTTGTTAAC
AGTCTTAATAAATAATAAAATGGAATAAAGAAACCAAGACCCCAAAAAA

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FIGURE 1444

MTRKIYPLYLILISWLNLRIVETKFHKAILIFLPISFSANSKDMYHL

[illegible]

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FIGURE 1446

MFCHLGDKSSCXXX
XXQ

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FIGURE 1447

TCATCAGCACAGCAATAGATCTAACGTTCCCGCCAGGGGTACTGGTCAGCGTTGGTTCTTTAGAAAGCCTGTGTA
GAATCGATTAAAAATTGCTCAGCACTTACTACAGCCATTTTCAACCAAGAAAAAATAATTTTCGGGACTCACTT
ATATTCCACAGTTTAAATATGGACAATTAATAGGTCAAGGTCCAGGCTGGAAGGGGACCACTTCGAATCTTGAAT
GCAGGGGGCAAACAGCTCAAGACACCATGGCTGATGAAGACGCTATGTACACGCTTTCAGTATGAAAACCAATGA
GCTACATGGGGCTGGCGAACAC

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FIGURE 1448

MKTNELHGAGE

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FIGURE 1449

AAAACCTTGAGGTGATTCACTTCCAGGCTCTCCTTCCATCAAGTCTCTCCTCCCTAGCGCTCTGGGTCTTAAT
GGCAGCAGCCGCCGCTACCAAGATCCTTCTGTGCCTCCCGCTTCTGCTCCTGCTGTCCGGCTGGTCCCGGGCTGG
GCGAGCCGACCCTCACTCTCTTTGCTATGACATCACCGTCATCCCTAAGTTCAGACCTGGACCACGGTGGTGTGC
GGTTCAAGGCCAGGTGGATGAAAAGACTTTTCTTCACTATGACTGTGGCAACAAGACAGTCACACCTGTCAGTCC
CCTGGGGAAGAACTAAATGTCACAACGGCCTGGAAAAGCACAGAACCCAGTACTGAGAGAGGTGGTGGACATACT
TACAGAGCAACTGCGTGACATTGAGCTGGAGAATTACACACCCCAAGGAACCCCTCACCTGTCAGGCCAGGATGTC
TTGTGAGCAGAAAGCTGAAGGACACAGCAGTGGATCTTGGCAGTTCAGTTTCGATGGGCAGATCTTCCTCCTCTT
TGACTCAGAGAAGAGAATGTGGACAACGGTTCATCCTGGAGCCAGAAAGATGAAAGAAAAGTGGGAGAATGACAA
GGTTGTGGCCATGTCCTTCCATTACTTCTCAATGGGAGACTGTATAGGATGGCTTGAGGACTTCTTGATGGGCAT
GGACAGCACCTTGGAGCCAAGTGCAGGAGCACCACTCGCCATGTCCTCAGGCACAACCCAACCTCAGGGCCACAGC
CACCACCCTCATCCTTTGCTGCCTCCTCATCATCTCCCTGCTTCATCTCCTGGCATCTAGAGGAGAGTCCTT
TAGAGTGACAGGTTAAAGCTGATACCAAAGGCTCCTGTGAGCACGGTCTTGATCAAACCTCGCCCTTCTGTCTGG
CCAGCTGCCCACGACCTACGGTGTATGTCCAGTGGCCTCCAGCAGATCATGATGACATCATGGACCCAATAGCTC
ATTCACCTGCCTTGATTCTTTTGCCAACAATTTTACCAGCAGTTATACCTAACATATTATGCAATTTTCTCTTG
TGCTACCTGATGGAATTCCTGCACTTAAAGTTCTGGCTGACTAAACAAGATATATCATTTTCTTTCTCTTTT
TGTTTGGAATCAAGTACTTCTTTGAATGATGATCTCTTTCTTGCAAATGATATTGTGAGTAAATAATCACGT
TAGACTTCAGACCTCTGGGGATTCTTTCCGTGTCTGAAAGAGAATTTTAAATTATTTAATAAGAAAAAATTTA
TATTAATGATTGTTTCCTTTAGTAATTTATTGTTCTGTACTGATATTTAAATAAAGAGTTCTATTTCCCAAAAAA
AAAAAAAAAAAA

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FIGURE 1450

MAAAAAATKILLCLPLLLLLSGWSRAGRADPHSLCYDITVIPKFRPGPRWCAVQGQVDEKTFLLHYDCGNKTVTPVS
PLGKKLNVTTAWKAQNPVLREVVDILTEQLRDIQLENYTPKEPLTLQARMSCEQKAEGHSSGSWQFSFDGQIFLL
FDSEKRMWTTVHPGARKMKEKWENDKVVAMSFHYFSMGDCIGWLEDFLMGMDSTLEPSAGAPLAMSSGTTQLRAT
ATTLILCCLLIILPCFILPGI

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FIGURE 1451

CTGGGGTTGGCAGTCTGCTTAACAAGAXGCTGGGACCACCTCTGAATTAGTGAATCAGGGAGCTGCTGTGTGATC
CCCTCCTCCAGGCTTTCTTGGAGTTTGTCTCTGCCACTTCCTCAAGCCCTTTAAAAAGGCTCCTGTGCTTTAGAG
AGTWAGGATGTTAATGACCGTTCTTTTTTCTTGTACTTTATTAAGTACTAGTCTTACTAGACTAGTGCTTAAGTG
GCAGTGTCTGCCTTTGCCTTCTCCCATCTCTTTATGCTCCTTTCTTCCAACCTTCTCACGTTTCTGTTTCTCGCAC
GGCCAGGTGTCCAGCATCCCATGCTGACTTGCGGTTGGCCAATCCCTCCTCGTAGATTTCCTCCACATTTTCCT
CTTCCTCCTTTTCCTGTGGGAAGTTCTTTTTCTGGGCTGTGGCTGGTCTTACGTAGTTCGGTGGAAAAAGTATTG
AGGTAGTGTTAGATACTGTGCTGCACCTCCAGGAGTGTCGAATCTTTTGGCTTCCCTGGGCCACACTGGAACAAG
AAGAACTGTCTTGGGCCACACGTAAAATACACGGACACTAACGATAGCTGATGAGCTAAAAAAAAAAAAAAAAAAAA

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FIGURE 1452

AACAATGGATATTCTGTAAATATCCTGTACAAAACAAGACTATTGCCAGTAATGTATACAAATTGTCTTTTTGT
GTACTTCCAGCATAGGTTTGGATATATGAACATTTTTCTTTTATTGTTTTATCTTCACAGAAAATAAAAGGTGTT
AATTTGCTTTTTTAAACAAATTTAATTATCACATTTTAAATTACTTTGTGGACTGTGTTTTCAAACCTTTGCAAA
TTCATCTGTACACAGAAAATTTGACTTAAACATCTGCTGAATTCCAAATTTCTGTAATAGCTACTGTATCTG
TGATAAACTTTTCCTATATCTTTTCCTTGCCATTTCTATGGATTTTATAATGAAAGAAAAAGGCATTGGAGACTGAA
GGCAGAAATGGTTGTGACAGTGCTGTTTGGCTTTTTTCATTCTTCAAATGCCAAGTCATCCACTTTGTTTTCTGT
TTAGGCTTTGCACAAATACAATTGCTTTTCAGGAATCCTAAAGCAGCATTTTATTGAGTTTGAATTATTAAAGGTA
CAGAGGAAATGTGGTGATGTAGAATTTTCTTAACACAGGTATCTAGGAAGTAAGTGCTGAGTTGATTTTCTAGG
TTCTTACGTATTTGAAAAATAAAATTGCAATTCGAGATAAGTGCTTGAGCACTCTACTTAAGTATTCTCTGTGTT
TTATGAAGAGAAAATGATCTGATTTTCCCTTATACTTCAATTTTACAATACATATTCCCTTTTAACTTAAAAAAAT
TGTAATGTGGGAGAAAAAACCTGCAGGATGGAAACAATTATTAAGAATGTAGATCAATAAGTACTTTTTAGTG
ATGTGGCAGAAATCCCTGTTGATTCTAAGTTTTAGAGTGCTTTTCCCCTATTTCTGACCTACAACATAAACTA
CTCTCTATTAGGAGAACTAGACCACTTTCTTCATTCTTTTCTAAACTGCTGCAGATTGCCGTGAACCTCTATCAAT
AGTCTCTTTTCCGCAGGCAAAGTGGCATTTTCTAAACATGTTTGCTTACTGCCAGGTGGTTTGAAATCTATGATT
TACTGCAGTAGTATGTGCTTAAACAACTGTTGAGGTCTTTTAAGCAGGAAAGTTCAAAGGAAGTGTCTTGATA
ATGGTACTGGTTTTTCTACAAATATTAAGTAGTCATTAGAAGTTTGCAACCACCACCAAGTCTGAGAGAACTCTGG
GATATTCTGTGGGTTTGGCATATTAGATAGAGAAAATGACAGATCTAGATGAAGGGAGCTTTTGATGTGTGCCT
TTAAAACTGATTATGTATAAATACTGATATTTACATACGGAGATATTTGAAGACCCAAGTCTGCCTTTACAG
AGCCCTCCATTCCAAGTTTAGTTTTTGTCAAAATATGAATCATTTTATTTGACTGTACTATCAGTACACAAATGC
ATGAGTATGTTTATACAGTGTTAGACTGATGTGAATTTGCATTTGTTACATTACATTGCCAGCGCATATCATTTA
GCAAGTTGGCATTAAACATTTATGCTTTAATTAATGCCAGTATACCTATGTGTGCAGCAGTAAAAAATTAGTGAG
AAAAAGCAACTTTTTGTCACTCTTAGGAAATATTTGTCTTATTAGTGTTCTTGGCACATGTATATTACTAAAGT
AGATAATTCCAATGAGAAATACTACCAGATTATTGTTATAAAATTAATTTACAATGTCCCTGATATTGAGCTAAC
TCTTAAAAAAACCAAACAAACTCGTATCTGAGTGTAACCTTGCCAATATTTTAAAAGCCAAATATTCTCTGGA
CAACAAATTTGTATTGCTCAGGGACAGTTTACCTTGCTTGGTAAACCTTCCCAAACAGAAATATAGCTATACTAT
CTTTGGTTTTGT

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FIGURE 1453

MWQKSLILSFRVSFPLFLTYNYKLLSIRRTPLSSFFSKLLQIAVNSINSLFSAGKVAFSKHVCLLPGGLKSMI
YCSSMCLKQLLRSESKGSVLIMVLVFLQI

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FIGURE 1454

GAGAGCCAGAGGCCACTCTTTATTGCTTTTTTCTCAGGCTTCTGCTTGTGTGATCAGGGNAAGGGATCCCACAT
ATGGGAATGGTTAGTGGCTTTTGGGACTCTCCAGGAGCCTCTGTTTTAAGAATGAGGCCAAATGTGCAGGCTCAG
GCCAAGCGGCAGAGATGAATGAGGTGATGACCACAGCCTTGATCCGGCAGGAGCTCAGAGATGCCCGGGAAGACG
GGGGGCCCCGAACGGAAGCAGAAAAACACTTATGGCCGCTGGGAAGTTGGGAGAGCGAGGCTGGGGCTCTGGCAGG
CCCAGGGAAAAGTTCCTGTCTAGGCTCTTTATTAAAAAATTTAAAAGGAGGAGTTGAGGCACCTTGAATATTCCT
TCGCGAGTCTTGGAGACTAGCCGATTTTTCTATGAAGCAAGCAAAGACCGCGGTCCCGGATCCTGCAACTTCTACC
TCATTTTCTCCAGGCCTCTCCACTTGCCCGAGCTCTCAGCCACCAGGAGACAGATGGAAGGGGCTTCTGGATTGC
GTTGGGAGCGGGCACTGTCCCTACCCACTCCTGCTCAGTTTCCCAAAGTCCAGCGACTTCCGACCCTCCTTGGG
GGAAAAATACCAGTACCCAGACACCTTTGCACCCTGTTATATTGACTGGGCTTGCTTCAGGAATATCTTACAAAG
AAAAGAAGAAGAAAGAACGGCTTGGAGTCATGTTTACATCTAGTTCTACTGATCCGTTACATCTGGAGAGTTTA
TTATAACTCCCTCTATAACTCTCTGTTTGGAGACACTGTGGCTCTATTGACAGACTGATATCTAGGAAATATTG
CTCTATGTCTAACCGTACCTAAATGTGCTGTGGTTGTATTTACAGATTTATGTTTGGGGAAATATAACTATTTT
CATTGTATTTGTGCATATACAGTAGTTATAGGAGCAGATTTATATATGGGAAATATACGACTCTCTTACAGCCA
TCCAGCTTTATGTACATTTGATATCCTGACAGATTTATATCTCTGAACAGCTATATTGATCAAAACGTATATTGT
TAGAATTATGTGTCCGAAGATTTTTTCTTATT

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FIGURE 1455

MKQAKTAVPDPATSTSFSPGLSTCPSSQPPGDRWKGLLDCVSGHCLPTPAQFPKVQRLPTLLGGKNTSTQTPL
HPVI

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FIGURE 1456

CTGCGCCTGGCGTCACCGACCGGTGCGGACAGGAAGAGGCTCTGGGCTGGCACATGTGTATGGCGGTGAGGCGGG
CGGGTACATGGCGGGCTCTGTGGGACTGGCGTTGTGCGGGCAGACGTTGGTGGTGCGGGGCGGCAGCCGATTCCCT
GGCCACCTCCATAGCAAGCAGTGATGATGACAGCCTCTTCATCTATGACTGCAGTGCTGCAGAAAAGAAGTCACA
AGAAAATAAAGGGGAGGACGCGCCCTTGGAACAGGGGAGCGGTGCGATTCTGGCGTCCACCTTCTCCAAGTCTGG
CAGCTATTTTGCTTTAACCGATGACAGTAAGCGTCTGATTCTTTTCCGTACAAAACCATGGCAATGTCTGAGTGT
CAGGACCGTGGCAAGGAGGTGTACAGCCCTGACTTTTCATAGCCTCGGAGGAGAAGGTCTTGGTGGCCGACAAGTC
TGGAGACGTCTACTCCTTTTCGGTGCTGGAGCCACACGGGTGTGGCCGTCTAGAGCTGGGGCACCTGTCTATGCT
GTTAGATGTGGCTGTGAGTCCTGATGACCGCTTCATCCTCACTGCCGACCGGGACGAGAAGATCCGAGTCAGCTG
GGCCGCGGCGCCCCATAGCATCGAGTCCTTCTGCTTGGGGCACACAGAGTTTGTGAGCCGTATCTCCGTGGTGCC
AACTCAGCCCCGGGCTGCTTCTGTCTCCTCTGCGGACGGCACCCCTGAGGCTCTGGGAGTACAGGAGCGGCCGCCA
GCTGCACTGCTGTACCTGGCCAGTCTGCAGGAGCTGGTGGACCCCCAGGCCCCCAGAAGTTTGCCGCGTCCAG
GATTGCATTCTGGTGCCAGGAGAACTGCGTGGCGCTCCTGTGCGACGGCACTCCTGTGGTCTACATCTTCCAGCT
GGACGCCCCGAGACAGCAGTTGGTGTACAGGCAGCAGCTGGCGTTCCAGCACCAAGTGTGGGACGTGGCTTTTGA
GGAGACCCAGGGGCTGTGGGTGCTCCAGGACTGCCAGGAAGCCCCCTGGTGCTCTACAGGCCTGTGGGCGACCA
GTGGCAGTCTGTTCTGAGAGCACCGTGTTAAAGAAAGTCTCTGGTGTTCTTCGTGGGAACCTGGGCCATGCTGGA
AGGCTCTGCCGGCGCAGACGCCAGCTTCAGCAGTCTCTACAAGGCCACGTTTCGACAACGTGACCTCCTACCTGAA
GAAGAAAGAGGAGAGACTGCAGCAGCAGCTAGAGAAGAAGCAGCGCGCCGGAGTCCCCCGCCTGGGCCCCGACGG
GCATGCCAAGAAGATGAGACCGGGGGAGGCGACGCTAAGTTGCTTGATCGTGGCGGTCTGTTTCTGTGCGACTGTGG
ACCACTTATGTGCGATCCGTGGACCACTTGCGTGCGATCTGTGCGCCGACGATGAGCTTGTTTCGGATGTAGCTCC
ATCGTAAGTCGAGGAGCATCTGTGATTTGTCCTCTGCTTATGGGATATGTTTTCCGCTACTGAGTCTGTGTAGT
AAATTTTTGACTAGGAA

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FIGURE 1457

MAGSVGLALCGQTLVVRGGSRFLATSIASSDDDSLFIYDCSAAEKKSQENKGEDAPLDQSGAILASTFSKSGSY
FALTDDSKRLILFRTKWPQCLSVRTVARRCTALTFIASEEKVLVADKSGDVYSFSVLEPHGCGRLELGHLSMLLD
VAVSPDDRFILTADRDEKIRVSWAAAPHSIESFCLGHTFVSRI SVVPTQPGLLLSSSGDGT LRLWEYRSGRQLH
CCHLASLQELVDPQAPQKFAASRIAFWCQENCVALLCDGTPVVYIFQLDARRQQLVYRQQLAFQHQVWDVAFEET
QGLWVLQDCQEAPLVLYRPVGDQWQSVPESTVLKKVSGVLRGNWAMLEGSAGADASFSSLYKATFDNVT SYLKKK
EERLQQQLEKKQRRRSPPPGPDGHAKKMRPGEATLSC

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FIGURE 1458

GCTGACACCTGCCCAGTGGAAAGCTGGCATCCCTCCCCTTGTGGGTTCAGAGCTGCAAGAAGCACCAGGCTCGGCC
ACTTCAGAAGCCCCAGCCTCGACCTAGCCACCCCTCTCAGGGCCACAGTGCAGAAGCCTGCACACCTGCCAAGTC
TCTCCGACTCCTTGACAGTGTGTGAGCATGGGCCAGGCTCCTGCTGACCCGGGCAGAGAAGGCCACCTTGAACA
AAGAATCCTGCAGGTGCTGACAGAGGCTGGCTCCCCGGTGAAACTTGCCAGCTGGTGAAGGAATGCCAAGCACC
CAAGAGGGAGCTCAACCAAGTCCTCTACCGAATGAAAAAGGAGTTGAAAGTCTCCCTCACATCCCCTGCCACCTG
GTGCTTGGGCGGGACTGATCCTGAAGGCGAGGGTCTGTCAGAGCTGGCCTTGTCAGCCCTGCCGAGAGGCCCA
GCAACATGCAGCTACAATTCCAGAGACCCCTGGCCCTCAGTTCAGCCAACAACGGGAGGAAGACATCTACAGGTT
TCTCAAAGACAATGGTCCCCAGAGGGCCCTGGTCATCGCCCAAGCACTGGGAATGAGGACAGCAAAAGATGTGAA
CCGAGACTTGTACAGGATGAAGAGCAGGCACCTTCTGGACATGGATGAGCAGTCCAAAGCATGGACGATTTACCG
CCCAGAAGATTCTGGAAGAAGAGCAAAGTCAGCCTCAATTATTTACCAGCACAAATCCAATCAACATGATCTGCCA
GAATGGACCCAACAGCTGGATTTCCATTGCAAACCTCCGAAGCCATCCAGATTGGACACGGGAACATCATTACAAG
ACAGACAGTCTCCAGGGAGGACGGTTCCGCCGGTCCACGCCACCTCCCTTCAATGGCACCAGGTGATTCTCAAC
TTGGGGGACCCTAGTTGATCCCTGGGGGCCCCAGGACATCCACATGGAGCGGTCCATACTGAGACGGGTGCAGCT
GGGACACAGCAATGAGATGAGGCTCCACGGCGTCCCGTCCGAGGGCCCTGCCACATCCCCCTGGCAGCCCCC
AGTCTCTGCCACTGCTGCCGGCCAGAAGCTTCGTTTGAAGCAAGAATTCCAGTCCAGGAACCTACCCTGAGGG
GGAAGCCGCCCAGAGAATCCACATGAAATCGTGCTTTCTCGAGGACGCCACCATCGGCAACAGCAACAAAATGTC
TATCAGCCCAGGGGTGGCTGGCCAGGAGGAGTCGCAGGGTCTGGAGAGGGGGAGCCAGGGGAGGACGCAGGTCTG
TCGTCCCGCAGACACACAATCCAGAAGTCACTTTCTCGAGACATTGGTCAGCCCATCACTCCCAGCCACTCGAA
GCTCACCCCCAAGCTGGAAACTATGACTCTTGGAACAGGAGTCACAAAGCTGCAGAAGGCAGCCACTATGTGGA
TGAAGCCTCACACGAGGGGAGCTGGTGGGGAGGTGGGATTTAGTGCACAGCCTCACGTGGGGCTTGACACAGGC
TGGGGGTGGGCGCATGCTAGGGAGACTAGCCTGCTGCTCTCTGCATTCTTAGCGTCTTGTTTGACCTGCTTGCT
TCCAGACATAACCTGCATGAATCAGTTTTGGGGGAATGGACCTGGCATGGGGATGGGTTTCAGGCCAGGTCTTTTG
ATGGCCAGGAGTAGATGACAGGGAGTTGCCTTGGGGAACCTTTGGTGTGCCAAGAGGAGGTGGGTAGATGGGAGT
GGGGCTCGGTCCCCCAGGCCCAGGGGACTCTCTCCACTCTTTCTGGGCTCGGGGCATCTGCCTGGAGTTACCTT
CCATCATGGCTACCTGCTGTGGTTTGAATGTTTGAGTCCCAACAAAATTCATATCAAAACATAATCCCAACTGGG
TGCAGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCGGGCGGATCAATAGGTGAGGAAATCCAGA
CCGTCTTGCTAACATGGTGAAACCCCGTCTCTACTAAAAAAAAAAAAATACAAAAATTAGCCGGGCGTTGTGGCG
GGCACCTGGAGTCCCAGCTACTCCGGAGGCTGAGGGAGGAGAATGGTGTGAACCCGGGAGGTGGAGCTTCCAGTG
AGCCGAGATCGCGCCACTGCACTCCAGGCTGGGCGACAGAGCGAGACTCCGTCTCAAAAAATAAATACATAAAT
AAAAAATAAACCACCCATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1459

MAQAPADPGREGHLEQRILQVLTEAGSPVKLAQLVKECQAPKRELNQVLYRMKKELKVSLTSPATWCLGGTDPEG
EGPAELALSSPAERPQQHAATIPETPGPQFSQQREEDIYRFLKDNGPQRALVIAQALGMRTAKDVNRDLYRMKSR
HLLDMDEQSKAWTIYRPEDSGRRAKSASIIYQHNPINMICQNGPNSWISIANSEAIQIGHGNIITRQTVSREDGS
AGPRHLPSMAPGDSSTWGTLLVDPWGPQDIHMERSILRRVQLGHSNEMRLHGVPSSEGAHIPPGSPPVSATAAGPE
ASFEARIPSPGTHPEGEAAQRIHMKSCFLEDATIGNSNKMSISPGVAGPGGVAGSGEGEPGEDAGRPPADTQSRS
HFPRDIGQPITPSHKLTPKLETMTLGNRSHKAAEGSHYVDEASHEGSWWGGGI

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FIGURE 1460

GCAGAAATCAATATGTGCACAGTTCTCTTTATCAGGCAAAAACACGTTTATTGAGACATGAAATGAGAATCAGGCT
GAAGGAATCATGCAGCTGAAGAGATGATTATATTCATAGAAATGAAGAGATGAAATATTCAAAGAAGATGGCTACT
TTATTGTGAGACTTACCACTTTAACCTCATATGTTAACAGCACCTACCAAAAAATGATATGAGATAGAGCTAAAA
TACTGAAATTGCAAATGGACAAAATAAATCATGAAAATTTGTTTATTATTTCTTCAATAAATATTTCTAGGTGCT
TTGTGATTCTTTCATTTAGTCATTAAAGCCATTGCTTTACTATATTGCGTTGCCACTTTAAAAACAAGTTACTTG
ACATTGTTTTTGACAGATTTCACTATATTCTTATGTAATTAATTGATTATTTCTAAAATGTTTGAATAAACTTTG
TACTCCCTCTAAGGAGTATTTTATTCATTCTTTTAATTCCCAAATGAACTTTGAACCTTACAGTGCTGTTGAATGC
CTTGTAAGGACTTCTTGAAATTGCATAAACTATTCTTGTAATGGTAAACTTGAGAATTTTCTTTGTTTCTTTT
TTCTCTATGTCTTAAAGAATGCCTTTAGAATCTAATTCATGTTGTATCAGATAAGAATGTTTCTGTGGTTTCTCG
TATCAGATGTGTAAAGAAATTATTACTGGGATGCCATTGGCTATGTCTCTTTCCCCTTCATGTAAAAATTCCAAG
TGTCAGTAAACTTCTCTATAATATTTTCTTAAACCATTATATAAATTTGTGTTATAATACTCCAGAAAAATCAAT
GTAATAAGTGGTCATATATATCACCAACTATGGATATCAAAAAGTTGGGGTCACATCAGTGCTATTTATTTAATT
AAAATACATTGCATATTTCTATTAGCACAACTTCTCTCTAAAAGGTCTGTGTAACCTTCTCATCATTATTTG
ATTGCTGTTATGGGATCCTGTCAAACTGTGTAATTGTTTATTCTCCATTCCTCAAATACAAAATTGAGTAGGTT
G

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FIGURE 1461

QNQYVHSSLYQAKTRLRLRHEMRIRLKESCS

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FIGURE 1462

TCATTTTAAAGAGACTCCTGCTATGTTGCACAGACTTGTGAATTCCTGGTTTCAAGTTATCTTCCCCCTATGT
CACTCAAGTAATGTGGACTACACTCATGTGACACCATGCCCATCTTTATGTTGTGTATCTTATTTTGTGTTTGT
TACTCTTGAATCAGCTCAGTCTGAAAATCTGTCTTTTAATTCATGGGGATTTTTAGAAATGATTCTTGGAGGG
TTTGTCTTTTGAATGTGTGGTCCCTTCTCTGCCTAGAACTTTTTTTTTTGAATTCAGAC

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FIGURE 1463

MPIFMLCILFLFCFTLESAQSENLSFNWSGFFRMISWRVLSFECVVPSLPRTFFFE

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FIGURE 1464

TGCCTGGCCTGACATTTTTANAAAAAGTTTTATTTTGCACGGCTCTAAACCTCCATGTTATTTTCCAGTGGTGTA
GAAGGTACCAGCTAAAGTGAACCACTATGTAATATTAGGCCATTCTAAAGGAAAGATGTTCCATGTCATCAGAGA
TGGTAAAATAGGCAGGGAAAAAAAATCTTTGGTACCAAAGATTACACTTGTGTTTCTACACAGCAAACCATTTT
TCTTTTCATGAAAATAATATATTATTAACATGAATATATTATTTTGCTATTAATGTGAAAGTTGTCTCTAAATATT
TTTTAATTTTCAAACCTACACTTTATTTTTCATTTGAAATGTTTTTCACACCTTTTGCATTACATAATAATTTTGT
GGAAGCATTTTGGCCCTTTAGAATAAATATTAGATTGATATAGCTGAAATGTGACTTCCAGTTCTTTGATATTCCC
CTTGTTATTCAAATAGAAATATGGAAATGCTTTATATATTACTGTTAAATTTCTTAGTGCAGAAATAACATTATT
AATAGAGTATTGTTTTCAAACAGATGATTAATTTCAAGAGGTTTAAACAGTGAAATTGTGTCAATATTTTGCATT
TAAATGAATTTAATTGACCGATATTTTCTGTAGTTAAATTTAGTCACAATATCACATATGTTCTTCAAGAAACA
CATGAAATTATTAATAAAGTAATTAAAAAATTTTTAATGTATAACAGAATTGACCAATAGGCCAGTTTTCTGGTA
ACTTATGATAGTAGATTGTTTCTTTAGAACTGGGCAGAAGCTCTGCATTCTCACTTGTACTTTGATTTCTTATT
TCTTGGTCAGGCAATTTGAGGAAAGAAGAAATGGCATGGGGAATATATATGTTTTGTTTCTTAGGGAAAACAGTC
TGAGAAATGAATAAAAAGCATGAANNNNNNNNNNNNNNNNNNNNNTACCATGGAAAAGGATATTCACAGTAGTA
CAGTTCTCAATATTTTAAATTAGATGTCATATTTTTTTAATATAGTAAAACCTTGGGATATAGAATATTACATCT
TTTGAGAATGTATGTGTCTCTAAGTAAGTAAAATCTAATGCGTATAGGAGACTGATAGCTAAAAATGAATGGAAC
ATTAATGTACTTTTATAATTAAACCTCTTATCTATCAGAAATTGTAAGAGAATAGATACATGTTTTGAATGTAAA
GTTGAAAAGTCTGGTTTACTGAATAAATTGAAAGTGATTTATAAAATCTAAATTTGGACTACTTGCAATGATAA
GCTATTCTAGTAGCCTTTAGTTTTAAATCCAACAGAAATCTAGAAGTCACAAGCAAATATCTTAAAGGTAAAATCC
ATCTGGGCACCTCATTTAAAGTATATCTTAAAAAAGCAGCAGCAAGGTACCTTGCCATTTTGTAGCATATTTTCTTC
CTTTTTCTTTTTCTTT

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FIGURE 1465

PGLTFLXKVLFC TALNLHVIFQWCRRYQLK

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FIGURE 1466

GACTTTGTAACCTGATTTTCAGAGAAGCGATTAAGGAATTGTACTGTCTTTAAACAATATTTAGAATGCTTCAGTA
AAAGCATTTTTTAAAAAATTTTTCTAATGATGTAGTAAATGTACCTAATATAAAGTTAAGTGGTTTTATTTAATAC
TTTTCACCTGACCATGATTATGTTATAAATAAGAGGATTTATAGTTTGCATGCCTGATATAATCTATTTAATTC
CTTTACAAAATTTTTGTACATGAAAGATAAATGTCTTCATTTTACCAGCTACCTCCTTCCAGATTGAATGCTTCA
GTGCACTTTGATTTTCAAATTGGCTATTATTTTTTAATGTAATTAACCTTCACAATTTAAATTGAAGGATATTCT
GATCCTTAGGTTATAAATATGTGACTTGATGGTTTATGTAACATTCAAGTAGCATGTTTTCTATAACAATATGAT
AAAAGTTTTGATACATACCTTGTATGTTGCTTGACAGATCTGTTTTAGAAAACATTCCTCTGCCTTTTGAAATGA
AGCCATGTATTTGAAATTATTTCCCAAACAATTATATCTTAAGCGTGTGCTACATAGTAATCATAGTCATTTTAA
TTTAGATTATAAAGCTATATTTTAACTTTGAGGTTTGTGAATTTCTTAGACATATTAATGACTTTATAGTTAAT
GGTGCTCTCAGATTTTATTTTTTAAGTTAAAAATTTGCCAGGCGCGGTGGCTCA

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FIGURE 1467

LCKLISEKRLRNCTVFKQYLECFSKSIFKKFF

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FIGURE 1468

[illegible]

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FIGURE 1469

FPFFLNQRQISDFMNVCHCA

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FIGURE 1470

GTTTTCAAAGGCACTCTGTTAGGTGGCATAACAGCCCTGATTAAAAACAGCACTGAACTTAGACATGTTTCATTTT
TTTCTCTAACCTAGTACCTTTTTTACAGATTGCATATTAACAGCTTATTTTTGCATTACCTCTGTAAACCCTCA
ATCAAAATTTATTTAAAAATATTGGGAGCTTTTAGTTTAAAGTGATACCTACTGGCCCCCTCAAAACATCCAGCATT
AAAAAATAAGACTGGCAGTGAAATAATTATCAAAATTATAGGAAGAATTTTCATTTAGCCAGAACTGAATTGAA
AAATCCATTTGGT

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FIGURE 1471

FQRHSVRWHTALIKNSTELRHVSFFSLT

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FIGURE 1472

ATGCTTCTTCCCCAAGGCAGCATCAAATTTTGAATTAATTTTTTGCTGCTTAATAAGGACTTAAACTGGTACCCAA
GTCAGAAAGACTCTGCCTCTAATTTTCTGGGGCTTGGGGATGAAGATAAAGTGTTACACCCAGTGTTTGTCCACC
ACAGTCTGTGGGGCAGAGAGACCCCTTCCTGGGACTGAATTCTCAATTTGAAGCACTGTTGTTCAAAGATCTCCCT
TCTGGGTCTGACAAGAAGAAACATAACCCTTATTTATTGCATTCTTCTGGCTTACATACATTGCCCTCACTAATC
AATGGACATTTTCAATTTTCAATTTTCTAATTTTGAAGAGAAGGCCACCATGGAATTTAATAAAAAATATTATTGAAGA
GAATTGCCATCATTCTCCATTTTCCCTGAACTACCACAAGCTTCTCAGAATTTTAGACAAATGTTTTTCCCCTCA
GAACTGAGCATCAGTGCTGCTTTGGAAAAACATTCCATGTGAATACTGTGGTTTCAGTGTCAGGACCTGTACTTG
GGCAGTTGGCAAGAGAGTGTCAGTTTATTTTATTGGGAGATGGGAACACCCAATTTAATTGATGCAATTAGGTTG
TAGGTTTTTTACAGTTTTTCTTTCTTTTCTTTTCTTTTCTTTTCT

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FIGURE 1473

MKIKCYTQCLSTTVCGAERPFLGLNSQFEALLFKDLPSGSDKKKHNPYLLHSSGLHTLPSLINGHFSISLLILRE
GHHGI

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FIGURE 1474

GCTCATGTCTAGGCTGAGAGTGAGATAGGAGCCACTGGAAGAATGAGATGATTCAGACAAGAGATTGTAGGAGAT
TGGCTTATTCTGTTGACAAGATGGTAATCCGACTTATTTTTTGGTTTTTTGGTGTTGGTGGTTTAGGAAGACAGG
AACTTCTCCACACCCGGTAGAGTTCAGCTGCCTTTTCATTAGTCAGCAAGCAGTTTTTCCTTTCTCAAGGCAGTC
CACATCCAGCAAAACATTTGATTAACTGGAAAGCAATACCATTCTCATGCCAGTGTACAAATTACATGAAAGAGC
ATCATTTTTCTAGTGTCTGAGGATTGGCTGCTTATGGCCAATTTTGGCAGCAAAACGATAGGATTAAAAATAGCT
TGAAGATGATCTAGTCTTAAATAATATATTTTCATGATGAACTTTCCTTGGGAAAGTGCATCTTTCTGCCTACAAG
AATCACATGACCCCTTTCAATAATTTATGTAGTAGAGAAAAACACACTATTTCTCATAGAGTTTTTCAGTCATGTG
CTGTGGTGTGATTGTTTCTGGACATTCAATAAATTTTATAGTTAACTGAGTTCTCTTTTCTGTTTTGTTGCTATT
TAACGTCCATTGAAAACATGGCTTTCTTTTGCGCATTCTGTTACTTTTCAGCTGTACTTTCTAATAAGAATGGATT
GCCCTTTTGTAGCAATCTTTGATTGAACTGGTACATTTTCAGATTACTTAAATGTCATCAGGCCACACAGCATACCA
GGTAACAGAAAGCCATAAATTAATAAATAAAAAAAGGCAAGC

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FIGURE 1475

MSSGHTAYQVTESHKLKIKKRQ

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FIGURE 1476

AGTTAAGTAAATCACCCCAATTTTTCTAATATTTAAGTGAACATTTAAAGATAAGCATTTCCTTAATGTTAATTT
CTTTTCTTTCATGTAATCTTGTGTCAGTAGACAAATGATGGTGACTATATTCTGTAATAAGTACATATATTATGATT
AAAAAAAAAAGCGTGTAATCTGCCCCAAAGAGATCATAAGCACTTTGGAGCTATAAACTTCTTGCTATTTCTA
CTTCATGGTACTGATATTCTCTTCTCAGATAACCAAACAAAAACAGCTGAATAAAATCAACCATTAATAGTAAA
A

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FIGURE 1477

MLISFLSCNLVSRQMMVTIFCNKYIYYD